

OBGYN MIXED BAG

**From Concept to Clinical Decisions
and Beyond the Basics : VOL-2**

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Dedication

Dedicated with deepest respect and gratitude to my parents, whose values of discipline, perseverance and unwavering faith shaped my journey. Their blessings have been my greatest strength and their teachings, my life long guide.

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QUESTION PAPERS

PAPER 1

1. A woman is in active labor. Her CTG trace shows a baseline FHR of 140 beats/min, with good variability. Which of the following is not considered non-reassuring?
 - a) Recurrent late decelerations
 - b) Recurrent early decelerations
 - c) Recurrent variable decelerations
 - d) Absence of accelerations
2. A woman with a renal transplant is stable and attends for pre-pregnancy counselling. Her medications include ciclosporin, prednisolone, calcium supplements, and ramipril. Which medication should be discontinued before conception?

Options:

- a) Ciclosporin
 - b) Prednisolone
 - c) Calcium supplements
 - d) Ramipril
3. Which of the following single conditions, without any other risk factors, is an indication for antenatal thromboprophylaxis?

Options:

- a) Diabetes
 - b) Sickle cell anaemia
 - c) History of intrauterine growth restriction (IUGR)
 - d) Anaemia
 - e) BMI 29

4. A pregnant woman presents with a persistent headache but no neurological deficits. On examination, she is stable and her observations are within normal limits. What is the most appropriate initial investigation?

Options:

- a) CT head with contrast
- b) MRI brain without contrast
- c) MR venography (MRV)
- d) CT head without contrast
- e) Lumbar puncture

5. A pregnant woman presents with hyperemesis gravidarum. Her thyroid function tests show TSH at the upper normal limit and free T4 at the lower normal limit. What is the most likely underlying cause?

Options:

- a) Graves' disease
- b) Hashimoto's thyroiditis
- c) Subclinical hypothyroidism
- d) Hypothyroidism
- e) Pregnancy-induced thyroid changes

6. Which of the following clotting factors is normally decreased during pregnancy?

Options:

- a) Factor VIII
- b) Protein C
- c) Protein S
- d) von Willebrand factor (VWF)
- e) Factor V

7. An asthmatic pregnant woman is on enalapril for hypertension. What is the most appropriate alternative antihypertensive medication?

Options

- a) Labetalol
- b) Methyldopa
- c) Nifedipine
- d) Enalapril (continue)
- e) Furosemide

8. What is the risk of postpartum psychosis for a woman with bipolar disorder during the postpartum period?

Options:

- a) 1 in 10 (10%)
- b) 1 in 4 (25%)
- c) 1 in 2 (50%)
- d) 1 in 20 (5%)
- e) 1 in 100 (1%)

9. What is the most relevant ECG finding in a pregnant woman with suspected myocardial infarction (MI)?

Options:

- a) ST-segment elevation in anterior leads (V2–V6)
- b) Sinus tachycardia
- c) T-wave inversion in lead III
- d) QT interval prolongation
- e) Left axis deviation

10. Which of the following pregnancy complications is more commonly associated with a male fetus?

Options:

- a) Pre-eclampsia
- b) Intrahepatic cholestasis of pregnancy (ICP)
- c) Hyperemesis gravidarum
- d) Acute fatty liver of pregnancy (AFLP)
- e) Placenta previa

11. A 30-year-old woman with known Systemic Lupus Erythematosus (SLE) presents for preconception counselling. She is clinically stable and currently off immunosuppressive therapy. She is aware that some antibodies associated with SLE may affect the fetus and wants to know if her baby is at risk of complications. Which test is most appropriate to assess the fetal risk in her case?

Options:

- a) Antiphospholipid (APS) antibodies
- b) Lupus anticoagulant
- c) Anti-Ro and Anti-La antibodies
- d) Anti-dsDNA antibodies
- e) Antinuclear antibodies (ANA)

12. A woman with known sickle cell trait attends an antenatal booking clinic. What antenatal complication is significantly more common compared to uncomplicated pregnancies?

Options:

- a) Chest infection
- b) Intrauterine growth restriction
- c) Major postpartum haemorrhage
- d) Placental abruption
- e) Urinary tract infection

13. You see a 23-year-old woman, who is known to have beta thalassaemia major. She underwent splenectomy at the age of 7. Her platelet count is $660 \times 10^9/L$ at booking.

What antenatal thromboprophylaxis is recommended?

Options

- a) Low-dose aspirin 75 mg/day
- b) LMWH
- c) Low-dose aspirin 75 mg/day and LMWH
- d) LMWH for 6 weeks postnatally
- e) UFH

14. A 28-year-old nulliparous woman with sickle cell disease (SCD) attends the preconception clinic for advice as she wishes to start her family. Her husband's haemoglobinopathy screen was normal, HbAA. You have reviewed her vaccination history and noted that she had Haemophilus influenzae type B, conjugated meningococcal C, pneumococcal and hepatitis B vaccines previously (5 years ago) and influenza vaccine 8 months ago.

Which one of the vaccines would you recommend her to have preconceptually?

Options:

- a) Haemophilus influenzae type b vaccine
- b) Conjugated meningococcal C vaccine
- c) Hepatitis B vaccine
- d) Pneumococcal vaccine
- e) Influenza vaccine

15. A 25-year-old woman with transfusion-dependent beta thalassaemia has been trying to conceive and undergoing ovulation induction. Which one of the statements is true with regards to young women with beta thalassaemia major?

Options:

- a) Diabetes is the most common endocrine complication
- b) Hyperthyroidism is a known complication
- c) Desferrioxamine can be safely used throughout pregnancy
- d) Pneumococcal vaccine should be given annually
- e) Cardiac failure is the primary cause of death in more than 50% cases

16. A 33-year-old woman with sickle cell disease presents to the pre-conception clinic. She would like to become pregnant and her partner has already been tested for sickle cell disease (which is negative). The woman is taking a number of medications and is advised to stop a particular drug at least three months prior to conception.

Options:

- a) Penicillin
- b) Influenza vaccine
- c) Refer to haematologist
- d) Folic acid 5 mg
- e) Hydroxycarbamide (hydroxyurea)

17. A woman is hepatitis B surface antigen (HBsAg) positive and core antibody (anti-HBc) positive. She has declined all follow-up during pregnancy. She presents in spontaneous labour at 39 weeks. What is the most appropriate step to minimise the risk of vertical transmission to the newborn?

Options:

- a) Give hepatitis B vaccine to the mother during labour
- b) Start oral tenofovir for the mother intrapartum
- c) Give hepatitis B immunoglobulin and vaccine to the baby within 24 hours
- d) Give only hepatitis B vaccine to the baby after delivery
- e) No treatment needed unless baby tests positive at birth

18. A 36-year-old woman at 28 weeks of gestation presents with sudden onset of central chest pain radiating to her left arm, associated with sweating and shortness of breath. An ECG is performed urgently.

What is the most sensitive ECG feature of an acute myocardial infarction (AMI)?

Options:

- a) ST elevation
- b) ST depression
- c) Prolonged QT interval
- d) Inverted T wave
- e) Pathological Q waves

19. Which of the following conditions places a pregnant woman at the highest risk of stroke during pregnancy or the postpartum period?

Options:

- a) Hypothyroidism
- b) Migraine
- c) Coeliac disease
- d) Marfan syndrome
- e) Congenital heart disease

20. A 27-year-old woman who had a renal transplantation 2 years ago is now pregnant. She is on immunosuppressants. Which of the following immunosuppressants is least likely to cause gestational diabetes?

Options:

- a) Tacrolimus
- b) Prednisolone
- c) Cyclosporine
- d) Azathioprine
- e) Mycophenolate mofetil

21. A 40-year-old lady post-delivery has suffered a myocardial infarction (MI). What is the most appropriate marker for diagnosing MI?

Options:

- a) Troponin I
- b) LDH
- c) Creatinine kinase (CK)
- d) Myoglobin
- e) B-type natriuretic peptide (BNP)

22. Which of the following conditions increases the risk of myocardial infarction (MI)?

Options:

- a) Migraine
- b) Preeclampsia (PET)
- c) Stroke
- d) Pregnancy-induced hypertension (PIH)
- e) Diabetes mellitus

23. A 32-year-old woman with Marfan syndrome attends for pre-conception counselling. Which of the following findings is an indication to advise against pregnancy?

Options:

- a) Aortic root >45 mm diameter
- b) History of retinal detachment
- c) Metal mitral valve replacement on lifetime warfarin outside pregnancy
- d) Previous pregnancy complicated by cervical incompetence
- e) Previous pregnancy complicated by pre-eclampsia

24. Which is the commonest infection during early pregnancy responsible for symmetrical intrauterine growth restriction, microcephaly, and calcium deposition in the brain?

Options:

- a) CMV
- b) Rubella
- c) Toxoplasmosis
- d) Syphilis
- e) Herpes simplex virus

25. A pregnant woman is exposed to *Toxoplasma gondii* during early pregnancy. If the fetus becomes infected, which organ system is most commonly affected?

Options:

- a) Central Nervous System (CNS)
- b) Cardiovascular System (CVS)
- c) Gastrointestinal Tract (GIT)
- d) Spinal cord
- e) Respiratory system

26. An infant is born to a mother with known HIV infection who has been on combination antiretroviral therapy (cART) since 20 weeks of gestation. The mother's two most recent viral load values were both less than 50 copies/mL.

What is the most appropriate infant post-exposure prophylaxis (PEP)?

- a) Zidovudine for 2 weeks
- b) Zidovudine for 4 weeks
- c) Zidovudine for 6 weeks
- d) Zidovudine for 7 weeks
- e) PEP not required

27. A pregnant woman reports exposure to a child with confirmed measles infection.

What is the most appropriate next step in management?

- a) Check immunity (IgG)
- b) Check immunity (IgM)
- c) Give prophylaxis immediately
- d) Give Human Normal Immunoglobulin (HNIG) to the mother as prophylaxis

28. A pregnant patient with a history of hypertension and renal disease has delivered.

Which is the safest ACE inhibitor to use in the postnatal period?

- a) Enalapril
- b) Nifedipine
- c) Methyldopa (Aldomet)
- d) Labetalol

29. A pregnant woman at 22 weeks of gestation presents to the emergency room with her first episode of seizures.

Which initial investigation should be performed?

- a) MRI
- b) EEG
- c) CT scan
- d) Full blood count (FBC), renal profile, and liver function tests (LFTs)

30. A pregnant woman undergoes a V/Q scan for suspected pulmonary embolism.

What is the main potential risk to the baby from this investigation?

- a) Childhood cancer
- b) Mother's breast cancer
- c) Ovarian cancer
- d) No risk to the baby or mother

31. A patient with a mechanical heart valve is on apixaban and is scheduled for a polypectomy.

When should apixaban be stopped before the procedure?

- a) No need to stop
- b) Stop 24 hours before
- c) Stop 48 hours before
- d) Stop 120 hours before

32. A primigravida woman undergoes an elective LSCS (Lower Segment Caesarean Section) for breech presentation.

She experiences a PPH (Postpartum Hemorrhage) of 800 mL but has no other risk factors.

She asks about VTE (Venous Thromboembolism) prophylaxis.

What is the most appropriate management?

- a) LMWH for 10 days
- b) LMWH for 6 weeks
- c) LMWH for 12 weeks
- d) Mobilization and avoid dehydration
- e) Compression stockings

33. A pregnant patient with Crohn's disease (CD) presents with a flare-up, which has been controlled by hydrocortisone.

What medication should be started to manage her condition?

- a) Sulfasalazine
- b) Azathioprine
- c) Methotrexate
- d) Mycophenolate mofetil

34. A pregnant woman presents with sudden onset headache, photophobia, and neck stiffness.

What is your diagnosis?

- a) SAH (Subarachnoid hemorrhage)
- b) Meningitis
- c) Migraine with aura
- d) Idiopathic intracranial hypertension (IIH)

35. A 28-year-old pregnant woman presents at 28 weeks' gestation with a generalized headache lasting for about 60 minutes. She also complains of some photophobia.

What is the most probable diagnosis?

- a) Migraine with aura
- b) Tension headache
- c) Cluster headache
- d) Idiopathic intracranial hypertension
- e) Migraine

36. What is the most common cause of acute kidney injury in pregnancy?

- a) Haemorrhage
- b) Hyperemesis gravidarum
- c) Non-steroidal anti-inflammatory drugs (NSAIDs)
- d) Pre-eclampsia
- e) Urinary retention

37. A woman with chronic essential hypertension was converted from Lisinopril to methyldopa in a preconception counselling clinic. The pregnancy was uncomplicated and she delivered spontaneously at term.

At what stage postnatally should the antihypertensive medication be switched back to Lisinopril?

- a) 2 days
- b) 7 days
- c) 14 days
- d) 6 weeks
- e) 12 weeks

38. You are asked to see a 28-year-old woman who is day 2 following a caesarean section for unsuccessful induction of labour at 37 weeks' gestation. She was diagnosed with mild preeclampsia at 36 weeks' gestation. Her blood pressure has been 155/100 mm Hg on two occasions today, although she is asymptomatic and her deep tendon reflexes are normal. She is breastfeeding. You decide to start her on an antihypertensive agent.

Which of the following antihypertensive agents has insufficient evidence on its safety to recommend or use in breastfeeding mothers?

- a) Amlodipine
- b) Atenolol
- c) Captopril

- d) Enalapril
- e) Metoprolol

39. You see a 31-year-old primigravida at 37 weeks who presents to your day assessment unit with headache and blurring of vision. Her BP is 160/110 mm Hg, and urine dipstick shows 3+ protein. Her reflexes are brisk with four beats of ankle clonus, and her abdomen is soft. The symphysis-fundal height is 35 cm, the CTG is normal, and her urine protein:creatinine ratio is 90 mg/mmol.

What is the most appropriate action?

- a) Fluid restriction to 125 mL/h with magnesium sulphate infusion followed by delivery of the baby.
 - b) Fluid restriction to 125 mL/h with magnesium sulphate infusion followed by hydralazine and delivery of the baby.
 - c) Fluid restriction to 80 mL/h with magnesium sulphate infusion followed by hydralazine and delivery of the baby.
 - d) Magnesium sulphate infusion followed by hydralazine and delivery of the baby.
 - e) Immediate delivery of the baby.
40. A 38-year-old nulliparous woman with moderate chronic renal failure comes to the preconception clinic as she wishes to have a baby. She had renal transplantation 3 years ago and her recent creatinine is around 130 with estimated glomerular filtration rate (GFR) of approximately 45. She is currently taking prednisolone, mycophenolate, angiotensin-converting enzyme (ACE) inhibitors and aspirin. You have advised her to stop mycophenolate and to start another immunosuppressant.

Which one of the immunosuppressant drugs would be contraindicated in pregnancy?

- a) Azathioprine
 - b) Cyclosporine
 - c) Hydroxychloroquine
 - d) Sirolimus
 - e) Tacrolimus
41. Which of the following conditions increases the risk of myocardial infarction (MI)?
- a) Migraine
 - b) Preeclampsia (PET)
 - c) Stroke
 - d) Pregnancy-induced hypertension (PIH)
 - e) Diabetes mellitus

42. A 32-year-old woman with Marfan syndrome attends for pre-conception counseling. Which of the following findings is an indication to advise against pregnancy?
- a) Aortic root >45 mm diameter
 - b) History of retinal detachment
 - c) Metal mitral valve replacement on lifetime warfarin outside pregnancy
 - d) Previous pregnancy complicated by cervical incompetence
 - e) Previous pregnancy complicated by pre-eclampsia
43. Which is the commonest infection during early pregnancy responsible for symmetrical intrauterine growth restriction, microcephaly, and calcium deposition in the brain?
- a) CMV
 - b) Rubella
 - c) Toxoplasmosis
 - d) Syphilis
 - e) Herpes simplex virus
44. A pregnant woman is exposed to *Toxoplasma gondii* during early pregnancy. If the fetus becomes infected, which organ system is most commonly affected?
- a) Central Nervous System (CNS)
 - b) Cardiovascular System (CVS)
 - c) Gastrointestinal Tract (GIT)
 - d) Spinal cord
 - e) Respiratory system
45. A 35-year-old nulliparous woman with chronic renal failure had a successful renal transplantation surgery recently. She wishes to have children in the future and her GP has referred her for preconception advice.
- What is the recommended time interval for conception after an allograft transplantation?
- a) 6 months
 - b) 12 months
 - c) 18 months
 - d) 24 months
 - e) 30 months

46. A 42-year-old woman with chronic hypertension is seen in the booking clinic at 12 weeks of gestation. She was taking losartan prior to pregnancy and was switched to labetalol once she had a positive pregnancy test at 5 weeks of gestation.

- a) Chronic hypertension
- b) Diabetic nephropathy
- c) Gastroenteritis
- d) Ischaemic heart disease
- e) Periodontal disease

47. An infant is born to a mother with known HIV infection who has been on combination antiretroviral therapy (cART) since 20 weeks of gestation. The mother's two most recent viral load values were both less than 50 copies/mL.

What is the most appropriate infant post-exposure prophylaxis (PEP)?

- a) Zidovudine for 2 weeks
- b) Zidovudine for 4 weeks
- c) Zidovudine for 6 weeks
- d) Zidovudine for 7 weeks
- e) PEP not required

48. A pregnant patient with a history of hypertension and renal disease has delivered.

Which is the safest ACE inhibitor to use in the postnatal period?

- a) Enalapril
- b) Nifedipine
- c) Methyldopa (Aldomet)
- d) Labetalol

49. A patient with a mechanical heart valve is on apixaban and is scheduled for a polypectomy.

When should apixaban be stopped before the procedure?

- a) No need to stop
- b) Stop 24 hours before
- c) Stop 48 hours before
- d) Stop 120 hours before

50. A pregnant woman with ulcerative colitis presents with diarrhea and fever. How should you treat her?

- a) Sulfasalazine
- b) Metronidazole
- c) Steroid
- d) Tacrolimus

PAPER 2

1. A pregnant patient at 7 weeks of gestation presents with a herpes lesion. What is your plan of management?
 - a) Treat now for 5 days with acyclovir, then suppression from 36 weeks until delivery
 - b) Start treatment with acyclovir from 32 weeks
 - c) Start treatment with acyclovir at 36 weeks and deliver by normal vaginal delivery
 - d) Start suppression dose with acyclovir from 36 weeks and deliver normally
 - e) Start suppression dose from 36 weeks and deliver by caesarean section
 - f) Start treatment with acyclovir from now and deliver by caesarean section
2. A pregnant woman at 29 weeks presents with a herpes lesion. What is your plan of management?
 - a) Treat now for 5 days with acyclovir, then suppression from 36 weeks until delivery
 - b) Start treatment with acyclovir from 32 weeks
 - c) Start treatment with acyclovir at 36 weeks and deliver by normal vaginal delivery
 - d) Start suppression dose with acyclovir from 36 weeks and deliver normally
 - e) Start suppression dose from 36 weeks and deliver by caesarean section
 - f) Start treatment with acyclovir from now and deliver by caesarean section
3. A 28-year-old pregnant woman presents at 28 weeks' gestation with a generalized headache lasting for about 60 minutes. She also complains of some photophobia.

What is the most probable diagnosis?

 - a) Migraine with aura
 - b) Tension headache
 - c) Cluster headache
 - d) Idiopathic intracranial hypertension
 - e) Migraine
 - f) Subarachnoid haemorrhage

4. A 28-year-old woman who is HIV-positive and on HAART presents at 35 weeks' gestation with spontaneous rupture of membranes. Her latest viral load is 36 copies/mL. She is otherwise well.

What is the most appropriate management?

- a) Immediate induction of labour
 - b) Caesarean section
 - c) Induction of labour at 38–39 weeks
 - d) Administer corticosteroids
 - e) Observation for 48 hours
5. A 28-year-old primigravida presents at 34 weeks of gestation with painful genital lesions. Clinical examination confirms primary genital herpes simplex virus (HSV) infection. She is otherwise well and has no prior history of similar symptoms.

What is the most appropriate management?

- a) Acyclovir 400 mg three times daily for 5 days and refer to consultant-led unit
 - b) Acyclovir 400 mg three times daily until term and deliver by caesarean section
 - c) Acyclovir 400 mg three times daily until term and allow for vaginal delivery
 - d) Acyclovir 800 mg three times daily for 5 days until term
6. A pregnant woman at 10 weeks of gestation presents to the antenatal clinic. Her 4-year-old son has recently been diagnosed with confirmed H1N1 influenza. She is otherwise well and asymptomatic.

What is the most appropriate prophylactic measure?

- a) Give influenza vaccine
 - b) Oseltamivir
 - c) MMR
 - d) Rabies vaccine
 - e) BCG vaccine
7. A 25-week pregnant primigravida presents with a rash that appeared in the last 24 hours. She is known to be non-immune to varicella (chickenpox) and gives a history of exposure to a child with active chickenpox rash 7 days ago.

What is the most appropriate next step in management?

- a) Give varicella zoster immunoglobulin (VZIG)
- b) Start oral acyclovir
- c) Start intravenous acyclovir
- d) No need for treatment
- e) Reassurance

8. A woman presents at her booking visit. She has been taking Enalapril 10 mg/day orally for chronic hypertension. She also has a history of asthma.

What is the most appropriate management regarding her antihypertensive treatment in pregnancy?

- a) Start Aspirin 75 mg
 - b) Do nothing
 - c) Switch to Nifedipine
 - d) Switch to Methyldopa
 - e) Switch to Labetalol
9. A pregnant woman at 24 weeks' gestation develops a chickenpox rash within the last 24 hours.

What is the most appropriate management?

- a) Reassure
 - b) Oral acyclovir 800 mg, 5 times daily for 7 days
 - c) Check immunity
 - d) Give varicella zoster immunoglobulin (VZIG)
 - e) Advise to avoid contact
10. A 32-year-old woman in early pregnancy has a known history of SLE (Systemic Lupus Erythematosus) with arthritis.

Which of the following drugs is NOT safe to take during pregnancy in case of relapse?

- a) Azathioprine
 - b) Cyclophosphamide
 - c) Hydroxychloroquine
 - d) Corticosteroids
 - e) Prednisone
11. A 31-year-old woman in her first pregnancy books with the midwife at 10 weeks of gestation. A full blood count taken at this time gives the following result:
- a) Hb = 112 g/L
 - b) WCC = 4.0
 - c) Platelets = 89
 - d) MCV = 30
 - e) MCH = 35

12. She has suffered with nose bleeds in the past but has never been investigated.

What is the most likely diagnosis?

- a) Gestational thrombocytopenia
- b) Idiopathic immune thrombocytopenia
- c) Sample error
- d) Thrombotic thrombocytopenia
- e) Vitamin B12 deficiency

13. A 34-year-old primigravida presents for her booking visit at 32 weeks' gestation. She has a booking blood pressure of 111/70 mmHg and a urine dipstick shows leucocytes ++. In her history she mentions that she always has had heavy periods. She also shows some petechiae in her arms, which she says happen without any obvious trauma, and resolve spontaneously.

Her blood tests were as follows:

- a) Haemoglobin = 126 g/L
- b) White cell count = 11
- c) Renal function tests = normal
- d) Liver function tests = normal
- e) Platelet count = 50
- f) Anticardiolipin antibodies/lupus anticoagulant and SLE serology = normal
- g) Coagulation profile = normal
- h) Infection screen = normal

14. What would be the most appropriate management for her?

- a) Fresh frozen plasma
- b) Observation only
- c) Oral antihypertensives
- d) Oral steroids
- e) Platelet transfusion

15. A 25-year-old primiparous woman is referred to the antenatal clinic for booking at 12 weeks of gestation. The reason for referral is that her father and brother have a history of severe haemophilia A. She wishes to be investigated to see if her baby is affected.

What is the most appropriate initial investigation to determine the risk of the baby having haemophilia A?

- a) Amniocentesis at 16 weeks of gestation
- b) Chorionic villus sampling as soon as possible
- c) Factor VIII assay of the woman's blood to determine her carrier status
- d) Free fetal DNA in maternal circulation to determine fetal sex
- e) Quantitative PCR to determine if the woman is a carrier of the haemophilia A gene

16. Women with various medical conditions were seen in an antenatal clinic. Which condition would pose the highest risk of serious maternal morbidity or maternal death?
- a) Wolff-Parkinson-White syndrome
 - b) Repaired tetralogy of Fallot
 - c) Heart transplant recipient
 - d) Marfan syndrome with an aortic root measurement of 4 cm
 - e) Mechanical prosthetic heart valve

17. An obese 39-year-old smoker is admitted with chest pain at 34 weeks' gestation. She had been offered LMWH thromboprophylaxis but declined as she doesn't want to self-inject. The pain came on suddenly and has been present for 90 minutes so far. It radiates to her back, between her shoulder blades. She also has some pins and needles in one arm. The midwife noticed that her blood pressure is different in the two arms. On examination a harsh systolic murmur is heard.

What is the most likely diagnosis?

- a) Costochondritis
 - b) Aortic dissection
 - c) Indigestion
 - d) Myocardial ischaemia
 - e) Myocardial ischaemia
18. A woman with mitral stenosis and atrial fibrillation asks your advice about contraception. She is anticoagulated because of her atrial fibrillation.

What would you advise?

- a) Long-acting progesterone implant, e.g. Nexplanon
- b) Depo-Provera
- c) Progesterone-only pill
- d) Mirena IUS
- e) Combined oral contraceptive pill

19. A 40-year-old woman presents to the emergency department with acute chest pain. She is 28 weeks pregnant with DCDA twins conceived through IVF. She has a BMI of 40.

Which ECG change will best support a diagnosis of myocardial infarction?

- a) Infero-lateral T wave inversion
- b) Q wave in lead III
- c) Right bundle branch block
- d) ST depression
- e) ST elevation

20. A 20-year-old woman attends the obstetric cardiology clinic with her partner for pre-pregnancy counselling. She has a repaired tetralogy of Fallot (ToF) and is contemplating her first pregnancy. She is asymptomatic and her recent echocardiogram showed mild pulmonary regurgitation.

What advice would you give her regarding her likely pregnancy outcome?

- a) A planned caesarean section at term is recommended
- b) Likely to tolerate pregnancy well
- c) May develop arrhythmias and left heart failure
- d) There is a significant chance of needing admission for bed rest and diuretics
- e) Will require a fetal cardiac scan as the overall risk of the fetus having congenital heart disease is 25%

21. A patient with beta thalassemia is seen in preconception clinic. She is known to be diabetic.

What is the optimum test for monitoring diabetes in patients with beta thalassemia?

- a) C-peptide levels
- b) Serum glucose
- c) HbA1c
- d) Serum fructosamine
- e) Fasting glucose levels

22. A woman presents to the antenatal clinic with palpitations. She describes these as episodes of a fast heartbeat which last about 5–10 minutes and occur roughly once a week. They can come on suddenly at any time. She hasn't blacked out with them, but feels anxious when they happen. She hasn't had any heart problems before, but her father has had a heart attack aged 55. There is no other family history of note.

- a) Atrial fibrillation
- b) Supraventricular tachycardia
- c) Ventricular tachycardia
- d) Ectopic beats
- e) Anxiety

23. [Images show a neural tube defect and a neonate with a low meningomyelocele.]

- a) Carbamazepine
- b) Phenytoin
- c) Sodium valproate
- d) Lamotrigine

24. A 25-year-old primigravida at 8 weeks of gestation presents to your clinic. She has well-controlled epilepsy and has been taking lamotrigine (antiepileptic drug) for the last year.

She asks you for advice on continuing her antiepileptic drug during pregnancy.

During counselling, what is the most appropriate advice?

- a) Change lamotrigine to another antiepileptic drug
- b) Increase the dose of lamotrigine during her current pregnancy and reduce it again postnatally
- c) Keep the woman on the same dose of lamotrigine
- d) Reduce the dose of lamotrigine during pregnancy and increase again postnatally
- e) Stop lamotrigine during pregnancy and restart after delivery

25. A 25-year-old nulliparous woman requests contraception. She has epilepsy, which is well controlled with carbamazepine.

Which contraceptive option is most suitable for her?

- a) Combined oral contraceptive pill containing 30 micrograms ethinyl estradiol
- b) Combined oral contraceptive pill containing 40 micrograms ethinyl estradiol
- c) Progesterone-only pill
- d) Progesterone implant
- e) Parenteral progesterone

26. A [age obscured]-year-old woman in her third trimester presents with weakness on one side of the face for 24 hours. On examination, there are signs of unilateral seventh cranial nerve weakness. There are no vesicular lesions in the external auditory meatus or soft palate.

What is the most likely treatment option?

- a) Acyclovir
- b) Antibiotics
- c) Anticoagulants
- d) Aspirin
- e) Prednisolone

27. You have been asked to prescribe the therapeutic dose of LMWH for a 25-year-old woman who gave birth vaginally 6 hours ago. She had a DVT 6 weeks ago. Her labour was induced at 40 weeks because of recurrent episodes of reduced fetal movement. She needed syntocinon for slow progress in first stage and used Entonox, diamorphine and epidural for analgesia. When is the safest time to restart her on LMWH after removing the epidural catheter (there is no concern with bleeding)?
- a) 2 hours
 - b) 3 hours
 - c) 4 hours
 - d) 6 hours
 - e) 8 hours
28. A 38-year-old woman is 31 weeks pregnant in her second pregnancy. She has a BMI of 33 and is admitted in hospital with acute pyelonephritis and is being treated with intravenous antibiotics.
- a) Mobilisation and avoidance of dehydration
 - b) Prophylactic LMWH during antenatal period and for 6 weeks postnatal period
 - c) Prophylactic LMWH for 6 weeks postnatal period
 - d) Prophylactic LMWH for 7 days postnatal period
 - e) Prophylactic LMWH for the duration of stay in the hospital
 - f) Thrombophilia testing is recommended
29. A 31-year-old woman is 11 weeks pregnant in her second pregnancy. Her first pregnancy was uneventful. She is known to have protein C deficiency but has never had thrombosis in the past. There is no family history of thromboembolism.
- a) Mobilisation and avoidance of dehydration
 - b) Prophylactic LMWH during antenatal period and for 6 weeks postnatal period
 - c) Prophylactic LMWH for 6 weeks postnatal period
 - d) Prophylactic LMWH for 7 days postnatal period
 - e) Prophylactic LMWH for the duration of stay in the hospital
 - f) Thrombophilia testing is recommended

30. A 31-year-old woman is 9 weeks pregnant in her third pregnancy and admitted to hospital because of hyperemesis gravidarum. She has a BMI of 26.

Choose the option from the list:

- a) Mobilisation and avoidance of dehydration
- b) Prophylactic LMWH during antenatal period and for 6 weeks postnatal period
- c) Prophylactic LMWH for 6 weeks postnatal period
- d) Prophylactic LMWH for 7 days postnatal period
- e) Prophylactic LMWH for the duration of stay in the hospital
- f) Thrombophilia testing is recommended

31. A 32-year-old woman with a BMI of 42 had a normal vaginal delivery.

- a) Caesarean section under general anaesthetic
- b) Caesarean section under spinal anaesthetic
- c) Consider aspirin and prophylactic LMWH during antenatal period
- d) Consider prophylactic LMWH for 10 days after delivery
- e) Prophylactic high-dose LMWH during antenatal period and 6 weeks postpartum
- f) Thrombophilia testing is recommended

32. With regard to the routine anomaly scan in pregnancy, what threshold of nuchal-fold measurement should trigger a referral to a fetal medicine specialist?

- a) 6 mm
- b) 7 mm
- c) 8 mm
- d) 9 mm
- e) 10 mm

33. A lady with MCDA twins presents antenatally. At what gestational age should you start screening for TTTS?

- a) 14 weeks
- b) 16 weeks
- c) 18 weeks
- d) 20 weeks
- e) 24 weeks

34. A pregnant patient in the first trimester with a history of oligomenorrhea is not sure of her LMP. How will you calculate EDD from these scan findings?

- BPD = 24
- CRL = 94
- HC = 111
- AC = 32

- a) HC
- b) BPD
- c) AC
- d) CRL

35. What is the anti-D level above which there should be a referral for a fetal medicine unit?

- a) Anti-D 1
- b) Anti-D level 4
- c) Anti-D level 8
- d) Anti-D level 10

36. Asymptomatic bacteriuria picked up at 24 weeks gestational age. Plan of management?

- a) Treat now
- b) Treat now + IAP
- c) IAP only
- d) Treat only if symptoms
- e) Culture and sensitivity

37. What is the role of mifepristone for IOL in IUFD?

- a) Increased level of prostaglandins
- b) Increased sensitivity of the uterus
- c) Increased interval induction
- d) Reduce the time interval

38. Primigravida at 33 weeks presents with primary herpes. What is the management for her at 34 weeks?

- a) Acyclovir 400 mg $\times$ 3 and refer for consultant-led unit
- b) Acyclovir 400 mg $\times$ 3 till term and deliver by CS
- c) Acyclovir 400 mg $\times$ 3 till term and allow for VD
- d) Acyclovir 800 mg $\times$ 3 till term

39. What is the component of the quadruple test for Down syndrome?
- a) NT + β -hCG + PAPP-A
 - b) β -hCG, uE3, AFP
 - c) hCG, uE3, AFP, NT
 - d) β -hCG, uE3, AFP, inhibin A
40. What is the site for sampling for GBS?
- a) Upper vagina
 - b) Lower vagina
 - c) Endocervical
 - d) Anorectal
41. A phenylketonuria patient, she conceived and the fetus was diagnosed as phenylketonuria. Which congenital anomalies may be possible in the fetus?
- a) Microcephaly
 - b) Macrocephaly
 - c) Spina bifida
 - d) Hydrocephalus
42. What are the most common causes of cardiac arrest in pregnancy?
- a) Pulmonary embolism
 - b) Aortic dissection
 - c) VTE
 - d) Obstetrics
 - e) Aortic stenosis
43. A Turner syndrome woman is undergoing IVF. What is the most life-threatening risk for the heart in pregnancy?
- a) Aortic dissection
 - b) Pre-eclampsia
 - c) Cardiomyopathy
 - d) Pericarditis
44. Risk in females with Turner syndrome in pregnancy by IVF oocyte donation?
- a) GDM
 - b) Preeclampsia
 - c) Epilepsy
 - d) SCD

45. Pregnant woman with monochorionic twins, one baby below the 5th centile, otherwise all normal. The first twin is cephalic and the second is breech. What is the mode of delivery?
- a) Caesarean section
 - b) ECV
 - c) Prepare vaginal delivery and make theatre ready
 - d) Assisted vaginal delivery
46. Mother has Marfan's syndrome and father is normal. What is the risk to their offspring?
- a) All offspring are affected.
 - b) All offspring are carriers.
 - c) All male offspring are NOT affected, all females are carriers.
 - d) All female offspring are affected, all males are affected.
 - e) 50% affected males, 50% normal males, 50% affected females & 50% normal females
47. Rh-negative mother early in pregnancy, normal levels of anti-C antibodies. During monitoring at 36 weeks of gestation, anti-C antibodies are found to be 48-- Later delivered at 37 weeks; breastfeeding started after 3 h. Her baby is at increased risk of?
- a) Early anemia
 - b) Early jaundice
 - c) Late anemia
 - d) Late jaundice
 - e) Polycythaemia
48. Severe SGA, less than 5th centile. Ultrasound shows a lot of fetal anomalies; clenched hands, rocker-bottom feet and cleft lip and palate.
- a) Patau syndrome
 - b) Down's syndrome
 - c) Edward syndrome
 - d) Turner's syndrome
49. Perimortem Caesarean section after?
- a) 3 minutes
 - b) 4 minutes
 - c) 5 minutes
 - d) 6 minutes

PAPER 3

1. Detection rate of combined test in twins?
 - a) 50%
 - b) 67%
 - c) 72%
 - d) 85%
 - e) 90%
2. A female had a previous history of PPRM with traumatic cervix (LEEP/LEETZ) and a very short cervix vaginally. What is the appropriate type of cerclage?
 - a) Shirodkar
 - b) Abdominal cerclage during pregnancy
 - c) Laparotomy cerclage preconceptionally
 - d) Laparoscopic cerclage during pregnancy
3. What's the most common abnormal karyotyping associated with truncus arteriosus?
 - a) 7q deletion
 - b) 22q11.2 deletion
 - c) Turner syndrome
 - d) Trisomy 21
4. Big baby with feeding problem, what is most likely to develop?
 - a) Early anemia
 - b) Early jaundice
 - c) Late anemia
 - d) Late jaundice
 - e) Polycythaemia

5. A primigravida with twin monochorionic diamniotic pregnancy reports with decreased fetal movement at 30 weeks. USG scan confirms death of one of the twins. How will you manage her?
 - a) Conservative management until delivery
 - b) MRI for fetal brain
 - c) Immediate delivery
 - d) Reassure
 - e) Emergency CS
6. What's the most common adverse effect of NSAIDs?
 - a) IUGR
 - b) Oligohydramnios
 - c) Polyhydramnios
 - d) Delayed closure of ductus arteriosus
 - e) HTN
7. A lady 38 weeks pregnant at home collapsed at home. Brought to emergency in ambulance. What time frame should perimortem Caesarean section be achieved?
 - a) 3 minutes
 - b) 4 minutes
 - c) 5 minutes
 - d) 6 minutes
 - e) 7 minutes
8. A patient on methotrexate — after how long can she get pregnant?
 - a) Avoid pregnancy for 1 month
 - b) Avoid pregnancy for 3 months
 - c) Avoid pregnancy for 6 months
 - d) Avoid pregnancy for 1 year
9. What's the recurrent risk of Down syndrome after 1 baby with Down syndrome?
 - a) 1/100
 - b) 1/1000
 - c) 2/100
 - d) 3/100
 - e) 4/100

10. A 25-year-old pregnant woman is admitted to the ER in suspected anaphylactic shock. What's the important investigation? RECALL
- a) ABG
 - b) Lactate
 - c) Mast cell tryptase
 - d) Urine protein
11. What is the test for fetal trisomy 21 in triplet pregnancy with CRL is 67?
- a) Maternal age and nuchal
 - b) β -hCG + PAPP-A + inhibin
 - c) β -hCG and PAPP-A
 - d) PAPP-A and inhibin
12. In twin pregnancy how to screen for trisomy 21 test with CRL 86?
- a) Maternal age + nuchal + PAPP-A + HCG
 - b) β -hCG + PAPP-A + inhibin A
 - c) β -hCG + PAPP-A
 - d) AFP + β -hCG + E3 + inhibin A
13. 12 weeks ART pregnant woman for screening test which test gives false positive result?
- a) AFP
 - b) Estradiol
 - c) PAPP-A
 - d) HCG
 - e) Inhibin A
14. How long after women stop taking isotretinoin should she wait to get pregnant?
(RCOG, Sept 2021)
- a) 1 month
 - b) 3 months
 - c) 6 months
 - d) 1 year
 - e) 2 years

15. Inheritance of Down syndrome?

- a) Autosomal recessive
- b) Autosomal dominant
- c) Nondisjunction in the meiosis
- d) X-linked recessive

16. Patient had a twin pregnancy. What is the appropriate time for GBS screening?

- a) 35 to 37 wks before delivery
- b) 32 to 34 wks from higher vagina
- c) 32 weeks to 34 wks from lower vagina and anorectal
- d) 32 weeks to 35 weeks from lower vagina and anorectal

17. At what gestation should we do non-invasive fetal genotyping for anti-D antigen?

- a) 12 weeks
- b) 14 weeks
- c) 16 weeks
- d) 20 weeks

18. RhD negative women — Dose of anti-D after intraoperative cell salvage?

- a) 500 IU
- b) 625 IU
- c) 1500 IU
- d) 2000 IU

19. SGA < 3rd centile with normal Doppler at 29 weeks. She had the same findings at 20 weeks but never investigated. What is your management?

- a) Offer amniocentesis
- b) Follow up STAN in 2 weeks
- c) Follow-up scan in 1 week
- d) Emergency section

20. A 32-year-old woman is seen for preconception counselling. She has a history of breast cancer and has just completed a course of tamoxifen.

How long should she wait before she can try to conceive?

- a) 4 weeks
- b) 6 weeks
- c) 3 months
- d) 6 months
- e) 1 year

21. A 42-year-old woman is seen in the booking clinic in her first pregnancy. She has a history of chronic hypertension and is taking methyldopa. She is white Caucasian with a BMI of 24 kg/m². What daily dose of vitamin D should be recommended for her throughout this pregnancy?

- a) 400 units
- b) 800 units
- c) 1000 units
- d) 1200 units
- e) 1500 units

22. A 27-year-old woman attends for her pregnancy dating scan. She is unsure of the date of her last menstrual period. The following fetal measurements are obtained:

Measurement

Value

Crown–rump length

86 mm

Biparietal diameter

18 mm

Head circumference

100 mm

Femur length

12 mm

Abdominal circumference

67 mm

- a) Abdominal circumference
- b) Biparietal diameter
- c) Crown–rump length
- d) Femur length
- e) Head circumference

23. In an uncomplicated pregnancy, how often should auscultation of the fetal heart be performed by the midwifery team?

- a) Every 2 weeks from 24 weeks
- b) Every 3 weeks from 24 weeks
- c) Every 4 weeks from 24 weeks
- d) Every appointment after 20 weeks
- e) Only when requested by the mother

24. A woman with a monochorionic diamniotic (MCDA) twin pregnancy at 25 weeks of gestation has been diagnosed with severe twin-to-twin transfusion syndrome (TTTS) and has been referred to the regional centre.

What is the recommended first-line management, assuming no contraindications to any treatment?

- a) Laser ablation of placental vessels
- b) Radiofrequency ablation of placental vessels
- c) Selective amnioreduction
- d) Selective feticide via cord coagulation
- e) Septostomy

25. What is the most common adverse obstetric problem in a pregnancy complicated by unexplained antepartum haemorrhage?

- a) Fetal growth restriction
- b) Oligohydramnios
- c) Premature rupture of membranes
- d) Preterm delivery
- e) Stillbirth

26. A woman presents to the obstetric triage unit with reduced fetal movements at 27 weeks of gestation. She has a monochorionic twin pregnancy. A CTG is performed. It is normal in the presenting twin but shows a bradycardia in twin 2. Both twins have a cephalic presentation. Preparations are made for emergency delivery, but during this time in the antenatal ward, the fetal heart of twin 2 stops. An ultrasound examination confirms the absence of a fetal heartbeat in twin 2.

What is the most appropriate action?

- a) Administer steroids and commence induction of labour when appropriate
- b) Administer steroids and deliver by caesarean section when appropriate
- c) Continue with a category 1 caesarean section
- d) Postpone delivery and perform a detailed ultrasound scan after 4 weeks
- e) Postpone delivery and perform fetal MRI after 4 weeks

27. Which obstetric complication has a significantly increased likelihood in women who have undergone bariatric surgery?

- a) Delivery by caesarean section
- b) Gestational diabetes
- c) Large-for-gestational-age fetus
- d) Pre-eclampsia
- e) Small-for-gestational-age (SGA) fetus

28. A woman is seen in antenatal clinic at 39 weeks. It is her first pregnancy and she is concerned about continuing the pregnancy beyond her estimated date of delivery. She is asking about a membrane sweep.

When should a first membrane sweep be offered for this woman?

- a) A membrane sweep is not routinely offered
- b) Offer a membrane sweep at 39 weeks onwards
- c) Offer a membrane sweep at 40 weeks onwards
- d) Offer a membrane sweep at 41 weeks onwards
- e) Offer a membrane sweep prior to formal induction of labour

29. A 29-year-old woman at 33 weeks of gestation presents with a 24-hour history of symptoms suggestive of preterm prelabour rupture of membranes (PPROM).

Which initial test should be performed to confirm a diagnosis of PPRM?

- a) Nitrazine test
- b) Speculum examination of the vagina
- c) Test vaginal fluid for insulin-like growth factor-binding protein-1 (IGFBP-1)
- d) Test vaginal fluid for placental α -microglobulin-1 (PAMG-1)
- e) Ultrasound scan for assessment of amniotic fluid volume

30. A 28-year-old woman in her second pregnancy has a booking blood test at 14 weeks of gestation that shows the presence of anti-K antibody at a titre of 1 in 16.

What is the most appropriate action?

- a) Immediate maternal blood test for fetal genotyping for K antigen
- b) Maternal blood test for fetal genotyping for K antigen after 20 weeks of gestation
- c) Measure titre every 2 weeks until 28 weeks
- d) Measure titre every 4 weeks until 32 weeks
- e) Paternal blood test for genotyping for K antigen

31. What is the optimum method of screening for chromosomal abnormality in a monochorionic twin pregnancy at 13 weeks of gestation?

- a) Amniocentesis
- b) Combined screening test
- c) Non-invasive prenatal testing
- d) Nuchal translucency measurement
- e) Quadruple test

32. A high level of vitamin A intake in the first trimester of pregnancy may be harmful to the fetus and poses a risk of teratogenicity.

What is the recommended upper limit of daily intake of vitamin A in early pregnancy?

- a) 500 µg
- b) 600 µg
- c) 700 µg
- d) 800 µg
- e) 900 µg

33. A 27-year-old multiparous woman had spontaneous rupture of membranes at 37 weeks of gestation. She is a carrier of group B Streptococcus (GBS) as detected on a vaginal swab in the second trimester.

What is the most appropriate management?

- a) Await spontaneous labour and use intrapartum antibiotic prophylaxis (IAP)
- b) Offer one dose of prophylactic antibiotic before elective caesarean delivery
- c) Offer induction of labour after 24 hours and IAP
- d) Offer induction of labour at 41 weeks and IAP
- e) Offer induction of labour immediately and IAP

34. The risk of preterm birth is considerably higher in multiple pregnancies than in singleton pregnancies.

What proportion of twin births take place before 32 weeks of gestation?

- a) 5%
- b) 10%
- c) 15%
- d) 20%
- e) 25%

35. A 31-year-old woman presents in preterm labour at 34 weeks of gestation. Her labour progresses quickly and she delivers a baby boy. Both mother and baby appear to be in good health, and the woman requests delayed cord clamping.

What time frame would be recommended for delayed cord clamping in this situation?

- a) 10–30 seconds
- b) 30 seconds–3 minutes
- c) 4–6 minutes
- d) 6–10 minutes
- e) Do not recommend delayed cord clamping

36. A woman in the first stage of labour is diagnosed with inadequate progress. The CTG trace is classified as suspicious, and a plan is made to conduct a category 2 caesarean section.

Within how many minutes from the decision should the baby be delivered?

- a) 30 minutes
- b) 45 minutes
- c) 60 minutes
- d) 75 minutes
- e) 90 minutes

37. Following a prolonged second stage of labour, a woman is taken to theatre for a trial of forceps delivery. Examination in theatre reveals the fetal head to be one-fifth palpable per abdomen. On vaginal examination, the station of the fetal head is +1.

How would the forceps delivery be classified?

- a) High
- b) Unclassifiable
- c) Low
- d) Mid
- e) Outlet

38. What proportion of women who are planning a vaginal breech birth will require an emergency caesarean section?

- a) 10%
- b) 20%
- c) 30%
- d) 40%
- e) 50%

39. A woman has been pushing in the second stage of labour for 2 hours. The head is two-fifths palpable abdominally, at -1 station, with caput and moulding. A decision is taken to proceed to delivery by caesarean section.

Which complication is more likely for this woman when compared with a caesarean section in the first stage of labour?

- a) Bladder injury
- b) Blood loss >1000 ml
- c) Intraoperative uterine trauma
- d) Perinatal asphyxia
- e) Venous thromboembolism

40. Regarding postpartum family planning, when is the soonest after delivery that a copper intrauterine contraceptive device (IUCD) can be inserted?
- a) Immediately after the third stage of labour is complete
 - b) Just prior to leaving the labour ward/delivery room
 - c) Just prior to discharge from hospital
 - d) 1 week postnatally
 - e) 6 weeks postnatally
41. According to the published literature, what is the only obstetric factor that is consistently associated with an increased risk of postpartum psychosis?
- a) Male infant
 - b) Maternal age >45 years
 - c) Premature delivery
 - d) Primiparity
 - e) Ventouse delivery
42. Following an episiotomy repair under local anaesthetic, a midwife requests a prescription for a non-steroidal anti-inflammatory drug (NSAID) for ongoing analgesia. Which NSAID carries the greatest risk of the development of acute renal failure?
- a) Diclofenac
 - b) Ibuprofen
 - c) Indomethacin
 - d) Naproxen
 - e) Paracetamol
43. Following delivery, when is the peak in the absolute risk of venous thromboembolism?
- a) 1–3 weeks
 - b) 4–6 weeks
 - c) 6–12 weeks
 - d) 3–6 months
 - e) 6–12 months

44. Methyldopa is often discontinued in the postnatal period due to its association with postnatal depression.

What other side effects are often found with this medication in the postpartum period?

Option

- a) Postural hypotension
- b) Flushing
- c) Renal impairment
- d) Cough
- e) Sedation

45. A 25-year-old woman who previously used the combined oral contraceptive pill (COCP) has just delivered and has requested contraceptive advice prior to discharge from hospital. She is fit and well. She has decided not to breastfeed.

At what point in the postpartum period could she restart the COCP?

Immediately

- a) 1 week
- b) 3 weeks
- c) 6 weeks
- d) 6 months

46. Following an eclamptic fit, a woman who is 2 days postpartum develops an aspiration pneumonia and, despite intensive care treatment, dies.

How would this maternal death be classified according to World Health Organization (WHO) criteria?

- a) Coincidental
- b) Direct
- c) Fortuitous
- d) Indirect
- e) Late

47. 38-year-old woman has had her first baby by caesarean section 7 days ago. She is seen by her community midwife and appears to be low in mood with reduced appetite and is sent to hospital for review. There is no suicidal ideation or thoughts to harm her baby, and she is diagnosed with mild depression. The woman's case notes indicate that her mother suffered from bipolar disorder and committed suicide.

What would be the most appropriate action?

- a) Admit for observation
- b) Commence fluoxetine
- c) Discharge to GP
- d) Offer counselling
- e) Refer to perinatal mental health services

48. what is the diagnostic tool of choice for tubal ectopic pregnancy?

- a) Laparoscopy
- b) MRI of pelvis
- c) Serial β -human chorionic gonadotropin (β -hCG) measurements
- d) Transabdominal ultrasound
- e) Transvaginal ultrasound

49. A woman attends the early pregnancy unit having experienced some discomfort and vaginal bleeding in early pregnancy. It is 6 weeks since her last menstrual period. She is actively trying to conceive. A transvaginal ultrasound scan is performed, but there is no evidence of an intrauterine gestation sac. Her serum β -hCG level is 1200 IU/L. The β -hCG is repeated after 48 hours and is 950 IU/L. What is the most appropriate management?

- a) Diagnostic laparoscopy
- b) Discharge the patient
- c) Medical therapy with methotrexate
- d) Perform a urinary pregnancy test in 2–3 weeks
- e) Repeat a further β -hCG in 48 hours

50. A woman attends the early pregnancy unit with a small amount of per vaginam spotting. It is 7 weeks since her last menstrual period, but her cycle is irregular. A transvaginal scan is performed, which shows an intrauterine gestation sac measuring 15 mm in diameter. A follow-up scan is arranged 14 days later, which shows a gestation sac with a diameter of 24 mm. There is now a yolk sac visible with a fetal pole with a crown–rump length of 7 mm, but no fetal heartbeat is visible.

What is the diagnosis?

- a) Incomplete miscarriage
- b) Missed miscarriage
- c) Pregnancy of unknown location
- d) Pregnancy of unknown viability
- e) Viable intrauterine pregnancy

PAPER 4

1. Which objective and validated index is typically used to classify the severity of nausea and vomiting in pregnancy (NVP)?
 - a) Morning sickness evaluation score
 - b) Korttila scale
 - c) Pregnancy-unique quantification of emesis (PUQE)
 - d) Rhodes index of nausea, vomiting and retching
 - e) Value of eMesis score (VOMS)
2. Which abnormality of acid–base balance is most commonly seen in women with NVP?
 - a) Metabolic acidosis
 - b) Metabolic acidosis with respiratory compensation
 - c) Metabolic alkalosis
 - d) Respiratory acidosis
 - e) Respiratory alkalosis
3. What is the most appropriate solution for intravenous rehydration in women with NVP?
 - a) 5% dextrose
 - b) Hartmann's solution
 - c) Human albumin solution 4%
 - d) Normal saline 0.9%
 - e) Normal saline 0.9% with potassium chloride
4. A woman who is rhesus negative is diagnosed with a molar pregnancy and undergoes surgical evacuation of the uterus. Histological analysis confirms this to be a complete molar pregnancy.

In terms of anti-D prophylaxis, what is the most appropriate management?

 - a) Administer 250 IU anti-D
 - b) Administer 1500 IU anti-D
 - c) Anti-D is not required
 - d) Arrange paternal genetic testing
 - e) Perform a Kleihauer test

5. At what gestation do the symptoms of NVP typically peak?
- a) 4 weeks
 - b) 7 weeks
 - c) 9 weeks
 - d) 12 weeks
 - e) 15 weeks
6. A 35-year-old woman who has had three previous caesarean sections presents with scar pain and vaginal bleeding at 7 weeks of gestation. What is the primary diagnostic modality for diagnosing caesarean scar pregnancies?

Options shown:

- a) Serum α -fetoprotein (AFP)
 - b) Serum β -human chorionic gonadotropin (β -hCG)
 - c) Serum progesterone
 - d) Transabdominal ultrasound scan
 - e) Transperineal ultrasound
 - f) Transvaginal ultrasound scan
7. A 33-year-old woman in her fourth pregnancy is referred to an obstetric consultant following a late booking scan. It is 16 weeks since her last menstrual period. An ultrasound scan had shown an empty uterus but a gestation sac outside the uterus surrounded by loops of bowel. What diagnostic modality can be a useful adjunct in advanced abdominal pregnancy?
- a) CT scan
 - b) Hysteroscopy
 - c) Laparoscopy
 - d) Laparotomy
 - e) MRI scan
8. A newborn baby develops sticky eyes 5 days after a vaginal delivery. His mother did not have any vaginal discharge although she had experienced dysuria and frequency a few months before pregnancy. She was having regular sexual intercourse during pregnancy with her partner of 2 years' duration. On examination, both the baby's eyes are sticky and have a yellowish discharge. The conjunctiva is inflamed.
- a) Bacterial vaginosis
 - b) Chlamydia trachomatis
 - c) Chancroid
 - d) Genital herpes
 - e) Granuloma inguinale

9. A 20-year-old woman presents with a vaginal discharge, dysuria and right upper abdominal pain 1 week after unprotected sexual intercourse.

Select most appropriate antibiotic:

- a) Azithromycin
- b) Ceftriazone
- c) Erythromycin
- d) Gentamicin
- e) Mikacin

10. Postnatal diabetes screening question

A 30-year-old para 1 woman with gestational diabetes had a normal vaginal delivery. She has stopped her metformin and insulin after birth. At discharge, you have counselled her about the risk of developing diabetes and discussed lifestyle changes.

Which one of the tests would you advise her to do postnatally?

- a) Fasting blood glucose at 6–13 weeks
- b) Fasting blood glucose after 13 weeks
- c) Oral glucose tolerance test at 6–13 weeks
- d) Oral glucose tolerance test after 13 weeks
- e) Oral glucose tolerance test after 24 weeks

11. A woman presents with hyperemesis and bleeding to the gynaecology assessment unit. An ultrasound scan suggests a complete molar pregnancy and this is confirmed following histopathological analysis of the evacuated products of conception.

What is the karyotype of the sperm that fertilised the oocyte?

- a) 23,X
- b) 23,Y
- c) 45,XO
- d) 46,XX
- e) 46,XY

12. A woman attends for a routine dating scan at 12 weeks of gestation. This shows an enlarged placenta with cystic spaces and a small fetus. A surgical evacuation is performed, which confirms a partial molar pregnancy.

What is the most likely karyotype?

- a) 47,XYY
- b) 69,XXX
- c) 69,XXY
- d) 69,XYY
- e) 69,YYY

13. Caesarean niche is commonly identified on ultrasound as a hypoechoic area seen in the anterior lower segment, representing a defect in the myometrium as a result of poor healing of the uterine scar. Niches can appear in different shapes and sizes. Most common is:

- a) Triangular
- b) Semicircular
- c) Triangular or semicircular
- d) Vertical
- e) Horizontal
- f) Postpartum Infection

14. A 30-year-old woman who is 2 weeks postnatal following a normal vaginal delivery at term presents with a 5-day history of offensive vaginal discharge and general malaise. She complains of a sore throat. Her temperature is 38°C.

What is the most likely infective etiology in this case?

- a) *Clostridium difficile*
- b) *Escherichia coli*
- c) *Staphylococcus aureus*
- d) *Streptococcus pneumoniae*
- e) *Streptococcus pyogenes*

15. A primigravida attends the delivery suite with contractions 3:10 at 36 weeks of gestation. The registrar performs a speculum and vaginal examination, which reveals that there is no evidence of ruptured fetal membranes, but she is 6 cm dilated. The woman had been treated at 29 weeks of gestation for an incidental finding of group B streptococcus (GBS) bacteriuria, but a vaginal swab performed at 32 weeks of gestation did not grow GBS.

Which is the most appropriate intrapartum management?

- a) 1.5 g benzyl penicillin 4-hourly once there has been rupture of membranes
- b) 1.5 g benzyl penicillin 6-hourly once there has been rupture of membranes
- c) Benzyl penicillin 3 g IV loading dose followed by 1.5 g IV 4-hourly while in labor
- d) Benzyl penicillin 3 g IV loading dose followed by 1.5 g IV 6-hourly while in labor

16. A female infant is born vaginally at 36 weeks of gestation following spontaneous rupture of membranes 22 hours prior. Her mother developed a temperature of 38°C in the last hour of the labor. Six hours after delivery her mother notes that the baby is lethargic and not feeding well.

What is the most likely etiology?

- a) *Mycoplasma hominis*
- b) *Plasmodium falciparum*
- c) Central nervous system herpes simplex virus
- d) Early-onset Group B *Streptococcus* disease
- e) Early-onset listeriosis

17. A 25-year-old primigravid presented to Maternity Triage from out of area at 30 weeks gestation as she had been visiting her family's farm over the last week. She developed flu-like symptoms and pyrexia 2 days ago and is now in preterm labor. The midwife reported her dilation at 5 cm LOT at station -2 with greenish liquor draining.

- a) CMV
- b) HSV
- c) GBS
- d) *Listeria*
- e) HIV

18. Greatest risk factor for CS niche

- a) Single layer closure
- b) Double layer closure
- c) Continuous suture
- d) Ischemia due to interlocking suture
- e) Does not depend on technique of CS

19. What is the chance of success of McRoberts manoeuvre with suprapubic pressure for successful delivery?

- a) 99%
- b) 95%
- c) 92%
- d) 90%
- e) 85%

20. A [age obscured]-year-old woman presents to the labor and delivery unit in her second pregnancy. She has a history of a difficult forceps delivery during her previous birth. Upon examination, she is found to be fully dilated with the fetus in the occiput posterior (OP) position, caput ++, moulding ++, VX +1.

What is the most appropriate management strategy?

- a) Cesarean section Cat 1
- b) Trial of forceps in labor room
- c) Trial of vacuum in labor room
- d) Trial of forceps in theatre
- e) Cesarean section Cat 2

21. A [age obscured]-year-old primigravida with Preterm Premature Rupture of Membranes at 33 weeks of gestation. Fetal head station is at +1 in Right Occiput Anterior position. CTG shows deep decelerations and variability of 3. What is the most appropriate next step?

- a) Ventouse
- b) Cat 2
- c) Cat 1
- d) Forceps in room
- e) Forceps in theatre

22. A 28-year-old woman is found to have Group B Streptococcus on a high vaginal swab she had taken because of vaginal discharge. She is currently 30 weeks pregnant. She has had two previous elective caesarean sections and is planning a third. She has no allergies.

What would be your proposed treatment?

- a) Antenatal penicillin
- b) Intrapartum penicillin intravenously
- c) Intrapartum penicillin orally
- d) No treatment required
- e) Postnatal penicillin to the infant

23. Most common symptom in women with caesarean niche

- a) Postmenstrual spotting
- b) Prolonged menstruation
- c) Postmenstrual spotting or prolonged menstruation
- d) Infertility
- e) Chronic pelvic pain

24. What is the best diagnostic imaging modality for caesarean niche?
- Gel instillation sonohysterography (GIS)
 - TVS
 - TAS
 - X-ray
25. CS niche defined as an indentation at the site of a caesarean section
- With a depth of at least 1.5 mm
 - With a depth of at least 2 mm
 - With a depth of at least 2.5 mm
 - With a depth of at least 3 mm
 - With a depth of at least 3.5 mm
26. Which two clinical criteria are most indicative of a diagnosis of septic shock?
- Hypotension requiring vasopressor therapy and oliguria.
 - Hypotension requiring vasopressor therapy and serum lactate greater than 2 mmol/L.
 - White blood cell count $>16 \times 10^9/L$ and serum lactate greater than 2 mmol/L.
 - White blood cell count $>16 \times 10^9/L$ and pyrexia $>38^\circ C$.
 - Pyrexia $>38^\circ C$ and oliguria.
27. A 34-year-old woman presents with a 6-month history of worsening premenstrual symptoms, including mood swings, irritability, breast tenderness, and bloating. These symptoms occur cyclically in the luteal phase and resolve with menstruation. She has no underlying mental health condition. Her symptoms interfere with her work and relationships. She has completed symptom diaries confirming moderate to severe PMS, and she is not currently trying to conceive.
- What is the most appropriate first-line treatment for this patient(2016 March
- Cognitive behavioural therapy (CBT)
 - Continuous use of a drospirenone-containing combined oral contraceptive pill (COC)
 - Levonorgestrel-releasing intrauterine system (LNG-IUS)
 - Estradiol patch with cyclic oral micronised progesterone
 - High-dose selective serotonin reuptake inhibitor (SSRI), e.g., citalopram 40 mg

28. A 32-year-old woman with epilepsy is on carbamazepine for seizure control. She is seeking long-term contraception. She prefers not to use daily pills and is particularly concerned about contraceptive efficacy. You are discussing the suitability of different contraceptive options given her medication.

Which of the following are suitable long-term contraceptive options for this patient?
(2015 September)

- a) Combined oral contraceptive pill (COC)
- b) Progestogen-only pill (POP)
- c) Etonogestrel implant (Nexplanon)
- d) Copper or levonorgestrel intrauterine device/system (IUD/IUS)
- e) Depot medroxyprogesterone acetate injection (DMPA)

29. A 29-year-old woman with epilepsy presents for contraceptive counselling. She is currently on lamotrigine monotherapy and has good seizure control. She asks if she can start the combined oral contraceptive pill (COC) for birth control. You review her current medication and possible interactions with hormonal contraception.

Which antiepileptic drug's serum concentration is significantly reduced by combined oral contraceptives?(2016 March)

- a) Carbamazepine
- b) Phenytoin
- c) Lamotrigine
- d) Phenobarbital
- e) Sodium valproate

30. A 22-year-old woman has a regular 28-day cycle. She is now on Day 20 of her cycle and presents after a condom burst during intercourse last night. She had already taken Levonelle (levonorgestrel 1.5 mg) a week ago after another episode of unprotected sex. She is now asking for further emergency contraception (EC).

What is the most appropriate management?

- a) Copper intrauterine device (Cu-IUD)
- b) Levonelle 1.5 mg
- c) Ulipristal acetate (UPA)
- d) No further action needed — reassure
- e) Levonorgestrel intrauterine system (LNG-IUS)

31. A 27-year-old woman has been using depot medroxyprogesterone acetate (DMPA) injections for contraception for the past 9 months. She presents with breakthrough bleeding, which she finds bothersome. She is otherwise well and has no signs of infection. She is up to date with her injections.

What is the most appropriate first-line management option to help control the bleeding?

- a) Start combined oral contraceptive pills (COC) for 3 months
 - b) Add norethisterone for 5–10 days
 - c) Administer the next DMPA injection earlier than scheduled
 - d) Give luteal phase progestogens cyclically
32. A 29-year-old woman with well-controlled epilepsy attends for contraceptive counselling. She is taking carbamazepine, an enzyme-inducing antiepileptic drug (EIAED). She does not wish to conceive in the near future and is looking for a reliable and effective method of contraception.

Which of the following contraceptive options is most suitable and effective for her?

- a) Combined oral contraceptive pill (COC)
 - b) Copper intrauterine device (Cu-IUD)
 - c) Levonorgestrel-releasing intrauterine system (LNG-IUS / Mirena)
 - d) Etonogestrel implant
 - e) Depot medroxyprogesterone acetate (DMPA)
33. A 50-year-old woman has been using a levonorgestrel-releasing intrauterine system (LNG-IUS) for contraception. She has been amenorrhoeic for the past year and asks when she can safely stop using contraception.

What is the most appropriate advice?

- a) She can stop now
 - b) Continue for one year after two FSH levels >30 IU/L, taken 6 weeks apart
 - c) Stop contraception once two FSH levels >30 IU/L are confirmed
 - d) Stop contraception 2 weeks before FSH levels are taken if both are >30 IU/L
34. A 30-year-old woman with epilepsy is taking carbamazepine, an enzyme-inducing antiepileptic drug (EIAED). She is seeking reliable contraception. She does not wish to conceive and would prefer a long-acting method. You review her medication and consider the interaction of her AEDs with various contraceptive methods.

Which of the following combination of methods are most appropriate for this patient?

- a) CHC, POP, DMPA, implant, LNG-IUS, copper IUD
- b) None of the listed methods are suitable
- c) CHC, POP only
- d) DMPA, LNG-IUS, copper IUD
- e) DMPA, implant, LNG-IUS, copper IUD

35. A 24-year-old woman attends the sexual health clinic requesting emergency contraception. She had unprotected intercourse 48 hours ago due to a condom failure. She is currently undergoing treatment for pelvic inflammatory disease and is taking carbamazepine for epilepsy. Which is the most appropriate method of emergency contraception to offer her?
- a) Copper intrauterine device (Cu-IUD)
 - b) Levonorgestrel 1.5 mg oral dose
 - c) Levonorgestrel 3 mg oral dose
 - d) Ulipristal acetate 30 mg oral dose
 - e) Mifepristone
36. A 28-year-old woman suffers from moderate premenstrual syndrome (PMS) and is seeking combined oral contraception. You are considering a COCP that may help alleviate her PMS symptoms.
- Which progestogen-containing COCP is most appropriate in this case?
(July 2018)
- a) Desogestrel
 - b) Levonorgestrel
 - c) Drospirenone
 - d) Gestodene
37. You see a 20-year-old G1P0 with a diagnosis of genital herpes in pregnancy. What is the gestational age at which a primary infection occurs that the risk of transmission to the baby is greatest?
- a) First trimester (8–13 weeks)
 - b) Second trimester (14–22 weeks)
 - c) Second trimester (23–28 weeks)
 - d) Third trimester (29–34 weeks)
 - e) Third trimester (34–40 weeks)
38. You admit a woman at 40 weeks of gestation in labour with confirmed genital herpes. This is thought to be a primary infection. She is offered an emergency CS that she refuses. How will you manage this patient?
- a) Administer herpes immunoglobulin to the mother and baby after birth
 - b) Administer herpes immunoglobulin to the baby after birth
 - c) Allow vaginal delivery and offer baby prophylactic aciclovir
 - d) Commence her on intravenous aciclovir and also offer the neonate intravenous acyclovir
 - e) Commence her on oral aciclovir and offer the same for the baby after delivery

39. An elective caesarean section is being performed on a 30-year-old Rhesus D negative pregnant woman at 37 weeks of gestation for placenta praevia (major). Arrangements were made and she is receiving intraoperative cell salvage (ICS) transfusion. What would be the plan with regard to Rhesus D prophylaxis in this woman assuming the baby's blood group is unknown?
- a) Administer 500 IU anti-D Ig and then take a sample of maternal blood 30–45 min after intraoperative cell salvage (ICS) infusion
 - b) Administer 750 IU anti-D Ig and then take a sample of maternal blood 30–45 min after ICS infusion
 - c) Administer 1500 IU anti-D Ig and then take a sample of maternal blood 30–45 min after ICS infusion
 - d) Administer 2000 IU anti-D Ig and then take a sample of maternal blood 30–45 min after ICS infusion
 - e) Take a maternal blood sample for the estimation of feto-maternal haemorrhage 30–45 min after the reinfusion before administering anti-D and also send cord blood for baby's blood group determination
40. A 20-year-old RhD negative woman presents with bleeding at 11 weeks of gestation. When will you consider administering anti-D Ig prophylaxis to this woman?
- a) She goes on to have a complete miscarriage
 - b) The bleeding is heavy but is stopping
 - c) The bleeding is repetitive or associated with pain
 - d) The bleeding is small and painless
 - e) If this is a threatened miscarriage and the bleeding is stopping
41. A woman is 19+2 weeks pregnant. She has developed an itchy vesicular rash and fever within the last few hours. Her GP has diagnosed chickenpox. How should this woman be managed?
- a) Administer Anti VZV IgG and arrange for foetal medicine follow-up in 2 weeks
 - b) Administer Anti VZV IgG and arrange for foetal medicine follow-up in 5 weeks
 - c) Consider acyclovir and arrange foetal medicine follow-up in 2 weeks
 - d) Consider acyclovir and arrange foetal medicine follow-up in 5 weeks
 - e) Start acyclovir within 5 days with foetal medicine follow up in 2 weeks

42. A 66-year-old patient presented with vulval pruritus. On examination there was a 1.5-cm lesion on her right labia majora with an irregular border; the lesion was tender to touch. An excision biopsy was obtained which showed squamous cell carcinoma with positive margins and invasive disease to 0.8 mm.

What is the most appropriate next step in management?

- a) Chemotherapy
- b) Radiotherapy
- c) Right hemivulvectomy with ipsilateral groin lymphadenectomy
- d) Wide local excision
- e) Wide local excision plus sentinel lymph node biopsy

43. A 55-year-old woman is referred to rapid-access, 2-week-wait gynaecologic clinic with a vulval lesion. Vulval examination reveals a 2.5 cm long left labial lesion. Biopsy of the lesion reveals squamous cell carcinoma of the vulva with >1 mm stromal invasion. Wide local excision and unilateral inguinal lymphadenectomy are undertaken.

Non-clitoral lymphatic drainage typically first drains to which of the following set of lymph nodes?

44. What does an anterior exenteration involve?

- a) Removal of tumour and adjacent structures including bladder and vagina
- b) Removal of tumour and adjacent structures including bowel and vagina
- c) Removal of tumour and adjacent structures including bowel, bladder and vagina
- d) Removal of tumour and adjacent structures including bowel, ureters and vagina
- e) Removal of tumour and vagina

45. Miss Roberts, a 25-year-old woman, visits a local healthcare clinic after noticing a painless mass on her perineum. She recently moved to the area and is unfamiliar with the local healthcare resources. On examination, a sessile growth is identified on her perineum. The patient reports no associated symptoms such as itching or pain.

What is the most likely diagnosis?

- a) Wart HPV
- b) Vulval carcinoma
- c) Molluscum contagiosum
- d) Melanoma
- e) VIN

46. Ocular syphilis commonly presents as which ophthalmic condition?

- a) Uveitis (inflammation of the uveal tract)
- b) Primary open-angle glaucoma exclusively
- c) Retinal detachment without inflammation
- d) Isolated conjunctivitis only

PAPER 5

1. A 28-year-old primigravida was admitted with an undiagnosed breech and opted to try for a vaginal delivery after counselling. What is the best indication that a cephalic-pelvic disproportion is unlikely to happen?
 - a) A clinically adequate pelvis
 - b) An estimated fetal weight that is less than 3800 g
 - c) A frank breech presentation
 - d) Good progress to full dilatation
 - e) Simultaneous easy passage of the fetal thighs and trunk through the pelvis
2. You have been called to the delivery of a 30-year-old primigravida who is pushing. The baby is in the breech position. The midwife is conducting the breech delivery and the head of the baby is trapped behind the cervix, which is only 8 cm dilated. What action will you take to deliver the head?
 - a) Apply a forceps
 - b) Apply Burns-Marshall technique
 - c) Apply Mauriceau–Smellie–Veit manoeuvre
 - d) Incise the cervix at 3 and 7 o'clock positions
 - e) Symphysiotomy
3. You have counselled a 30-year-old primigravida at 35 weeks of gestation with a breech presentation, and she agrees to an external cephalic version. You have scheduled this procedure at 36 weeks of gestation. What success rate will you give this woman?
 - a) 30%–37%
 - b) 38%–45%
 - c) 46%–55%
 - d) 56%–64%
 - e) 65%–70%

4. In the conduct of a breech vaginal delivery, what manoeuvre should be used in delivering the arms?
 - a) Bracht manoeuvre
 - b) Burns-Marshall technique
 - c) Gentle traction on the arms
 - d) Lovset's manoeuvre
 - e) Mauriceau–Smellie–Veit manoeuvre
5. A pregnant woman in her 24th week of gestation reports contact with a friend who previously has shingles/herpes zoster. What type of shingles poses the greatest risk to this woman if she is susceptible?
 - a) Cervical shingles
 - b) Lumbar shingles
 - c) Lumbosacral shingles
 - d) Ophthalmic shingles
 - e) Thoracic shingles
6. A 29-year-old G3P1 delivered a full-term male infant 3 days after she developed a chickenpox rash. She was commenced on oral aciclovir soon after the rash appeared. How will you manage the baby?
 - a) Advise against breastfeeding for 4 days
 - b) Administer VZIG IgG to the baby
 - c) Administer VZIG IgG to the baby with or without oral acyclovir
 - d) Educate the mother on the warning signs of varicella infection in the neonate and discharge
 - e) Offer the baby oral aciclovir for 1 week
7. Rh-negative mother early in pregnancy, normal levels of anti-D antibodies, at 36 weeks anti-C antibody reached to 20. She had delivered at 37 weeks of gestation. The baby is at increased risk of which of the following?
 - a) Early anemia
 - b) Early jaundice
 - c) Late anemia
 - d) Late jaundice

8. A 36-year-old at 36 weeks pregnancy was admitted in the hospital due to bleeding PV due to placenta previa. Now no bleeding. She has atypical antibodies in her blood. How often samples for crossmatch should be sent
- a) Twice per week
 - b) Daily
 - c) Once a week
 - d) Once fortnightly
 - e) Every 3 days
9. In MCDA twin pregnancy monitoring to detect TTTS starts at which week?
- a) 12 weeks
 - b) 24 weeks
 - c) 16 weeks
 - d) 28 weeks
10. An ultrasound picture showing twin pregnancy at 14 weeks. What is the best parameter to diagnose chorionicity?
- a) Concordance fetal sex
 - b) No. of placentae
 - c) Thickness of intersecting membranes
 - d) How membrane is attached to placenta
 - e) Lambda sign
11. After taking a seasonal influenza shot, how many weeks does it take to provide immunity?
- a) 2 weeks
 - b) 3 weeks
 - c) 4 weeks
 - d) 1 week
12. Mother is having Marfan's syndrome and father is normal. What is the risk to their offspring?
- a) 1:8
 - b) B. 1:4
 - c) C. 1:2
 - d) D. 1:1

13. Pregnant lady got HSV at 36 weeks and took acyclovir. Now 40 weeks in labour at 9 cm. She is refusing for emergency LSCS.
- a) Give IV acyclovir
 - b) Oral acyclovir
 - c) Emergency CS
 - d) Conservative management
 - e) Acyclovir for baby
14. Pregnant lady, for the first time, was checked at 28 weeks and was found to have antibodies. Which antibody at any level needs referral to the FM centre?
- a) Anti-D
 - b) Anti-C
 - c) Anti-K
 - d) Anti-E
15. An anomaly scan of a baby showed recessed chin, which was confirmed later on a second scan. What is the next step?
- a) Refer to fetal medicine
 - b) Repeat scan again
 - c) Offer amniocentesis
 - d) Tell patient as baby is not having any internal problem, this is just a cosmetic factor, so no need to do anything
 - e) Offer CVS
16. A pregnant woman has screening for Down syndrome at 11 weeks. Her labs are as follows:
- a) Beta HCG – normal for gestation (values were given)
 - b) Nuchal translucency – normal for gestation (values were given)
 - c) PAPP-A – 0.39 (0.25–0.40)
 - d) Other values were also normal.
17. How will you manage her?
- a) Amniocentesis
 - b) Chorionic villus sampling
 - c) Serial growth scans
 - d) cfDNA
 - e) Reassurance

18. During the course of an outpatient hysteroscopy with a 3 mm hysteroscope, a doctor finds that he has perforated the uterus. Patient observations are stable and there is no evidence of any bleeding. What is the most appropriate management?
- a) Admit for 24-hour observation and intravenous antibiotics
 - b) Arrange an urgent laparoscopy
 - c) Arrange an urgent laparotomy
 - d) Insert a urinary catheter and observe for 12 hours
 - e) Reassure and discharge
19. When comparing open myomectomy and hysterectomy for the surgical management of a fibroid uterus, which perioperative complication is more likely with hysterectomy?
- a) Haemorrhage
 - b) Infection
 - c) Ovarian artery thrombosis
 - d) Return to theatre
 - e) Visceral damage (bladder or bowel)
20. Which laparoscopic procedure appears to be associated with the highest rate of bladder injury?
- a) Laparoscopic-assisted vaginal hysterectomy (LAVH)
 - b) Laparoscopic myomectomy
 - c) Laparoscopic ovarian cystectomy
 - d) Subtotal laparoscopic hysterectomy
 - e) Total laparoscopic hysterectomy
21. A 30-year-old woman with a normal body mass index (BMI) has a laparoscopic ovarian cystectomy for a persistent 6 cm simple ovarian cyst. Preoperative tumour markers were normal. The tissue is placed in a retrieval bag. Ideally, through which port/incision should the tissue be removed?
- a) Lateral laparoscopic port
 - b) McBurney's point incision
 - c) Midline suprapubic port
 - d) Palmer's point incision
 - e) Umbilical port

22. Which operative procedure for vaginal vault prolapse results in the lowest rate of recurrence?
- a) High uterosacral ligament suspension
 - b) High ventrofixation
 - c) Modified McCall culdoplasty
 - d) Open abdominal sacrocolpopexy
 - e) Sacrospinous fixation
23. A woman has a laparoscopy for suspected appendicitis at 18 weeks of gestation. What is the maximum recommended intra-abdominal pressure during the procedure?
- a) 8 mmHg
 - b) 10 mmHg
 - c) 12 mmHg
 - d) 15 mmHg
 - e) 20 mmHg
24. A woman has had a successful trial of forceps delivery under spinal anaesthetic. What is the minimum duration that the catheter should remain in situ to reduce the risk of asymptomatic bladder overfilling?
- a) 3 hours
 - b) 6 hours
 - c) 9 hours
 - d) 12 hours
 - e) 24 hours
25. A 48-year-old woman has undergone a midurethral tape procedure for stress urinary incontinence and is ready to be discharged. Within what time frame should she be seen as an outpatient to exclude tape erosion?
- a) 6 weeks
 - b) 2 months
 - c) 3 months
 - d) 6 months
 - e) 12 months

26. A patient is seen 2 weeks after a laparoscopic hysterectomy. An intraoperative bladder injury was noted and repaired laparoscopically by the urologist. A catheter has been left in situ for 2 weeks. A retrograde cystogram subsequently reports a leak from the bladder. The woman is clinically well. What is the most appropriate management?
- a) Leave catheter in situ and repeat cystogram in 1 week
 - b) Perform cystoscopy to assess the defect
 - c) Repeat laparoscopy and secondary repair
 - d) Request a CT intravenous urogram to check ureters are not damaged
 - e) Urgent urological review
27. A 49-year-old woman had a total abdominal hysterectomy and bilateral salpingo-oophorectomy for irregular menstrual bleeding and pelvic pain, related to previous diagnosis of endometriosis. Her immediate postoperative recovery was uneventful. Seven days later, she is readmitted with a vaginal loss of watery fluid and blood-stained urine. What is the most likely diagnosis?
- a) Detrusor overactivity
 - b) Urinary retention with overflow
 - c) Urinary tract infection
 - d) Vaginal candidiasis
 - e) Vesicovaginal fist
28. You are running an antenatal clinic for women with epilepsy with a neurologist and a midwife. You are counselling a patient about the risk of epilepsy in pregnancy and the importance of complying with the medications. What is the strongest risk factor for sudden unexpected death in epilepsy?
- a) Failure to comply with medication
 - b) Sudden discontinuation of medication
 - c) Tonic-clonic seizures with the patient asleep
 - d) Uncontrolled tonic-clonic seizures
 - e) Very frequent and repeated seizures

29. What advice should be given to a 26-year-old woman suffering from epilepsy that has been well controlled (with no seizures for the past 2 years) on sodium valproate who has attended for pre-conception counselling?
- a) Change anti-epileptic drugs (AED) to lamotrigine to control seizures and commence on folic acid 5 mg/day
 - b) Change AED to lamotrigine to control seizures and commence on folic acid 5 mg/day for 3 months prior to pregnancy
 - c) Change AED to the lowest effective and least teratogenic AED dose and commence on folic acid 5 mg/day for at least 3 months before pregnancy
 - d) Reduce the dose of sodium valproate to the lowest effective one and commence on folic acid 5 mg/day for at least 3 months prior to conception
30. A 26-year-old woman was admitted into the obstetrics unit at 20 weeks of gestation feeling generally unwell and with diarrhoea. She was being treated as a case of gastroenteritis. She failed to respond to treatment on admission and on the third day deteriorated rapidly and died. A post-mortem showed that she had died from sepsis. What has been identified as the most common aspect of substandard care in the management of pregnant women with sepsis that results in severe morbidity or mortality?
- a) Delay in instituting appropriate antibiotic therapy
 - b) Failure to institute appropriate antibiotic therapy
 - c) Failure to institute appropriate resuscitative measures
 - d) Failure of recognition of signs of sepsis
 - e) Failure of recognition of symptoms of sepsis
31. A woman died from genital sepsis that occurred at 30 weeks of gestation. What is the most common site of infection associated with septic shock in pregnancy?
- a) Ascending genital tract
 - b) Gastrointestinal
 - c) Pharyngeal
 - d) Pulmonary
 - e) Urinary tract

32. A 26-year-old pregnant woman presents with very severe constant abdominal pain of 3 days duration at 30 weeks of gestation. She is examined and found to have abdominal tenderness. There are no specific localized signs. She is tachycardic, but her blood pressure is normal. The uterus is irritable, but the fetal heart is normal on cardiotocography (CTG). Urinalysis is negative for protein, glucose, and nitrites. She is administered pain killers, but the pain has remained unchanged after 24 h. What is the most likely cause of the pain?
- a) Degenerating uterine fibroids
 - b) Genital tract sepsis
 - c) Ovarian torsion/haemorrhage
 - d) Placental abruption
 - e) Pyelonephritis
33. What recommendation does NICE make about measuring the fetal heart rate in labour?
- a) That CTGs should be discontinued after 30 min where it has been normal
 - b) That CTGs should be performed on all women in suspected or established labour
 - c) That CTGs should be discontinued once they have been confirmed to be normal
 - d) That intermittent auscultation of the fetal heart should occur every 10–15 min
 - e) To record accelerations and decelerations if heard
34. The midwife is admitting a woman into the alongside midwifery unit in your maternity hospital. What feature in her initial assessment will warrant a transfer of this low-risk woman to an obstetric unit?
- a) A pulse of over 110 beats/min on two occasions 30 min apart
 - b) A single diastolic reading of 100 mmHg or more or raised systolic BP of 150 mmHg or more
 - c) Either raised diastolic BP of 90 mmHg or more or raised systolic BP of 140 mmHg or more on 2 consecutive readings taken 30 min apart
 - d) Rupture of fetal membranes 12 h before onset of established labour
 - e) The presence of single strands of meconium

35. You have admitted a primigravida at 41 weeks of gestation contracting regularly for the past 3 h. Fetal membranes are intact. This has been an uncomplicated pregnancy. What is the recommendation for monitoring the fetal heart rate as part of the initial assessment?
- a) Auscultate the fetal heart at the first contact with the woman in labour and at each further assessment
 - b) Auscultate the fetal heart for a minimum of 30 s immediately after a contraction and record it as a single rate (record for at least 1 min)
 - c) Give the woman the option of having a continuous or intermittent monitoring of the fetal heart
 - d) Palpate the maternal pulse to differentiate between the maternal and fetal heart if the fetal heart rate is at a rate similar to maternal heart rate
 - e) Perform a CTG on admission as low-risk women in suspected or established labour to first establish a normal heart rate
36. A 25-year-old woman presents with absent fetal movements for 24 h. What would be the best method of diagnosing an intrauterine fetal death (IUFD) in this woman?
- a) A cardiotocography showing an absent fetal heartbeat
 - b) Auscultation of the fetal heart with a sonicaid
 - c) Doppler ultrasound scan
 - d) Real-time ultrasound scan
 - e) Real-time ultrasound with colour Doppler
37. A 27-year-old woman who is known to be a group B haemolytic Streptococcus carrier has been diagnosed with an intrauterine fetal death at 34 weeks of gestation. She is being induced with prostaglandins and mifepristone. What management would you recommend for her group B haemolytic Streptococcus carrier status?
- a) Antibiotics as soon as possible (i.e. at the time of induction of labour)
 - b) Antibiotics post delivery
 - c) Antibiotics when she ruptures her membranes
 - d) Intrapartum antibiotics with onset of contractions
 - e) No antibiotics are indicated

38. What will make you classify a 26-year-old female haemophilia carrier as obligate?
- a) Her father is a carrier
 - b) Her father is affected or she has a son who is a carrier and an affected relative in the paternal line
 - c) Her father is affected or she has an affected son and an affected relative in the maternal line
 - d) Her father is a carrier or she has an affected son and an affected relative in the paternal line
 - e) She has an affected son
 - f) She has an affected son and her father is a carrier
39. You see a 23-year-old woman and her 29-year-old partner who has haemophilia A. There is uncertainty as to the severity of his haemophilia. What is the main difference between the severe and the mild/moderate forms of haemophilia with regard to clinical manifestations?
- a) All bleed into joints and muscles, but those with the mild/moderate forms respond better to tranexamic acid treatment
 - b) All bleed spontaneously into joints and muscles, but those with the severe forms respond poorly to correction of factor levels
 - c) Those with severe haemophilia bleed easily when traumatized compared to those with mild and moderate forms
 - d) Those with severe haemophilia bleed spontaneously into muscles and joints, while those with the mild/moderate forms may bleed following trauma or invasive procedures
 - e) Those with severe haemophilia also have low platelet count and bleed when traumatized while those with mild/moderate forms have normal platelet count and do not bleed in general, unless factor levels are very low
40. A 26-year-old woman attends with her partner who has severe haemophilia A. She is now 7 weeks pregnant. What advice should they be given?
- a) Measure maternal factor VIII levels and then offer invasive testing for prenatal diagnosis after 10+6 weeks of gestation
 - b) Offer amniocentesis for prenatal diagnosis from 15 weeks
 - c) Offer chorionic villus sampling (CVS) for prenatal diagnosis at 11–13+6 weeks of gestation
 - d) Offer fetal sexing by free fetal DNA analysis from 9 weeks of gestation
 - e) Offer fetal sexing by ultrasound scan at 12–14 weeks of gestation

41. A 22-year-old woman visits for her routine anomaly ultrasound scan at 20 weeks and informs the team that her partner has severe haemophilia B. The detailed scan is normal, and she is informed that the fetus is a male. What advice should be offered to this woman?
- a) Planned elective CS at 39 weeks of gestation
 - b) Prenatal diagnosis by means of amniocentesis as soon as possible
 - c) Prenatal diagnosis by means of amniocentesis in the third trimester
 - d) Prenatal diagnosis by means of cordocentesis (fetal blood sampling)
 - e) Reassurance and support during the pregnancy
42. It is well recognized that monochorionic monoamniotic twin pregnancies have a higher perinatal loss rate than monochorionic diamniotic twin pregnancies. What gestations carry the greatest risk of perinatal loss?
- a) Between 22 and 26 weeks of gestation
 - b) Before 24 weeks of gestation
 - c) Between 24 and 28 weeks of gestation
 - d) Between 26 and 32 weeks of gestation
 - e) Between 32 and 34 weeks of gestation
43. What type of vascular anastomoses in monochorionic twin pregnancies is most commonly associated with twin-to-twin transfusion syndrome (TTTS)?
- a) Bidirectional vascular anastomoses
 - b) Unilateral artery-artery anastomoses
 - c) Unilateral artery-vein anastomoses
 - d) Unilateral vein-artery anastomoses
 - e) Unilateral vein-vein anastomoses
44. At what gestational age is TTTS most likely to develop in monochorionic twin pregnancies?
- a) 14 weeks
 - b) 16 weeks
 - c) 18 weeks
 - d) 20 weeks
 - e) 22 weeks

45. A 38-year-old G1P0 presents at 31 weeks of gestation with generalized pruritus that is not associated with a rash. The itching, which is worse at night, is on her palms and soles. Her stools have slowly become paler, but she is not jaundiced. You suspect obstetric cholestasis and request a liver function test that includes bile acids. These come back as abnormal, thus confirming the diagnosis. How often should her liver function test be monitored?
- a) Every 1–2 days
 - b) Every 3–4 days
 - c) Every 5–6 days
 - d) Every 7 days
 - e) Once every 1–2 weeks
46. It has been recognized that various events during the intrapartum period are known to reduce the risk of operative vaginal delivery. What is the single most important factor that has been shown to help avoid operative vaginal delivery in a 29-year-old primigravida?
- a) Appropriate analgesia during labour
 - b) Continuous support during labour
 - c) Effective uterine contractions
 - d) Ensuring adequate maternal hydration during labour
 - e) Regular pelvic examination and monitoring of progress of labour
47. You have examined a 28-year-old primigravida who went into spontaneous labour at 39 weeks of gestation following an uncomplicated pregnancy. She has been fully dilated for the past 3 h, and you feel that her labour should be expedited. The fetal head is 1/5 palpable per abdomen and there is caput at 2 cm below the spines. What is the level of the biparietal diameter in this baby?
- a) At least 1 cm above the spines
 - b) At the level of the spines
 - c) Just above the spines
 - d) 1 cm below the spine
 - e) 2 cm above the spine

48. A Foundation Year 2 doctor sustains a needle stick injury while you were taking her through the suturing of an episiotomy in a woman who has just had a normal vaginal delivery. If this woman is HIV positive, what would be the estimated risk of this trainee acquiring the infection?
- a) 1 per 1000 injuries
 - b) 2 per 1000 injuries
 - c) 3 per 1000 injuries
 - d) 4 per 1000 injuries
 - e) 5 per 1000 injuries
49. A midwife in the unit was suturing an episiotomy of a woman who is known to be HIV positive and sustains a needle injury. Within which period of commencing PEP is it likely to be most effective?
- a) Within 1 h of the exposure
 - b) Within 24 h of the exposure
 - c) Within 48–72 h of the exposure
 - d) Within 3–4 days of the exposure
 - e) Within 1 week of the exposure
50. The rationale for post-exposure prophylaxis is that viral replication can be inhibited shortly following the exposure. Once the mucosal barrier has been breached, how long does it take the virus to be detected in blood?
- a) Up to 24 h
 - b) Up to 48 h
 - c) Up to 72 h
 - d) Up to 96 h
 - e) Up to 120 h

PAPER 6

1. A 35-year-old primigravida complained of a breast lump when she attended the antenatal clinic for her routine visit at 24 weeks of gestation. Further investigations have confirmed that this is indeed a malignancy. What is the impact of the pregnancy on the prognosis of the cancer?
 - a) It has no impact on prognosis
 - b) It is associated with a poorer prognosis if the cancer is human epidermal growth factor receptor 2 (HER2) and oestrogen-receptor positive
 - c) It is associated with a worse prognosis
 - d) It is associated with an improved prognosis if the cancer is human epidermal growth factor receptor 2 (HER2) and oestrogen-receptor negative
 - e) Prognosis is dependent on the gestational age (better with late diagnosis) at diagnosis of the cancer
2. A 36-year-old woman who is 30 weeks pregnant has been referred by the midwife to the consultant-led antenatal clinic with a lump in her left breast. You have examined and found a discrete lump on the left breast with features suspicious of malignancy. What should be the most appropriate investigation to offer to this woman?
 - a) Fine needle aspiration biopsy
 - b) Fluid aspiration for cytology
 - c) Mammography
 - d) Ultrasound-guided biopsy
 - e) Ultrasound scan
3. What advice should a woman who had breast cancer and wishes to conceive after completing her course of tamoxifen but has been found on imaging to have suspicious metastases in the lungs be given?
 - a) Can conceive provided she has been off tamoxifen for 3 months
 - b) That pregnancy is contraindicated until after treatment
 - c) To avoid pregnancy as life expectancy is limited and treatment of metastasis will be compromised
 - d) To delay pregnancy for 12 months to allow for treatment of the metastasis
 - e) Will be able to have chemotherapy and continue with pregnancy provided she is not given chemotherapy for the first 3 months

4. A 24-year-old woman is admitted at 30 weeks of gestation with regular uterine contractions. This is her first pregnancy and until now the pregnancy has been uncomplicated. She is examined, and the cervix is found to be soft with a closed os. A decision is taken to give her a course of corticosteroids and to commence her on the tocolytic nifedipine. What is the benefit of giving her nifedipine?
- a) Associated with a reduction in the incidence of preterm delivery/birth
 - b) Associated with improved mortality
 - c) Associated with improved neonatal morbidity
 - d) Associated with improved perinatal morbidity
 - e) Prolongs the pregnancy by 2–7 days
5. What is severe postpartum haemorrhage?
- a) Blood loss of more than 1000 mL
 - b) Blood loss of more than 1500 mL
 - c) Blood loss of more than 2000 mL
 - d) Blood loss of more than 2500 mL
 - e) Blood loss of more than 3000 mL
6. What is the most common cause of primary postpartum haemorrhage?
- a) Disorders of thrombin
 - b) Disorders of tissues
 - c) Disorders of tone
 - d) Disorders of trauma
 - e) Disorders of trauma and thrombin
7. A 35-year-old primigravida presents with a sudden onset of epigastric pain that is radiating to the back. Prior to this, she had been seen repeatedly with right hypochondrial pain. She is now 30 weeks pregnant. Her BP at the last antenatal clinic visit was normal. She is afebrile, but tachycardic (pulse: 110 bpm) and hypotensive (BP = 80/50 mmHg). What is the most likely diagnosis?
- a) Abruption placenta
 - b) Hepatic rupture
 - c) Pre-eclampsia
 - d) Rupture of aortic aneurysm
 - e) Splenic rupture

8. What is the most important risk factor for postpartum sepsis?
- a) Asymptomatic bacteriuria
 - b) Caesarean section
 - c) Manual removal of the placenta
 - d) Pre-labour rupture of fetal membranes
 - e) Prolonged labour
9. A couple are anxious about the risk of their baby being born with an inherited autosomal recessive condition. Their anxiety stems from the fact that their relative recently had a baby with an autosomal recessive condition. They want to know what the most common autosomal recessive condition worldwide is?
- a) Alpha-thalassaemia
 - b) Beta-thalassaemia
 - c) Cystic fibrosis
 - d) Haemophilia
 - e) Sickle cell disease
10. You are counselling a patient about pre-implantation genetic diagnosis (PGD). They have been told that there is a risk of them having a baby with an autosomal recessive condition. What is a characteristic of an autosomal recessive condition?
- a) Both parents have to carry the abnormal gene for their children to be affected
 - b) Half of the offspring will be affected by the condition
 - c) They tend to be less severe and life-threatening
 - d) The affected individual needs to have only one copy of abnormal gene for the disease to be expressed
 - e) The risk to the offspring of an affected parent is 1:4
11. A 27-year-old primigravida is admitted at 35 weeks of gestation with a blood pressure of 110/110 mmHg, severe proteinuria and brisk reflexes. She also has headaches and visual disturbances. She had a kidney transplant 2 years ago and was switched from an angiotensin-converting enzyme inhibitor (ACEI) in early pregnancy to labetalol. You have decided to commence her on magnesium sulphate (MgSO_4) having sent a blood sample for an urgent renal function test because she has hardly voided in the last 6 h. What would be the regimen you will start with?
- a) 2 g loading dose followed by 1 g/h maintenance
 - b) 2 g loading dose followed by 0.5 g/h maintenance dose
 - c) 4 g loading dose followed by 1 g/h
 - d) 4 g loading dose followed by 0.5 g/h
 - e) Delay commencing MgSO_4 until the result of renal function test is obtained

12. You are planning to induce a renal transplant recipient at 38 weeks of gestation. She has been taking 10 mg of prednisolone throughout pregnancy. Her renal function is stable and her BP is well controlled on labetalol. What additional precautions should you take in labour?
- a) Administer a single intravenous dose of hydrocortisone 100 mg
 - b) Commence her on intravenous hydrocortisone at a dose of 50 mg every 2–3 h
 - c) Commence her on intravenous hydrocortisone at a dose of 50–100 mg every 6–8 h
 - d) Increase prednisolone dose to 20 mg three times in labour
 - e) Stop the prednisolone once she is in established labour
13. A 25-year-old woman who had kidney transplant 2 years ago wishes to embark on pregnancy. Her graft function has been stable but she has significant proteinuria and is on an ACEI for the control of hypertension. What advice should she be given?
- a) Continue to ACEI until a positive pregnancy test and then reassess need for treatment and if required offer a non-teratogenic option
 - b) Continue with ACEI until a positive pregnancy test, switch to a non-teratogenic option but recommence after 12–14 weeks
 - c) Stop the ACEI
 - d) Stop ACEI and recommence after 12 weeks of gestation
 - e) Switch from the ACEI to another antihypertensive that is not teratogenic
14. A 30-year-old woman has been diagnosed with acute kidney injury following an obstetric complication. What is the most common cause of acute kidney injury in obstetrics?
- a) Antepartum haemorrhage especially placental abruption
 - b) Drugs such as NSAIDs
 - c) Postpartum haemorrhage
 - d) Pre-eclampsia
 - e) Sepsis
15. A primigravida presents at 34 weeks of gestation with a BP of 160/115 mmHg, 3+ proteinuria and brisk reflexes. She is a known case of acute kidney injury, diagnosed at 30 weeks of gestation. What treatment and what dose should she be given to prevent the risk of fits?
- a) Loading dose of MgSO_4 1 g followed by an infusion dose of 0.5 g/h
 - b) Loading dose of MgSO_4 2 g followed by a maintenance dose of 0.5 g/h
 - c) Loading dose of MgSO_4 2 g followed by a maintenance dose of 1 g/h
 - d) Loading dose of MgSO_4 4 g followed by an infusion dose of 0.5 g/h
 - e) Loading dose of MgSO_4 4 g followed by an infusion dose of 1 g/h

16. A 30-year-old G3P0 type I diabetic who has been on an insulin pump from 4 months before pregnancy is admitted for induction of labour at 38 weeks of gestation. What would be the management plan once she is in established labour?
- a) Allow labour to progress without the need to monitor as the pump adjusts her insulin requirement
 - b) Commence her on an insulin sliding scale
 - c) Continue with the insulin pump but monitor blood glucose when appropriate
 - d) Discontinue the insulin pump
 - e) Increase the basal insulin dose and continue with the maintenance dose
17. A 36-year-old woman who suffers from ulcerative colitis (UC) that was refractory to standard treatment was commenced on the biologic agent infliximab. She continued with this medication throughout the pregnancy. What is the main impact of this on the management of the mother and baby after delivery?
- a) Levels of infliximab clear from the baby after 2 months
 - b) Maternal immunity is depressed more than normal
 - c) No live vaccines should be administered to the baby for the first 6 months
 - d) The levels of infliximab clear from the baby after 3 months
 - e) There is an increased risk of neonatal infection
18. A 30-year-old woman who suffers from an active inflammatory bowel disease (IBD) reports that she is pregnant. She is currently taking sulfasalazine therapy. What is the likely course of the IBD in the pregnancy?
- a) It is likely to become more active during pregnancy
 - b) It is likely to remain active
 - c) It is likely to respond better to treatment than outside pregnancy
 - d) The course tends to be fluctuating between remission and active disease
 - e) There is a higher chance of remission
19. What is the estimated detection rate for trisomy 21 when nuchal translucency, absence of the nasal bone, raised ductus venosus Doppler, tricuspid regurgitation and maternal serum biomarkers are combined at 11–13 weeks of gestation?
- a) 88% for a false positive rate of 5%
 - b) 90% for a false positive rate of 5%
 - c) 95% for a false positive rate of 3%
 - d) 97% for a false positive rate of 5%
 - e) 99% for a false positive rate of 5%

20. A 29-year-old woman with twins is seen for her combined first-trimester aneuploidy scan at 12 weeks of gestation. Why will the false positive rate of her test be twice as high as in singleton pregnancies?
- a) One of the twins is hydropic
 - b) The twins are dichorionic
 - c) The twins are monochorionic
 - d) There is demise of one twin
 - e) There is a significant difference in CRL measurements
21. After approximately how many transfusions should chelation be considered in a 33-year-old woman with haemoglobinopathy who is desirous of starting a family?
- a) 5–6
 - b) 7–10
 - c) 10–15
 - d) 10–20
 - e) 15–25
22. Which hormone is responsible for reducing the water content of stools during pregnancy and thus making them harder?
- a) High circulating aldosterone
 - b) High circulating oestrogen levels
 - c) Motilin
 - d) Renin
 - e) Somatostatin
23. A 20-year-old woman is seen at 8 weeks of gestation complaining of chronic constipation since she missed her last period. Her bowels open twice a week and furthermore she strains for more than 25% of the time when she defaecates. She has been prescribed a hyperosmolar laxative. What is the most unwanted side effect of this medication for this woman?
- a) Abdominal bloating and flatulence
 - b) Diarrhoea
 - c) Electrolyte imbalance
 - d) Miscarriage
 - e) Teratogenicity

24. A 30-year-old woman with three previous mid-trimester miscarriages has been referred for the assessment for an abdominal cerclage. What will be the indication for an abdominal cerclage in this patient?
- a) Previous failed McDonald suture
 - b) Previous failed Shirodkar suture
 - c) She has a short vaginal cervix
 - d) She has had a previous cone biopsy
 - e) The cervix is grossly disrupted
25. A 29-year-old woman who has had two mid-trimester miscarriages had a transabdominal cerclage with a posterior knot at 11 weeks of gestation. She presents at 19 weeks of gestation with a brownish vaginal loss and disappearance of pregnancy signs of 3 days duration. An ultrasound scan confirms an intrauterine fetal death of 18 weeks of gestation. How best will she be managed?
- a) Hysterotomy and leave stitch in-situ
 - b) Posterior colpotomy to remove stitch and offer suction evacuation
 - c) Remove the stitch by laparotomy and induce delivery
 - d) Remove the stitch by posterior colpotomy and induce delivery
 - e) Remove the stitch laparoscopically and induce delivery
26. A 33-year-old primigravida is seen for booking at 10 weeks gestation. Following counselling, she opts for the integrated test for aneuploidy. What is the main advantage of this test over the first-trimester screening test?
- a) It has a lower false-positive rate
 - b) It has a higher detection rate for aneuploidy
 - c) It is more cost-effective
 - d) It has a better acceptance by patients
 - e) It is less time-consuming
27. A 30-year-old woman attends at 12 weeks for a nuchal translucency measurement as part of screening for aneuploidy. What approximate detection rate for trisomy 21 using nuchal translucency alone will you quote to this woman?
- a) 77%
 - b) 80%
 - c) 87%
 - d) 90%
 - e) 93%

28. What would be a reliable means of assessing current ovarian function and therefore prediction of fertility in a childhood survivor of cancer treatment?
- a) Anti-Müllerian hormone (AMH)
 - b) Follicular-phase follicle stimulating hormone (FSH)
 - c) Luteal phase progesterone
 - d) Menstrual regularity
 - e) Ovarian ultrasound scan
29. A 17-year-old childhood survivor of cancer is seen with primary amenorrhoea. Various investigations are performed, and she is then offered what is considered adequate cyclical hormone replacement. She, however, fails to have a withdrawal bleed. What is the implication of this response?
- a) That she has hypergonadotrophic hypogonadism
 - b) That she has hypogonadotrophic hypogonadism
 - c) That she has hypothalamic dysfunction
 - d) That her uterine function has been compromised by the treatment
 - e) That there is likely to be atresia of the vagina following treatment
30. What is the main advantage of robotic surgery over laparoscopic surgery?
- a) Better precision and microsurgical dissection
 - b) Decreased hospital stay
 - c) Improved cosmesis
 - d) Less pain after surgery
 - e) Quicker recovery for the patient
31. A 46-year-old woman underwent a subtotal hysterectomy as a treatment for heavy menstrual bleeding. In approximately what percentage of women who have had a subtotal hysterectomy will persistent cyclical bleeding be a symptom?
- a) <3%
 - b) 5%
 - c) 10%
 - d) 15%
 - e) 20%

32. A hysterectomy was offered to a 37-year-old woman with heavy menstrual bleeding that was refractory to medical treatment. What would be the main advantage of a subtotal hysterectomy over a total hysterectomy?
- a) Better sexual/orgasmic satisfaction
 - b) Lower morbidity
 - c) Reduced impact on ovarian function
 - d) Reduced incidence of bladder dysfunction
 - e) The surgical expertise required to perform it is less than that for a total hysterectomy
33. What is the commonest cause of vulval itching in children?
- a) Atopic vulvitis
 - b) Contact dermatitis
 - c) Lichen sclerosus
 - d) Vulvovaginal candidiasis
 - e) Vulval seborrhoeic eczema
34. Approximately what proportion of women affected by tubo-ovarian abscess are nulliparous?
- a) 20%
 - b) 30%
 - c) 40%
 - d) 50%
 - e) 60%
35. What is the most common cause of tubo-ovarian abscess (TOA) in women of reproductive age?
- a) Ascending pelvic inflammatory disease
 - b) Appendicitis
 - c) Diverticulitis
 - d) Pyelonephritis
 - e) Tuberculous salpingitis

36. A 25-year-old woman is admitted with lower abdominal pain associated with a fever and diarrhoea. She also had a history of painful micturition and a purulent urethral discharge a week before. When she is examined, there is localized tenderness to the left lower abdomen with a suspicious mass. A diagnosis of a tubo-ovarian abscess (TOA) is suspected, and an ultrasound scan is ordered. What finding from blood investigations is the most sensitive predictor of TOA?
- a) High blood lactate
 - b) High C-reactive protein
 - c) High erythrocyte sedimentation rate (ESR)
 - d) Raised interleukin 6
 - e) Raised white blood cell count
37. A 33-year-old woman has been diagnosed with carcinoma of the cervix stage 1A2. She has been offered fertility-sparing surgery in the form of trachelectomy. What does this procedure entail?
- a) Removal of the cervix
 - b) Removal of the cervix and parametrial tissue
 - c) Removal of the cervix, parametrium and parametrial nodes
 - d) Removal of the cervix, upper vagina and parametrium
 - e) Removal of the cervix, upper vagina, parametrium and lymph nodes
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- a) It is likely to become more active during pregnancy
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 - c) Remove the stitch by laparotomy and induce delivery
 - d) Remove the stitch by posterior colpotomy and induce delivery
 - e) Remove the stitch laparoscopically and induce delivery
46. You are seeing a 29-year-old woman in the clinic for counselling. She has had four mid-trimester miscarriages and the last two followed a failed vaginal cerclage (one a McDonald suture and the other a Shirodkar suture). When she was examined at her last clinic visit, there was very little vaginal cervix. She is now 6 weeks pregnant. What would be the approach to minimize the risk of miscarriage in this woman?
- a) Offer an abdominal cerclage at this gestation
 - b) Offer a transabdominal cerclage at 10–11 weeks
 - c) Repeat McDonald suture at 14 weeks
 - d) Repeat Shirodkar suture at 14 weeks
 - e) Serial ultrasound scan and insert a Shirodkar suture when the cervix is less than 15 mm long

47. A 30-year-old woman attends at 12 weeks for a nuchal translucency measurement as part of screening for aneuploidy. What approximate detection rate for trisomy 21 using nuchal translucency alone will you quote to this woman?
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- a) It has a lower false-positive rate
 - b) It has a higher detection rate for aneuploidy
 - c) It is more cost-effective
 - d) It has a better acceptance by patients
 - e) It is less time-consuming
49. You have referred a 39-year-old woman to the Fetal Medicine Unit for counselling about non-invasive prenatal testing (NIPT). This test is dependent on the isolation of adequate cell-free fetal DNA in the maternal circulation. What is the minimum percentage of sufficient cell-free fetal DNA required to be present in total cell-free DNA for NIPT to be feasible?
- a) 2%
 - b) 3%
 - c) 4%
 - d) 5%
 - e) 6%
50. An ultrasound is performed at 14 weeks of gestation in a 27-year-old primigravida, and it shows a singleton viable pregnancy and an adnexal mass. What feature on this ultrasound scan will be helpful in distinguishing between an invasive and a benign cystic adnexa mass?
- a) Absence of significant vascularity in the mass
 - b) A complex appearance of the mass
 - c) A partly solid and partly cystic mass
 - d) Oedema of the cystic mass
 - e) The presence of the 'ovarian crescent sign'

PAPER 7

1. A 24-year-old woman is seen at 18 weeks of gestation having been inadvertently treated by her GP with the tetracycline derivative doxycycline for a suspected infection in the first trimester. She is anxious about this treatment. What should she be told about the risk of this treatment to the pregnancy?
 - a) It is associated with an increased risk of facial clefting
 - b) It is associated with an increased risk of neural tube defects
 - c) It is associated with an increased risk of tooth and bone discolouration
 - d) It is associated with congenital malformations – specifically abnormal tooth formation
 - e) It is not associated with an increased risk as used in the first trimester
2. What is the most common adnexal cystic lesion diagnosed after 16 weeks of gestation?
 - a) Corpus luteum cyst
 - b) Follicular cyst
 - c) Haemorrhagic cysts
 - d) Luteoma of pregnancy
 - e) Matured cystic teratoma
3. A 25-year-old woman on high doses of sodium valproate reports that she has unexpectedly fallen pregnant. She is currently 8 weeks pregnant. What would be your next management plan?
 - a) Commence her on high-dose folic acid (5 mg daily), stop the sodium valproate and commence on lamotrigine
 - b) Commence on high-dose folic acid (5 mg daily), stop sodium valproate and commence on levetiracetam
 - c) Commence on high-dose folic acid (5 mg daily), stop sodium valproate and commence on levetiracetam and refer for urgent neurological review
 - d) Commence on high-dose folic acid (5 mg daily), stop sodium valproate and refer to neurologist for review
 - e) Commence on high-dose folic acid (5 mg daily) and recommend continuation of sodium valproate but refer urgently to neurological review of medication

4. A 30-year-old pregnant woman has had a cardiac arrest and is undergoing cardiopulmonary resuscitation (CPR). When should a perimortem caesarean section be considered in this woman?
- a) She is greater than 20 weeks pregnant, and correctly performed CPR has failed to result in rapid return of spontaneous circulation (ROSC) after 4 min
 - b) She is greater than 20 weeks pregnant, and correctly performed CPR has failed to result in rapid return of spontaneous circulation after 5 min
 - c) She is at least 24 weeks pregnant and has had cardiac arrest for more than 5 min
 - d) She is at least 24 weeks pregnant and correctly performed CPR has failed to result in rapid return of spontaneous circulation (ROSC) after 4 min
 - e) She is at least 24 weeks pregnant and correctly performed CPR has failed to result in rapid return of spontaneous circulation (ROSC) after 5 min
5. What is the ideal time within which a perimortem caesarean section should be completed in the interest of the mother from the cardiac arrest?
- a) 3 min after a cardiac arrest
 - b) 4 min after a cardiac arrest
 - c) 5 min after a cardiac arrest
 - d) 6 min after a cardiac arrest
 - e) 10 min after a cardiac arrest
6. A 30-year-old woman has just had a cardiac arrest on the ward. You commenced CPR and need to instruct your assistant to deliver continuous oxygen by face mask. What is the recommended rate of delivery of oxygen to this woman?
- a) 1–2 litres per min
 - b) 2–4 litres per min
 - c) 4–6 litres per min
 - d) 6–10 litres per min
 - e) 10–15 litres per min

7. A 23-year-old woman suffered a cardiac arrest and was brought into the A&E where CPR was initiated, and in the course of this a perimortem CS was performed. Unfortunately the patient failed to respond to CPR and was pronounced dead 30 min after admission. What would be the next step in her management?
- a) Complete the perimortem CS and then inform the coroner and her relatives
 - b) Leave all intravenous access ports, lines, intubation and other equipment including the CS in place and notify the coroner and relatives
 - c) Remove the placenta and send for examination but do not complete the procedure until the coroner has been informed
 - d) Inform the relatives and seek permission to inform the coroner after which the abdomen can be closed and the placenta sent for histological examination
 - e) Inform the coroner and seek permission to complete the procedure and then inform the relatives
8. A 29-year-old woman presents at 24+6 weeks of gestation with mild contractions and intact fetal membranes. A speculum examination is performed and the cervical os is closed. What is the recommended management that is considered cost-effective?
- a) Commence on tocolysis and a course of corticosteroids
 - b) Oncofetal fibronectin and corticosteroids
 - c) Transabdominal cervical length measurement followed by a course of corticosteroids
 - d) Translabial cervical length measurement followed by a course of corticosteroids
 - e) Transvaginal cervical length measurement followed by a course of corticosteroids
9. You have admitted a 30-year-old woman in her second pregnancy at 26+3 weeks of gestation with uterine contractions and intact fetal membranes. You suspect that she is in preterm labour. What would be the recommended management for this woman?
- a) Corticosteroids and atosiban
 - b) Corticosteroids and cervical cerclage
 - c) Corticosteroids and glyceryl trinitrate skin patches
 - d) Corticosteroids and nifedipine
 - e) Corticosteroids and progesterone

10. You are conducting an assisted vaginal breech delivery of a 32-year-old woman at 27 weeks of gestation, and this is complicated by head entrapment. What immediate action will you take to deal with this complication?
- a) Administer nifedipine
 - b) Administer terbutaline subcutaneously
 - c) Incise the cervix laterally
 - d) Perform an episiotomy
 - e) Proceed to a stat caesarean section
11. Approximately what percentage of all live births are twins?
- a) 1%
 - b) 2%
 - c) 3%
 - d) 4%
 - e) 5%
12. Approximately what percentage of twin pregnancies are delivered preterm (i.e. before 37 completed weeks of gestation)?
- a) 15% (1:6)
 - b) 20% (1:5)
 - c) 25% (1:4)
 - d) 33% (1:3)
 - e) 50% (1:2)
13. A 29-year-old woman presents at 22 weeks of gestation for routine antenatal assessment. A cervical length measurement is performed, and this is reported as 22 mm. What intervention has been shown to have the best benefit with respect to reducing the risk of preterm birth in this woman?
- a) Cervical cerclage
 - b) The Arabin pessary
 - c) The tocolytic nifedipine
 - d) None
 - e) Vaginal progesterone

14. What is the most common non-genital cause of sensorineural deafness in children?
- a) Congenital cytomegalovirus (CMV) infection
 - b) Congenital HIV infection
 - c) Congenital rubella infection
 - d) Congenital syphilis infection
 - e) Congenital toxoplasmosis infection
15. A 30-year-old primigravida at 14 weeks of gestation was seen two days ago with myalgia, rhinitis and a mild temperature. She was investigated and found to have an infection with CMV. Assuming that this is a primary infection, what would be the estimated risk of vertical transmission in this pregnancy?
- a) Up to 10%
 - b) Up to 25%
 - c) Up to 40%
 - d) Up to 50%
 - e) Up to 75%
16. A 30-year-old woman has been diagnosed with a CMV infection at 16 weeks of gestation. She is known to have had a CMV infection in the past. What would be the vertical transmission rate for this woman?
- a) <1%
 - b) 1%–2%
 - c) 3%–4%
 - d) 4%–5%
 - e) 5%–6%
17. When will you summon a multidisciplinary team of senior staff to attend a woman with primary postpartum haemorrhage?
- a) She has lost in excess of 500 mL blood and bleeding is ongoing or she is in clinical shock
 - b) She has lost in excess of 750 mL blood and bleeding is ongoing or she is in clinical shock
 - c) She has lost in excess of 1000 mL blood and bleeding is ongoing or she is in clinical shock
 - d) She has lost in excess of 1500 mL blood and bleeding is ongoing or she is in clinical shock
 - e) She has lost in excess of 2000 mL blood and bleeding is ongoing or she is in clinical shock

18. A 28-year-old schoolteacher is attending for counselling about the risk of CMV as she plans to start a family. She is anxious about the risk of CMV to the pregnancy as this is a common infection in her school. What is the matrix to whose exposure she has the greatest risk of acquiring the infection?
- a) An infected adult's saliva
 - b) Respiratory droplets of an adult
 - c) Respiratory droplets of an infected young child
 - d) Urethral secretions from an infected adult
 - e) Urine of an infected child
19. You are about to see a couple in the pre-conception clinic for counselling about the risk of viral infections in pregnancy. When if infected is she at the greatest vertical transmission?
- a) Periconception (8 weeks before and up to 6 weeks after conception)
 - b) Pre-gestation (12 months to 8 weeks before conception)
 - c) The first trimester (up to 13 weeks)
 - d) The second trimester
 - e) The third trimester
20. A 25-year-old woman had Hodgkin's lymphoma and was treated with chemotherapy only. With respect to her cancer treatment, she is at a slightly increased risk of which pregnancy complication?
- a) Congenital malformations
 - b) Miscarriage
 - c) Preterm delivery
 - d) Small for gestational age
 - e) Stillbirth
21. A 29-year-old woman is diagnosed with postural tachycardia syndrome (PoTS) at 20 weeks of gestation. What conservative treatment would be considered for this patient in the first instance?
- a) Increase caffeine intake
 - b) Increase fluid and salt intake
 - c) Increase fluid intake
 - d) Application of compression stockings
 - e) Initiate aerobic exercises

22. A 37-year-old primigravida is admitted in established labour at 29+4 weeks of gestation. She has been prescribed magnesium sulphate for neuroprotection. What is the correct dose to be administered?
- a) A 1 g bolus over 30 min and then 1 g
 - b) A 4 g bolus over 30 min and then 1 g
 - c) A single 1 g bolus IV over 30 min and then a 1 g infusion per hour until she delivers
 - d) A single 4 g infusion IV over 30 min and then a 1 g infusion per hour until she delivers
 - e) A single 6 g bolus IV over 30 min and then a 1 g infusion per hour until she delivers
23. A 27-year-old woman is diagnosed with monochorionic diamniotic twin pregnancy at an ultrasound scan performed at 10 weeks of gestation. At what gestational age should monitoring for twin-to-twin transfusion syndrome (TTTS) be started?
- a) 14 weeks
 - b) 16 weeks
 - c) 18 weeks
 - d) 20 weeks
 - e) 24 weeks
24. A 28-year-old woman is suspected to have severe sepsis following a normal vaginal delivery at 35 weeks of gestation. She had presented with spontaneous rupture of membranes 12 h before being induced. A blood test is performed as part of investigation. What lactate level will influence your care of this patient?
- a) 2 mmol/L
 - b) 4 mmol/L
 - c) 6 mmol/L
 - d) 8 mmol/L
 - e) 10 mmol/L
25. An ultrasound scan is performed on a 23-year-old primigravida at 11 weeks of gestation. This shows herniation of the gut with the umbilical cord inserted at the centre of the hernia sac. What is the most likely diagnosis?
- a) Exomphalos/omphalocele
 - b) Gastroschisis
 - c) Omphalomesenteric duct remnants
 - d) Physiological hernia
 - e) Umbilical cord hernia

26. A 41-year-old woman attends at 13+4 weeks of gestation. What would you consider to be the most appropriate screening test for Down syndrome for her?
- a) Combined test (MA + NT + biochemistry)
 - b) NT and biochemical test in the first and second trimesters
 - c) NT measurement
 - d) Triple test
 - e) Quadruple test
27. Question 1. Maternal physiologic adaptations to pregnancy include all of the following, EXCEPT:
- a) Vasodilatation
 - b) Increased tidal volume
 - c) Decreased renal glomerular filtration
 - d) Darkening of the skin on the cheeks
28. Maternal circulating blood volume typically increases by what percentage?
- a) 0%
 - b) 10%
 - c) 40%
 - d) 80%
29. Maternal changes in the kidney during pregnancy include which of the following?
- a) Decrease in urine flow through the collecting system
 - b) Decrease in glomerular filtration rate
 - c) Decrease in creatinine clearance
 - d) Decrease in size
30. Which of the following is NOT a common maternal hematologic change during pregnancy?
- a) Hypercoagulability
 - b) Leukocytosis
 - c) Anemia
 - d) Reduced red blood cell mass

31. Which hormone causes delayed gastric and gallbladder emptying during pregnancy?
- a) Human placental lactogen
 - b) Progesterone
 - c) Estrogens
 - d) Parathyroid hormone
32. Which of the following thyroid test patterns are characteristic of normal pregnancy?
- a) Decreased thyroid binding globulin (TBG), elevated free T₃ and T₄
 - b) Decreased TBG, elevated total T₃ and T₄
 - c) Elevated TBG, no change in total T₃ and T₄
 - d) Elevated TBG, no change in free T₃ and T₄
33. Which are the three most important dietary minerals in pregnancy?
- a) Cadmium, selenium and iron
 - b) Iron, sodium and calcium
 - c) Iodine, iron and sodium
 - d) Iron, calcium and iodide
34. Which of these statements is true of maternal immunity during pregnancy?
- a) The mother has specific immune defects, including an impaired resistance to chickenpox (varicella virus)
 - b) The mother is protected from all viral diseases
 - c) The placenta increases its expression of classic MHC class I and II transplantation antigens to signal to the mother that she is pregnant
 - d) Transfer of maternal IgG to the fetus is inhibited throughout pregnancy
35. Mrs PO is a 27-year-old woman who is G1P0. She is brought in via ambulance at 35 weeks of pregnancy with a history of headache and blurred vision. On arrival, her blood pressure was 150/100 mmHg, urinalysis showed +++ proteinuria. While you are assessing her she has a tonic-clonic seizure. There is no history of epilepsy.
- What is the first step in her emergency management?
- a) Caesarean section
 - b) Give intravenous hydralazine
 - c) Inform the obstetric consultant
 - d) Secure airway and keep in recovery position
 - e) Secure IV access and give bolus dose of magnesium sulfate per protocol

36. A 34/40 weeks pregnant low-risk primigravida is referred via the Community Midwives. Her blood pressure is 140/90 mmHg and she has a trace of proteinuria. Her booking BMI was 29. A fetal growth scan done showed abdominal circumference on the 5th centile, and a normal AFI and umbilical artery Doppler.

What would be the most appropriate step at this point in her management?

- a) Admit and administer steroids
- b) Admit and aim to deliver her in 24–48 hours
- c) Antenatal Day Unit assessment for BP profile, PET bloods, urine analysis, CTG – if satisfactory, CMW check mid-week and repeat USS for liquor volume and Doppler 1/52
- d) Commence oral methyldopa 250 mg tds and check blood results
- e) Monitor on-off via Antenatal Day Unit with BP profile, bloods, fetal monitoring and discharge to CMW if satisfactory

37. You see a 30-year-old woman who is unsure of her dates. An ultrasound scan is performed, and the measurements are as follows: CRL = 90 mm, HC = 120 mm, BPD = 36 mm, FL = 20 mm, AC = 98 mm. What measurement should be used to determine her gestational age?

- a) AC
- b) BPD
- c) CRL
- d) FL
- e) HC

38. A 25-year-old Somali woman who recently came to the UK admits genital cutting as a child. She is 26 weeks pregnant. You examine and find infibulation. What is the type of female genital mutilation (FGM) that this woman has?

- a) Circumcision
- b) FGM type 1
- c) FGM type 2
- d) FGM type 3
- e) FGM type 4

39. A 30-year-old woman who has just had a normal vaginal delivery at term sustains a perineal tear that involves 50% of the external anal sphincter. You are called to suture this tear. How will you classify the degree of the tear?
- a) 2nd degree
 - b) 3a degree
 - c) 3b degree
 - d) 3c degree
 - e) 4th degree
40. A 24-year-old primigravida goes into spontaneous labour at 39+6 weeks of gestation following an uncomplicated pregnancy. She progresses to 8 cm dilatation but fails to dilate any further. You have examined and found that the baby is in the deflexed occipito-posterior position. What will be the diameter of the presenting part in this baby?
- a) Mentover-tical
 - b) Occipito-frontal
 - c) Sub-mento bregmatic
 - d) Sub-occipito bregmatic
 - e) Sub-occipito frontal
41. A 32-year-old woman in her second pregnancy was induced at 40 weeks because of gestational diabetes that is well controlled with metformin. She had prostaglandin gel and 3 h later had an artificial rupture of fetal membranes. Shortly after, she started contracting and progressed to full dilatation after 7 h. She remained fully dilated for 2 h and then started pushing. The head was delivered but was noticed to be receding (i.e. there was a turtle-neck appearance). You were called and arrived after 2 min. What would be the next step to take in her management?
- a) Apply suprapubic pressure
 - b) Insert your hand in the vagina and deliver the posterior arm
 - c) Place her in all fours
 - d) Perform an episiotomy and then attempt to deliver the shoulders
 - e) Place her in the McRoberts position

42. primigravida is diagnosed with an intrauterine fetal death at 26 weeks of gestation. Following counselling, she books for induction of labour. What would be the appropriate dose of misoprostol and mifepristone to use to induce labour?
- a) Mifepristone 200 mg, misoprostol 50 µg qd for a total of 5 doses
 - b) Mifepristone 200 mg, misoprostol 100 µg qd for a total of 5 doses
 - c) Mifepristone 200 mg, misoprostol 200 µg qd for a total of 5 doses
 - d) Mifepristone 200 mg, misoprostol 400 µg qd for a total of 5 doses
 - e) Mifepristone 200 mg, misoprostol 800 µg qd for a total of 5 doses
43. A 36-year-old woman who had breast cancer and has been free of any recurrence and has also just completed her five-year course of tamoxifen wishes to know when can she start trying to conceive?
- a) After 3 months
 - b) After 6 months
 - c) After 12 months
 - d) After 24 months
 - e) Advised against pregnancy
44. You see a 31-year-old woman at 10 weeks of gestation for booking. She is on anti-tuberculosis treatment. What is the most relevant monthly test you need to perform on this patient?
- a) Clotting screen
 - b) Full blood count
 - c) Liver function test
 - d) Mantoux test
 - e) Renal function test
45. You suspect myocardial infarction in a pregnant woman at 24 weeks of gestation. An ECG is performed. What finding on the ECG would be highly suspicious (i.e. which is the most sensitive and specific change) of an acute myocardial infarction (AMI)?
- a) Newly developed Q-wave
 - b) New ST-wave
 - c) ST depression
 - d) ST elevation
 - e) T-wave inversion

46. A primigravida develops eczematous skin eruptions at 30 weeks of gestation. These are associated with itching and on examination are found to be located mainly within abdominal striae. What is the most likely diagnosis?
- a) Atopic eruption of pregnancy
 - b) Eczema of pregnancy
 - c) Obstetric cholestasis
 - d) Pemphigoid gestationis
 - e) Polymorphic eruption of pregnancy (PEP)
47. A primigravida is seen at 28 weeks of gestation for an ultrasound scan for suspected fetal growth restriction. This is confirmed on ultrasound scan measurement of the various biometric indices, and there is oligohydramnios and reduced end-diastolic flow (REDF) on umbilical artery Doppler. The baby is known to be a boy. What is the most likely cause of the oligohydramnios?
- a) Placenta insufficiency
 - b) Polycythemia
 - c) Posterior urethral valve
 - d) Renal agenesis
 - e) Renal hypoperfusion
48. A 30-year-old lady who suffers from a major depressive disorder and has recently been admitted but is now well controlled on fluoxetine 40 mg has just found that she is pregnant. This is an unplanned pregnancy, and she is worried about the effects of the drug on the baby. What advice should she be given?
- a) Explain that the risk of malformation is low and recommend continuation of the medication
 - b) Stop medication and replace it with a tricyclic antidepressant
 - c) Stop medication and resume after delivery
 - d) Stop medication and resume after the end of the first trimester
 - e) Stop medication immediately

49. A 25-year-old woman who is known to have beta-thalassaemia major has just delivered. She is on desferrioxamine. The mother plans to breastfeed and is worried about the effect of the drug on the baby. What should she be told?
- a) Advise against breastfeeding
 - b) Advise that breastfeeding is safe
 - c) Change to another iron-chelating agent and allow her to breastfeed
 - d) Recommend to continue medication and breastfeed as long as she understands the risk
 - e) Stop the medication and breastfeed
50. A 29-year-old primigravida attends the clinic at 26 weeks of gestation to discuss postpartum thromboprophylaxis. She is homozygous for factor V Leiden. Her mother had a pregnancy-related thromboembolism. What would be the duration of thromboprophylaxis after her delivery?
- a) 10 days
 - b) 14 days (2 weeks)
 - c) 28 days (4 weeks)
 - d) 42 days (6 weeks)
 - e) 84 days (12 months)

PAPER 8

1. What organism is known to be the most common cause of sepsis in pregnancy?
 - a) *Escherichia coli*
 - b) Group B β -haemolytic *Streptococcus*
 - c) *Pseudomonas*
 - d) *Staphylococcus aureus*
 - e) *Streptococcus pyogenes*
2. You are about to see a 32-year-old woman in her third pregnancy at 12 weeks of gestation. Her last baby suffered from haemolytic disease of the fetus and newborn (HDFN). An antibody titre at this gestation is 8 IU. The father is heterozygous for RhD. What would be the next stage in her management?
 - a) Chorionic villus sampling for fetal genotype
 - b) cfDNA in maternal blood for fetal genotype
 - c) Refer to fetal medicine for serial MCA Doppler monitoring
 - d) Serial titres weekly
 - e) Ultrasound scan for hydrops
3. A primigravida presents with a chickenpox rash 3 days after it was first noticed. She is now 18 weeks pregnant. How will she be managed?
 - a) Arrange detailed scan with the fetal medicine unit after 5 weeks
 - b) Arrange amniocentesis to exclude intrauterine infection
 - c) Commence on aciclovir 400 mg tds for 5 days
 - d) Reassure and discharge
 - e) Ultrasound scan for anomaly in 3 weeks

4. You are seeing a couple for pre-pregnancy counselling. The husband has beta-thalassaemia, while the woman has beta-thalassaemia trait. What is the risk of their offspring being affected by thalassemia?
- a) 1:2
 - b) 1:4
 - c) 1:8
 - d) 1:16
 - e) 1:32
5. A 30-year-old G3P2 attends the VBAC clinic for counselling about mode of delivery. This is an uncomplicated pregnancy and she had indicated after her mid-trimester scan that she would like to try for a vaginal delivery. She had an emergency CS for her first pregnancy because of fetal distress and then had a uterine rupture in the second pregnancy intrapartum. The outcome at surgery was a live birth. What is the risk of uterine rupture that you will quote for this woman if she went for VBAC?
- a) $\geq 1:200$ (0.5%)
 - b) $\geq 1:100$ (1%)
 - c) $\geq 1:20$ (5%)
 - d) $\geq 1:150$ (0.67%)
 - e) $\geq 1:50$ (2%)
6. A 28-year-old who had a previous CS is being counselled about VBAC. What information from her past obstetric history would give her the best chance of a successful VBAC?
- a) If she has had a previous vaginal delivery
 - b) If the previous CS was an elective CS for breech presentation
 - c) If the previous CS was for fetal distress in the late first stage of labour
 - d) If the previous CS was for labour dystocia at 8 cm or more dilatation
 - e) If the previous CS was for labour dystocia at less than 8 cm dilatation
7. What is the estimated percentage reduction in venous thromboembolism (VTE) risk by low-molecular-weight heparin (LMWH) in medical and surgical patients, respectively?
- a) 30% and 40%
 - b) 40% and 50%
 - c) 50% and 60%
 - d) 60% and 70%
 - e) 70% and 80%

8. At what stage in pregnancy is the risk of VTE highest in a 33-year-old woman who is having her first baby and reports that her mother had a deep vein thrombosis (DVT) while on the combined hormonal contraceptive pill at the age of 35 years?
- a) In labour
 - b) In the first trimester
 - c) In the first three weeks postpartum
 - d) In the second trimester
 - e) In the third trimester
9. A 37-year-old mother of 3 who smokes 10 cigarettes per day books for antenatal care at 10 weeks of gestation. This was an IVF pregnancy. You have examined and found that her BMI is 29 kg/m². What recommendation will you offer her about thromboprophylaxis?
- a) Commence on LMWH for 10 days after delivery
 - b) Commence on LMWH from 28 weeks of gestation until 6 weeks post-delivery
 - c) Commence on LMWH from 28 weeks until 10 days post-delivery
 - d) Commence on LMWH now and until 10 days post-delivery
 - e) Commence LMWH now and until 6 weeks post-delivery
10. You are booking a 26-year-old in her first pregnancy at 6 weeks of gestation. She was referred for advice on thromboprophylaxis because she had a DVT three years ago and was investigated and found to be heterozygous for factor V Leiden. The GP had stopped her warfarin and commenced her on 5000 IU of Fragmin daily. What would be your plan for her management?
- a) Commence on a higher dose (either 50%, 75% or full treatment dose) of LMWH until 6 weeks postpartum
 - b) Commence on a higher dose (either 50%, 75% or full treatment dose) of LMWH until 12 weeks postpartum
 - c) Commence on a higher dose (either 50%, 75% or full treatment dose) of LMWH until 6 weeks postpartum or until warfarin is re-commenced
 - d) Continue with the LMWH until 6 weeks after delivery
 - e) Continue with the standard dose of LMWH until 6 weeks postpartum or until warfarin is re-commenced

11. What is the estimated prevalence of diagnosed pulmonary embolism in pregnancy in women with suspected PE?
- a) 1%–3%
 - b) 2%–6%
 - c) 4%–7%
 - d) 5%–9%
 - e) 8%–10%
12. A 30-year-old primigravida attends the Pregnancy Triage Unit with pain in her left leg. She is examined and DVT is suspected; the level of clinical suspicion is graded as high. She is commenced on therapeutic doses of dalteparin – an LMWH. A compression duplex ultrasound scan is performed and this is negative. What should be the next step in her management?
- a) Continue with the LMWH until a repeat compression duplex ultrasound scan has confirmed the absence of a DVT
 - b) Continue with the LMWH until diagnosis is positively excluded by repeat ultrasound scan on days 3 and 7
 - c) Stop the LMWH and advise her to represent if the symptoms persist
 - d) Stop the LMWH and discharge her
 - e) Stop the LMWH and repeat the ultrasound scan on days 3 and 7 to ensure that it is indeed not a DVT
13. A 33-year-old G2P1 presents at 29 weeks of gestation with sudden onset chest pain and difficulties breathing. She also reports that she has had a swollen and painful left leg for the past one week. You suspect that she has a PE as well as a left DVT. She is commenced on therapeutic doses of LMWH pending confirmation of diagnosis. What would be the most appropriate investigation to perform in this woman?
- a) Chest X-ray
 - b) Compression duplex ultrasound scan
 - c) Computed tomography pulmonary angiogram (CTPA)
 - d) Electrocardiogram (ECG)
 - e) Ventilation-perfusion (V/Q) lung scan

14. A 40-year-old mother of three in her fourth pregnancy at 30 weeks of gestation is admitted into the emergency unit with a suspicion of PE. She has otherwise been asymptomatic and there are no symptoms of DVT. She is commenced on therapeutic doses of LMWH pending confirmatory tests. What should be the next test to undertake in this woman?
- a) Chest X-ray (CXR) followed by V/Q scan or CTPA
 - b) Compression duplex ultrasound followed by V/Q scan or CTPA
 - c) Computerized tomography pulmonary angiography (CTPA)
 - d) Magnetic resonance imaging (MRI)
 - e) Ventilation-perfusion (V/Q) scan
15. A 23-year-old woman presents with reduced fetal movements at 33 weeks gestation. The fetal heart could not be heard with a sonicaid; hence, she was referred for an ultrasound scan. The scan has confirmed an intrauterine fetal death (IUFD). Approximately what percentage of women presenting with an intrauterine fetal death have reduced fetal movements?
- a) 25%
 - b) 35%
 - c) 45%
 - d) 55%
 - e) 65%
16. A 39-year-old woman is seen at 38 weeks of gestation with reduced fetal movements. Her BP is 150/95 mmHg and urinalysis is negative for protein. The fetal heartbeat is heard with a sonicaid and you arrange a cardiotocography, which shows normal baseline variability but no accelerations after 120 min. What will be your plan for this patient?
- a) Admit for monitoring of the fetus with daily CTGs
 - b) Organize an ultrasound scan for biometry
 - c) Organize an ultrasound scan for growth and Doppler of the umbilical artery
 - d) Organize delivery
 - e) Refer for biophysical profile assessment
17. What is the estimated percentage reduction in venous thromboembolism (VTE) risk by low-molecular-weight heparin (LMWH) in medical and surgical patients, respectively?
- a) 30% and 40%
 - b) 40% and 50%
 - c) 50% and 60%
 - d) 60% and 70%
 - e) 70% and 80%

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- a) In labour
 - b) In the first trimester
 - c) In the first three weeks postpartum
 - d) In the second trimester
 - e) In the third trimester
19. A 37-year-old mother of 3 who smokes 10 cigarettes per day books for antenatal care at 10 weeks of gestation. This was an IVF pregnancy. You have examined and found that her BMI is 29 kg/m². What recommendation will you offer her about thromboprophylaxis?
- a) Commence on LMWH for 10 days after delivery
 - b) Commence on LMWH from 28 weeks of gestation until 6 weeks post-delivery
 - c) Commence on LMWH from 28 weeks until 10 days post-delivery
 - d) Commence on LMWH now and until 10 days post-delivery
 - e) Commence LMWH now and until 6 weeks post-delivery
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 - b) Commence on a higher dose (either 50%, 75% or full treatment dose) of LMWH until 12 weeks postpartum
 - c) Commence on a higher dose (either 50%, 75% or full treatment dose) of LMWH until 6 weeks postpartum or until warfarin is re-commenced
 - d) Continue with the LMWH until 6 weeks after delivery
 - e) Continue with the standard dose of LMWH until 6 weeks postpartum or until warfarin is re-commenced

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 - e) 8%–10%
22. A 30-year-old primigravida attends the Pregnancy Triage Unit with pain in her left leg. She is examined and DVT is suspected; the level of clinical suspicion is graded as high. She is commenced on therapeutic doses of dalteparin – an LMWH. A compression duplex ultrasound scan is performed and this is negative. What should be the next step in her management?
- a) Continue with the LMWH until a repeat compression duplex ultrasound scan has confirmed the absence of a DVT
 - b) Continue with the LMWH until diagnosis is positively excluded by repeat ultrasound scan on days 3 and 7
 - c) Stop the LMWH and advise her to represent if the symptoms persist
 - d) Stop the LMWH and discharge her
 - e) Stop the LMWH and repeat the ultrasound scan on days 3 and 7 to ensure that it is indeed not a DVT
23. A 33-year-old G2P1 presents at 29 weeks of gestation with sudden onset chest pain and difficulties breathing. She also reports that she has had a swollen and painful left leg for the past one week. You suspect that she has a PE as well as a left DVT. She is commenced on therapeutic doses of LMWH pending confirmation of diagnosis. What would be the most appropriate investigation to perform in this woman?
- a) Chest X-ray
 - b) Compression duplex ultrasound scan
 - c) Computed tomography pulmonary angiogram (CTPA)
 - d) Electrocardiogram (ECG)
 - e) Ventilation-perfusion (V/Q) lung scan

24. A 40-year-old mother of three in her fourth pregnancy at 30 weeks of gestation is admitted into the emergency unit with a suspicion of PE. She has otherwise been asymptomatic and there are no symptoms of DVT. She is commenced on therapeutic doses of LMWH pending confirmatory tests. What should be the next test to undertake in this woman?
- a) Chest X-ray (CXR) followed by V/Q scan or CTPA
 - b) Compression duplex ultrasound followed by V/Q scan or CTPA
 - c) Computerized tomography pulmonary angiography (CTPA)
 - d) Magnetic resonance imaging (MRI)
 - e) Ventilation-perfusion (V/Q) scan
25. A 23-year-old woman presents with reduced fetal movements at 33 weeks gestation. The fetal heart could not be heard with a sonicaid; hence, she was referred for an ultrasound scan. The scan has confirmed an intrauterine fetal death (IUFD). Approximately what percentage of women presenting with an intrauterine fetal death have reduced fetal movements?
- a) 25%
 - b) 35%
 - c) 45%
 - d) 55%
 - e) 65%
26. A 39-year-old woman is seen at 38 weeks of gestation with reduced fetal movements. Her BP is 150/95 mmHg and urinalysis is negative for protein. The fetal heartbeat is heard with a sonicaid and you arrange a cardiotocography, which shows normal baseline variability but no accelerations after 120 min. What will be your plan for this patient?
- a) Admit for monitoring of the fetus with daily CTGs
 - b) Organize an ultrasound scan for biometry
 - c) Organize an ultrasound scan for growth and Doppler of the umbilical artery
 - d) Organize delivery
 - e) Refer for biophysical profile assessment
27. The prozone phenomenon in syphilis testing results from:
- a) Excess antibody causing false-negative non-treponemal test
 - b) Insufficient antibody leading to false-positive test
 - c) Antigen degradation during storage
 - d) Interference by hemolysis only

28. Which reaction can occur within 24 hours after starting effective syphilis therapy?
- a) Jarisch-Herxheimer reaction (acute inflammatory response)
 - b) Anaphylactic shock due to treponemal lysis
 - c) Serum sickness from benzathine salt
 - d) Stevens-Johnson syndrome
29. Which serologic test is treponemal and typically remains positive for life?
- a) FTA-ABS (Fluorescent treponemal antibody-absorption)
 - b) RPR (Rapid plasma reagin)
 - c) Non-treponemal cardiolipin test
 - d) Culture on specialized media
30. The most useful direct method to visualize *Treponema pallidum* from a primary chancre is:
- a) Dark-field microscopy of lesion exudate
 - b) Gram stain of exudate
 - c) Standard bacterial culture on blood agar
 - d) KOH preparation
31. This stage has been found to be the most infectious of all the stages.
- a) The tertiary stage of syphilis
 - b) The initial stage of syphilis
 - c) The stage of secondary syphilis
 - d) All of the foregoing
32. The recommended treatment for neurosyphilis is:
- a) Aqueous crystalline penicillin G IV for 10–14 days
 - b) Benzathine penicillin IM single dose
 - c) Doxycycline orally for 7 days
 - d) Oral azithromycin weekly for 3 weeks
33. In a pregnant patient with penicillin allergy, the recommended management is:
- a) Cease allergy list and perform penicillin desensitization then treat with penicillin
 - b) Use doxycycline instead of penicillin
 - c) Use erythromycin orally as equivalent therapy
 - d) No treatment necessary during pregnancy

34. Tertiary syphilis may present with which of the following clinical features?
- a) Gummatous lesions and cardiovascular aortitis
 - b) Primary painless chancre only
 - c) Superficial mucocutaneous patches limited to secondary stage
 - d) Acute bacterial meningitis caused by Gram-negative rods
35. Fourfold decline in non-treponemal titer (e.g., 1:32 to 1:8) after therapy usually indicates:
- a) Adequate therapeutic response and serologic cure trend
 - b) Treatment failure requiring immediate re-treatment
 - c) Laboratory error and test should be repeated
 - d) Conversion to false-positive status
36. The term “serofast” refers to:
- a) Persistent low-level non-treponemal titers despite adequate therapy
 - b) Immediate seroreversion to negative after treatment
 - c) False-positive treponemal test due to other infections
 - d) High-titer relapse indicating neurosyphilis
37. best specimen for dark-field examination is:
- a) Exudate from an undisturbed chancre or lesion
 - b) Blood sample drawn in EDTA
 - c) Urine specimen collected midstream
 - d) Throat swab placed in viral transport medium
38. For non-pregnant patients allergic to penicillin, an alternative regimen for early syphilis is:
- a) Doxycycline 100 mg orally twice daily for 14 days
 - b) Amoxicillin 500 mg orally three times daily for 3 days
 - c) Single IM ceftriaxone 250 mg dose
 - d) Trimethoprim-sulfamethoxazole single dos
39. For serologic testing, how should serum specimens be stored if testing is delayed?
- a) Refrigerate at 2–8°C and avoid repeated freeze-thaw cycles
 - b) Keep at room temperature for several days
 - c) Store at 37°C to preserve antibody activity
 - d) Freeze and thaw repeatedly to concentrate antibodies

40. The primary mechanism of action of penicillin against *Treponema pallidum* is:
- a) Inhibition of bacterial cell wall synthesis via penicillin-binding proteins
 - b) Inhibition of 30S ribosomal subunit protein synthesis
 - c) Disruption of DNA gyrase activity
 - d) Blocking folate synthesis by dihydropteroate synthase inhibition
41. Benzathine penicillin G is formulated to provide which pharmacokinetic property?
- a) Prolonged low serum concentrations after IM depot injection
 - b) Rapid high peak levels after oral administration
 - c) Exclusive cerebrospinal fluid penetration when given IM
 - d) Short half-life requiring continuous IV infusion
42. Which condition commonly produces a biological false-positive non-treponemal test?
- a) Systemic lupus erythematosus (autoimmune disease)
 - b) Untreated hypothyroidism only
 - c) Recent vaccination exclusively
 - d) Hypercholesterolemia
43. A practical limitation of dark-field microscopy is:
- a) Requirement for fresh lesion material and skilled microscopist
 - b) High sensitivity in late latent lesions
 - c) Ability to detect antibodies in serum
 - d) Usefulness on fixed, stored specimens
44. PCR testing for *Treponema pallidum* is most useful when:
- a) Detecting treponemal DNA from lesion swabs in early infection
 - b) Used as the sole test for serologic monitoring after treatment
 - c) Preferred for routine screening of blood donors only
 - d) Substituting for CSF VDRL in neurosyphilis confirmation
45. Typical cerebrospinal fluid (CSF) findings in neurosyphilis include:
- a) Lymphocytic pleocytosis, elevated protein, and reactive CSF VDRL
 - b) Neutrophilic pleocytosis with low protein
 - c) Normal cell count with decreased glucose only
 - d) Yeast cells on Gram stain

46. Cardiovascular involvement in tertiary syphilis most characteristically affects:
- a) Ascending aorta (aortitis and aneurysm formation)
 - b) Coronary arteries only causing acute MI
 - c) Pulmonary arteries causing emboli
 - d) Peripheral veins causing phlebitis
47. Neurosyphilis may occur during which stage(s) of infection?
- a) At any stage (early or late) of syphilis
 - b) Only during primary syphilis
 - c) Only during tertiary syphilis after 10 years
 - d) Only in congenital syphilis
48. A critical public health step after diagnosis of syphilis is:
- a) Partner notification and treatment to prevent reinfection and spread
 - b) Isolating the patient in a negative pressure room
 - c) Vaccinating all household contacts immediately
 - d) Only advising abstinence without partner evaluation
49. Doxycycline is contraindicated in which patient group for syphilis treatment?
- a) Pregnant women and children under 8 years of age
 - b) Healthy non-pregnant adults only
 - c) Adults with renal impairment exclusively
 - d) Adults with previous rash to penicillin but no systemic allergy
50. The RPR (rapid plasma reagin) test detects which type of antibodies?
- a) Non-treponemal reagin antibodies against cardiolipin-lecithin-cholesterol antigen
 - b) Treponemal-specific IgG against *T. pallidum* proteins
 - c) Antibodies to HIV co-infection only
 - d) Antibodies against encapsulated bacteria polysaccharides

ANSWERS

PAPER 1 ANSWER

Q1. Correct answer: D. Absence of accelerations

- * Baseline fetal heart rate 140 bpm is normal (110–160 bpm).
- * Good variability is reassuring.
- * Recurrent late decelerations → abnormal and concerning for uteroplacental insufficiency.
- * Recurrent variable decelerations → may indicate umbilical cord compression.
- * Recurrent early decelerations → usually benign and associated with head compression.
- * Absence of accelerations alone, however, is not necessarily abnormal in an intrapartum CTG if the baseline, variability and decelerations are reassuring. Therefore, it is the feature that is not considered a reassuring feature in this question.

Exam point: Accelerations are reassuring when present, but their absence does not by itself make an intrapartum CTG abnormal.

Q2. Correct answer: 4. Ramipril

A renal-transplant recipient is taking:

- * Ciclosporin
- * Prednisolone
- * Calcium supplements
- * Ramipril

Ramipril is an ACE inhibitor and must be stopped before conception.

ACE inhibitors can cause serious fetal complications, particularly:

- * Fetal renal impairment
- * Oligohydramnios
- * Fetal growth restriction
- * Abnormal skull development
- * Neonatal renal failure

The other listed medications may be continued when clinically indicated, with appropriate specialist supervision.

Exam point:

Pregnancy + ACE inhibitor/ARB → stop and substitute with a pregnancy-compatible antihypertensive.

Q3. Correct answer: 2. Sickle cell anaemia

Among the options, sickle cell disease is an important maternal medical risk factor for venous thromboembolism.

RCOG's thromboprophylaxis guideline lists sickle cell disease among medical comorbidities that contribute to antenatal VTE risk.

Why not the others?

- * Diabetes alone → does not automatically require antenatal LMWH.
- * Previous IUGR → increases obstetric surveillance needs but is not, by itself, an indication for LMWH.
- * Anaemia → not an indication.
- * BMI 29 → below the obesity threshold of BMI ≥ 30 and is not an indication.

Exam point:

👉 Sickle cell disease = think increased VTE risk → thromboprophylaxis assessment.

Q4. Correct answer: 2. MRI brain without contrast

A pregnant woman has:

- * Persistent headache
- * No neurological deficit
- * Stable examination
- * Normal observations

MRI without contrast is the most appropriate imaging investigation when intracranial pathology needs to be excluded.

MRI does not use ionising radiation and is preferred over CT when clinically appropriate during pregnancy. Gadolinium contrast should generally be avoided unless there is a compelling reason because it crosses the placenta.

Why not the others?

- * CT head with contrast → involves radiation and contrast.

- * MR venography → particularly useful when cerebral venous sinus thrombosis (CVST) is suspected.
- * CT without contrast → can be used when urgently required, but MRI is preferable when the situation is stable.
- * Lumbar puncture → not the initial imaging investigation for an unexplained persistent headache.

Exam point:

👉 Pregnancy + persistent headache + stable patient → MRI brain without gadolinium.

Q5. Correct answer: 5. Pregnancy-induced thyroid changes

The patient has hyperemesis gravidarum, with:

- * TSH at the upper/lower? — the image indicates thyroid function compatible with pregnancy-related change
- * Free T4 at the lower/upper limit as shown.

The key association is hyperemesis gravidarum ↔ high hCG ↔ transient thyroid stimulation.

hCG has a weak TSH-like action because it can stimulate the TSH receptor. High hCG concentrations in early pregnancy can therefore produce transient biochemical thyrotoxicosis, particularly in hyperemesis gravidarum.

This is called gestational transient thyrotoxicosis.

It is different from Graves' disease, where you would expect features such as:

- * Previous thyroid disease
- * Goitre
- * Ophthalmopathy
- * Positive TSH-receptor antibodies

Exam point:

👉 Hyperemesis gravidarum + transient abnormal TFTs = hCG-mediated gestational thyroid changes.

Answers at a glance

Q6. Correct answer: 3. Protein S

Pregnancy is a hypercoagulable state. Several procoagulant factors increase, including:

- * Factor VIII ↑
- * Factor VII ↑

- * Fibrinogen ↑
- * von Willebrand factor ↑

At the same time, free Protein S decreases, resulting in increased resistance to activated Protein C.

Protein C levels generally remain unchanged, whereas Protein S decreases significantly.

👉 Exam point: Pregnancy → ↓ Protein S + ↑ clotting factors → increased VTE risk.

Q7. Correct answer: 3. Nifedipine

Enalapril is an ACE inhibitor and is contraindicated in pregnancy because of fetal renal toxicity, oligohydramnios and fetal/neonatal renal impairment.

For a pregnant woman with asthma, nifedipine is an appropriate alternative antihypertensive.

Why not labetalol?

Labetalol is a β-blocker and can potentially cause bronchospasm, so it should be avoided or used cautiously in patients with asthma.

Other options:

- * Methyldopa → safe in pregnancy but not the preferred choice in this scenario.
- * Furosemide → not routinely used for chronic hypertension in pregnancy.
- * Enalapril → contraindicated.

👉 Exam point:

Pregnancy + asthma + hypertension → Nifedipine is a good choice.

Q8. Correct answer: 2. 1 in 4 (25%)

Women with bipolar disorder have a markedly increased risk of postpartum psychosis, particularly in the first few weeks after delivery.

The risk is approximately 25% (1 in 4) in women with bipolar disorder.

Postpartum psychosis is a psychiatric emergency and may present with:

- * Severe mood disturbance
- * Mania
- * Delusions
- * Hallucinations
- * Confusion/disorganisation
- * Rapidly changing mental state

👉 Exam point:

Bipolar disorder + postpartum period = very high risk of postpartum psychosis.

Q9. Correct answer: 1. ST-segment elevation in anterior leads (V2–V6)

ST-segment elevation in V2–V6 indicates an acute anterior myocardial infarction, usually involving the left anterior descending (LAD) coronary artery.

Other options are less specific:

- * Sinus tachycardia → common in pregnancy and nonspecific.
- * T-wave inversion in lead III → nonspecific.
- * QT prolongation → not the characteristic finding of acute MI.
- * Left axis deviation → can occur in pregnancy but does not diagnose MI.

👉 Exam point:

Acute MI → look for ST elevation in the leads corresponding to the affected myocardial territory.

V1–V4 → anterior/septal territory; V2–V6 → extensive anterior involvement.

Q10. Correct answer: 4. Acute fatty liver of pregnancy (AFLP)

AFLP is a rare but potentially life-threatening complication, usually occurring in the third trimester.

It has an association with:

- * Male fetus
- * First pregnancy
- * Multiple pregnancy
- * Low BMI
- * Certain fetal fatty-acid oxidation defects, particularly LCHAD deficiency

AFLP may present with:

- * Nausea/vomiting
- * Abdominal pain
- * Jaundice
- * Hypoglycaemia
- * Elevated liver enzymes
- * Coagulopathy
- * Renal dysfunction

The association with a male fetus is a classic examination point.

👉 Exam point:

Male fetus → think AFLP when asked about pregnancy complications with fetal-sex association.

Q11. Correct answer: 3. Anti-Ro and Anti-La antibodies

A woman with systemic lupus erythematosus (SLE) should be tested for anti-Ro (SSA) and anti-La (SSB) antibodies, because these antibodies can cross the placenta and affect the fetus.

They are associated with:

- * Neonatal lupus
- * Congenital heart block
- * Transient neonatal rash
- * Cytopenias and liver abnormalities

The most important fetal complication is congenital complete heart block, which can be permanent.

Why not the others?

- * Antiphospholipid antibodies / lupus anticoagulant → important for assessing maternal thrombosis and pregnancy-loss risk, but they do not specifically assess the risk of neonatal lupus/congenital heart block.
- * Anti-dsDNA → useful for monitoring SLE activity and risk of lupus nephritis.
- * ANA → sensitive for SLE but does not specifically predict fetal cardiac complications.

👉 Exam point:

SLE in pregnancy → always think Anti-Ro/SSA and Anti-La/SSB → fetal congenital heart block.

Q12. Correct answer: 5. Urinary tract infection

Sickle cell trait is generally much less severe than sickle cell disease. However, pregnancy in women with sickle cell trait is associated with an increased risk of urinary infection, particularly asymptomatic bacteriuria and pyelonephritis.

Therefore, antenatal urine screening is important.

The other complications listed are more strongly associated with sickle cell disease, rather than simple sickle cell trait:

- * IUGR → more characteristic of sickle cell disease

- * Placental abruption → not the characteristic increased complication of trait
- * Major PPH → not specifically associated with trait
- * Chest infection → much more relevant to sickle cell disease

👉 Exam point:

Sickle cell trait + pregnancy → increased risk of UTI/bacteriuria.

Q13. Correct answer: 3. Low-dose aspirin 75 mg/day + LMWH

This patient has two important thrombotic risk factors:

1. β -thalassaemia major
2. Previous splenectomy with marked thrombocytosis — platelet count $660 \times 10^9/L$

Splenectomy can cause persistent thrombocytosis and increases the risk of venous and arterial thrombosis.

Therefore, the combination of:

LMWH + low-dose aspirin

is recommended in this high-risk situation.

Why?

- * LMWH → provides anticoagulant VTE prophylaxis.
- * Low-dose aspirin → provides antiplatelet protection, particularly relevant because of marked thrombocytosis.

Why not aspirin alone?

Aspirin does not provide adequate VTE prophylaxis.

Why not LMWH alone?

In this particular high-risk setting, the marked post-splenectomy thrombocytosis makes addition of low-dose aspirin appropriate.

👉 Exam point:

Thalassaemia major + splenectomy + platelets $>600 \times 10^9/L$ → LMWH + low-dose aspirin.

Q14. Correct answer: 4. Pneumococcal vaccine

Sickle cell disease causes functional asplenia, making patients particularly susceptible to infections with encapsulated organisms, especially:

- * *Streptococcus pneumoniae*
- * *Neisseria meningitidis*

- * Haemophilus influenzae

The patient received her pneumococcal vaccination 15 years ago, so she requires consideration of pneumococcal revaccination/appropriate pneumococcal vaccination before pregnancy.

This is particularly important because pregnancy is an additional period in which prevention of serious infection is important.

👉 Exam point:

Sickle cell disease → functional asplenia → high risk of pneumococcal infection → ensure pneumococcal vaccination is up to date.

Q15. Correct answer: 5. Cardiac failure is the primary cause of death in more than 50% of cases.

In transfusion-dependent β -thalassaemia major, repeated blood transfusions cause progressive iron overload. Iron deposits in the myocardium, producing iron-overload cardiomyopathy.

This can lead to:

- * Left ventricular dysfunction
- * Arrhythmias
- * Heart failure
- * Maternal death

Therefore, cardiac disease is a major determinant of maternal mortality in women with transfusion-dependent thalassaemia.

Why the other statements are wrong:

- * Diabetes is the most common endocrine complication → false. Endocrine complications are common, but diabetes is not correctly described as the most common in this context.
- * Hyperthyroidism → not the typical thyroid complication; hypothyroidism is more relevant.
- * Deferasirox can be safely used throughout pregnancy → false. Iron-chelation therapy requires specialist review and is generally avoided during pregnancy unless there is a compelling indication.
- * Pneumococcal vaccine annually → false. Pneumococcal vaccination is not an annual vaccine.

👉 Exam point:

β -thalassaemia major → iron overload → myocardial siderosis → cardiomyopathy → heart failure.

Q16. Correct answer: 5. Hydroxycarbamide (hydroxyurea)

Hydroxycarbamide is an important disease-modifying drug for sickle cell disease because it:

- * Increases fetal haemoglobin (HbF)
- * Reduces sickling
- * Reduces vaso-occlusive crises
- * Reduces acute chest syndrome

However, because of potential fetal toxicity, hydroxycarbamide should be stopped before conception when planning pregnancy.

The question specifically says the woman is advised to stop a particular drug at least 3 months before conception → this points to hydroxycarbamide.

Why not the others?

- * Penicillin → may be required for infection prophylaxis in SCD.
- * Influenza vaccine → recommended because influenza can cause severe illness in SCD.
- * Haematologist referral → appropriate, but it isn't the drug that needs stopping.
- * Folic acid 5 mg → recommended in pregnancy/preconception and should be continued.

👉 Exam point:

Sickle cell disease + planning pregnancy → review/stop hydroxycarbamide and involve a haematologist.

Q17. Correct answer: 3. Give hepatitis B immunoglobulin (HBIG) + hepatitis B vaccine to the baby within 24 hours

The mother is:

- * HBsAg positive
- * Anti-HBc positive

This indicates current or previous HBV infection, and the newborn is at significant risk of perinatal transmission.

The most important intervention is immediate neonatal immunoprophylaxis:

HBIG + hepatitis B vaccine at birth, ideally within 12 hours.

The two injections should be administered at different anatomical sites. CDC guidance specifies HBIG and hepatitis B vaccine within 12 hours for infants born to HBsAg-positive mothers.

This dramatically reduces the risk of chronic HBV infection in the infant.

Why not:

- * Vaccinate the mother during labour → does not provide adequate immediate neonatal protection.
- * Tenofovir for the mother intrapartum → maternal antiviral therapy may be considered during pregnancy in women with high HBV DNA, but it is not the immediate neonatal intervention asked here.
- * Vaccine alone → insufficient when the mother is HBsAg positive; add HBIG.
- * No treatment → incorrect because transmission risk is substantial.

👉 Exam point:

HBsAg-positive mother → newborn gets BOTH HBV vaccine + HBIG immediately after birth.

Q18. Correct answer: 1. ST elevation

The woman has sudden:

- * Central chest pain radiating to the left arm
- * Shortness of breath

These are classic symptoms of acute coronary syndrome.

The ECG finding most characteristic of ST-elevation myocardial infarction (STEMI) is ST-segment elevation in appropriate contiguous leads.

Pregnancy does not change the fundamental ECG principle: ST elevation in the appropriate clinical setting should prompt urgent assessment for STEMI. ESC guidance recommends ECG and troponin testing when a pregnant woman presents with chest pain.

Why not:

- * ST depression → more suggestive of myocardial ischaemia/NSTEMI or reciprocal changes, depending on the pattern.
- * Prolonged QT interval → not a typical diagnostic feature of acute MI.

👉 Exam point:

Acute chest pain + ST elevation → think STEMI → urgent reperfusion pathway.

Answers at a glance

Q19. Correct answer: 2. Migraine

Pregnancy and the postpartum period are associated with an increased risk of stroke, and the risk is particularly increased in women with migraine, especially migraine with aura.

Migraine is associated with:

- * Increased risk of ischaemic stroke
- * Increased risk of cerebral vascular events
- * A stronger association when combined with other factors such as hypertension or smoking

The postpartum period is particularly important because of physiological changes in coagulation and blood pressure.

Why not the others?

- * Hypothyroidism → not a major specific risk factor for pregnancy-associated stroke.
- * Coeliac disease → not the strongest association.
- * Marfan syndrome → mainly associated with aortic complications/dissection rather than being the classic answer for pregnancy-associated stroke.
- * Congenital heart disease → may increase thromboembolic risk in some patients, but migraine is the intended answer here.

👉 Exam point: Pregnancy/postpartum + migraine, particularly aura → increased stroke risk.

Q20. Correct answer: 4. Azathioprine

The woman is taking immunosuppressants after renal transplantation.

The drugs listed include:

- * Tacrolimus
- * Prednisolone
- * Cyclosporine
- * Azathioprine
- * Mycophenolate mofetil

Azathioprine is least likely to cause gestational diabetes.

In contrast:

Tacrolimus → significant diabetogenic effect

- * Causes pancreatic β -cell dysfunction
- * Reduces insulin secretion

- * Can contribute to post-transplant diabetes

Corticosteroids such as prednisolone → hyperglycaemia

- * Increase insulin resistance
- * Increase hepatic glucose production

Cyclosporine and tacrolimus are calcineurin inhibitors, with tacrolimus particularly associated with diabetes.

Important pregnancy point:

Mycophenolate mofetil is teratogenic and contraindicated in pregnancy, so it should be switched before conception.

👉 Exam point: Among transplant immunosuppressants, tacrolimus and steroids are important causes of hyperglycaemia; azathioprine is relatively less diabetogenic.

Q21. Correct answer: 1. Troponin I

Cardiac troponins (I or T) are the preferred biomarkers for myocardial injury.

Troponin I is:

- * Highly specific for cardiac muscle injury
- * More sensitive than CK/CK-MB
- * Remains elevated for several days after MI

Marker

Main limitation

Troponin I

Preferred cardiac biomarker

LDH

Older, nonspecific marker; rarely used now

CK/CK-MB

Less specific than troponin

Myoglobin

Very sensitive but poorly specific

BNP

Marker of cardiac strain/heart failure, not MI diagnosis

Q22. Correct answer: 2. Preeclampsia (PET)

Preeclampsia is associated with an increased long-term cardiovascular risk, including:

- * Ischaemic heart disease
- * Myocardial infarction
- * Stroke
- * Chronic hypertension
- * Heart failure

The endothelial dysfunction and vascular changes associated with preeclampsia are markers of increased cardiovascular risk later in life.

Why this is important:

A history of preeclampsia should be regarded as a cardiovascular risk marker, particularly when preeclampsia is severe, early-onset, or recurrent.

👉 Exam point:

History of preeclampsia → increased lifetime risk of cardiovascular disease and MI.

Q23. Marfan syndrome and pregnancy

Correct answer: 1. Aortic root >45 mm diameter

The question asks which finding should prompt clinicians to advise against pregnancy in a woman with Marfan syndrome.

Marfan syndrome is associated with aortic root dilatation and aortic dissection. Pregnancy increases haemodynamic stress on the aorta, increasing the risk of aortic complications.

An aortic root diameter >45 mm represents a very high-risk situation and is a contraindication to pregnancy in this context.

The major concern is:

Aortic root dilatation → increased risk of aortic dissection/rupture during pregnancy.

👉 Exam point:

Marfan syndrome + aortic root >45 mm → pregnancy should generally be strongly discouraged because of high aortic dissection risk.

Q24. Correct answer: 1. CMV (Cytomegalovirus)

Congenital CMV is classically associated with:

- * Symmetrical intrauterine growth restriction
- * Microcephaly
- * Periventricular intracranial calcifications
- * Sensorineural hearing loss
- * Chorioretinitis
- * Seizures

The characteristic finding is periventricular calcification, which helps distinguish CMV from other congenital infections.

Why not the others?

- * Rubella → cataracts, congenital heart disease, deafness.
- * Toxoplasmosis → classically diffuse intracranial calcifications, hydrocephalus and chorioretinitis.
- * Syphilis → hepatosplenomegaly, rash, bone abnormalities.
- * HSV → skin/eye/mouth disease and encephalitis.

👉 Exam point:

CMV = microcephaly + periventricular calcification + hearing loss.

Q25. Correct answer: 1. Central nervous system (CNS)

Toxoplasma gondii has a strong predilection for the fetal CNS.

The classic congenital toxoplasmosis triad is:

1. Chorioretinitis
2. Hydrocephalus
3. Intracranial calcification

Neurological manifestations can include:

- * Hydrocephalus
- * Seizures
- * Developmental problems
- * Intracranial calcifications

👉 Exam point:

Congenital toxoplasmosis → CNS + eyes.

Important distinction:

- * CMV → periventricular calcifications + microcephaly
- * Toxoplasmosis → diffuse intracranial calcifications + hydrocephalus + chorioretinitis

Q26. Correct answer: Zidovudine for 2 weeks

The mother:

- * Has known HIV infection
- * Has been on combination ART since 20 weeks
- * Has a very low viral load (<50 copies/mL)

This represents very low risk of vertical HIV transmission.

In the guideline framework reflected by this MCQ, the infant can receive short-course zidovudine monotherapy for 2 weeks as post-exposure prophylaxis.

The longer courses are generally used when the risk of transmission is higher.

👉 Exam point:

Maternal HIV well controlled + VL <50 → low-risk infant → short zidovudine course.

Note: Neonatal HIV prophylaxis regimens have evolved over time and vary by guideline and risk category, so for an actual patient the current local HIV/paediatric guideline should be followed.

Q27. Correct answer: Check immunity (IgG)

The first step after exposure is to determine whether the pregnant woman is immune to measles.

Therefore, check measles-specific IgG antibodies if her immune status is unknown.

If she is non-immune, post-exposure prophylaxis with human normal immunoglobulin (HNIG/IVIG depending on the guideline and circumstances) may be indicated.

Why not IgM?

IgM is mainly useful when acute measles infection is suspected. It is not the appropriate test for establishing whether an asymptomatic exposed pregnant woman is immune.

Important: The live measles vaccine (MMR) is contraindicated during pregnancy.

👉 Exam sequence:

Exposure → check measles IgG → if non-immune, give appropriate immunoglobulin prophylaxis.

Q28. Correct answer: Enalapril

After delivery, enalapril can be used for hypertension, including in breastfeeding women.

It is an ACE inhibitor that is considered compatible with breastfeeding because only very small amounts enter breast milk.

The key distinction is:

ACE inhibitors are contraindicated during pregnancy, but some can be used safely after delivery.

- * Enalapril → preferred ACE inhibitor postpartum
- * Nifedipine → calcium-channel blocker, not an ACE inhibitor
- * Methyldopa → not an ACE inhibitor and is generally stopped shortly after delivery because of its association with depression and because other agents are preferred postpartum.

👉 Exam point:

Pregnancy → avoid ACE inhibitors.

Postpartum/breastfeeding → enalapril is a preferred ACE inhibitor.

Q31, because the wording of that MCQ is problematic.

Q29. Correct answer: Full blood count (FBC), renal profile and liver function tests (LFTs)

A first seizure in pregnancy requires urgent assessment for eclampsia, particularly after 20 weeks.

FBC, renal function and LFTs help assess for:

- * Thrombocytopenia
- * Renal impairment
- * Elevated liver enzymes/HELLP syndrome

Other investigations may subsequently be required depending on the clinical picture, including neuroimaging and EEG, but the initial laboratory assessment is important.

Why not MRI/CT/EEG as the initial answer?

- * MRI → useful if an intracranial cause is suspected, particularly with atypical features.
- * CT → may be needed urgently if intracranial haemorrhage or another acute neurological problem is suspected.
- * EEG → helps evaluate epilepsy but does not assess the pregnancy-related complications such as HELLP.

👉 Exam point:

Seizure after 20 weeks → always consider eclampsia and check FBC + renal + LFTs.

Q30. Correct answer: Childhood cancer

A V/Q scan uses ionising radiation.

The fetal radiation dose is low, but there is a theoretical/very small increase in the child's lifetime risk of cancer, particularly childhood cancer.

RCOG states that both V/Q and CT pulmonary angiography expose the fetus to radiation, but the risk of childhood cancer is extremely low.

The important distinction is:

* V/Q scan → slightly greater fetal radiation exposure than CTPA

* CTPA → greater maternal breast radiation exposure

Therefore, among the options shown, childhood cancer is the relevant theoretical fetal risk.

👉 Exam point:

V/Q scan → fetal radiation → very small theoretical childhood cancer risk.

Q31.

The MCQ is problematic.

The options shown are:

1. No need to stop
2. Stop 24 hours before
3. Stop 48 hours before
4. Stop 120 hours before

If this question is asking simply about interruption of apixaban before a procedure with significant bleeding risk, 48 hours is the likely intended answer.

However, there is a much more important issue:

A patient with a mechanical heart valve should generally NOT be anticoagulated with apixaban.

Mechanical valves require anticoagulation with a vitamin K antagonist such as warfarin, with management/bridging individualized according to valve type and thrombotic risk.

Therefore, for a real patient, the priority would be:

Mechanical valve + apixaban → urgently review anticoagulation with cardiology/anticoagulation specialists.

Do not simply stop apixaban for 48 hours without addressing the mechanical-valve anticoagulation requirement.

👉 For the MCQ: 48 hours is probably the intended answer.

👉 For clinical practice: the premise that a mechanical-valve patient is maintained on apixaban is itself inappropriate.

Q32. Correct answer: Mobilization and avoid dehydration

The woman has a blood loss of 800 mL, which is a minor PPH under the traditional RCOG classification (500–1000 mL).

She has no other VTE risk factors.

Therefore, pharmacological LMWH for 6 or 12 weeks is not automatically indicated simply because she had an 800-mL PPH.

Appropriate management includes:

- * Early mobilisation
- * Good hydration
- * Individual VTE risk assessment
- * Mechanical measures if pharmacological prophylaxis is temporarily unsuitable

RCOG emphasizes that women should be risk-assessed after delivery and that PPH increases VTE risk; pharmacological prophylaxis is determined by the overall risk profile.

Important: If the woman had additional risk factors—such as previous VTE, thrombophilia, obesity, prolonged immobility, etc.—the answer could change.

👉 Exam point:

Minor PPH alone + no other VTE risks → mobilisation + hydration rather than prolonged LMWH.

Q33. Correct answer: Azathioprine

The woman has Crohn's disease and her flare has been controlled with hydrocortisone. A steroid-sparing maintenance drug is needed.

Azathioprine is compatible with pregnancy and can be used as a maintenance immunomodulator in inflammatory bowel disease.

Why not the other options?

- * Methotrexate ✗ → teratogenic and contraindicated in pregnancy.
- * Mycophenolate mofetil ✗ → associated with significant fetal toxicity and should be avoided.
- * Sulfasalazine → can be used in pregnancy, but is more commonly used for mild colonic disease/ulcerative colitis; azathioprine is the more appropriate steroid-sparing option in this Crohn's scenario.

The principle is:

Steroids control the acute flare → azathioprine helps maintain remission and reduce steroid dependence.

👉 Exam point:

Pregnancy + Crohn's disease + need for steroid-sparing maintenance → Azathioprine.

Q34. Correct answer: SAH (subarachnoid haemorrhage)

The combination of:

- * Sudden, severe headache ("thunderclap headache")
- * Photophobia
- * Neck stiffness

is highly suggestive of subarachnoid haemorrhage.

SAH commonly presents with a sudden, extremely severe headache caused by bleeding into the subarachnoid space. Meningeal irritation produces neck stiffness and photophobia.

Why not the others?

- * Meningitis → headache, photophobia and neck stiffness can occur, but onset is usually less characteristically sudden/thunderclap and fever/systemic illness is often present.
- * Migraine with aura → may cause photophobia and neurological symptoms but does not typically cause marked neck stiffness or a sudden thunderclap headache.
- * Idiopathic intracranial hypertension → usually causes a more persistent headache with papilloedema/visual symptoms.

👉 Exam point:

Thunderclap headache + neck stiffness ± photophobia → think SAH first.

Q35. Correct answer: Migraine with aura

The woman has:

- * Generalised headache
- * Duration around 60 minutes
- * Photophobia

The pattern is most consistent with migraine, and the answer given in the question is migraine with aura.

Migraine commonly causes:

- * Moderate/severe headache
- * Photophobia
- * Phonophobia
- * Nausea/vomiting

Aura refers to transient neurological symptoms, typically visual symptoms such as:

- * Flashing lights
- * Zig-zag lines
- * Scintillating scotoma
- * Temporary visual disturbance

Important pregnancy point:

A new or severe headache after 20 weeks should not automatically be labelled migraine. Pre-eclampsia and secondary neurological causes must first be excluded, particularly if there is hypertension, visual disturbance, neurological deficit or abnormal examination.

👉 Exam point:

Photophobia + typical recurrent headache pattern → migraine; but new headache in pregnancy requires assessment for secondary causes.

Q36. Correct answer: Pre-eclampsia

Among the options shown, pre-eclampsia is the best answer.

Pre-eclampsia can cause renal injury through:

- * Renal endothelial dysfunction
- * Glomerular endotheliosis
- * Reduced renal perfusion
- * Severe hypertension
- * HELLP syndrome

Severe pre-eclampsia/eclampsia is a major cause of AKI, particularly in the late third trimester and postpartum period.

Important nuance: Epidemiology varies by country and setting. In contemporary Indian studies, sepsis is reported as the most common overall cause of pregnancy-related AKI, followed by haemorrhage and pregnancy-induced hypertension. Since sepsis is not an option in this MCQ, pre-eclampsia is the best answer from the choices provided.

Why not the others?

- * Haemorrhage → can cause pre-renal AKI, especially with severe PPH, but is not the best answer among these options.
- * Hyperemesis gravidarum → can cause dehydration and pre-renal AKI, but is uncommon as the major cause.
- * NSAIDs → can cause renal impairment but are not the commonest pregnancy-related cause.
- * Urinary retention → postrenal AKI is uncommon.

👉 Exam point:

Pregnancy + AKI + no sepsis option → pre-eclampsia is the likely exam answer.

Q37. Correct answer: 2 days

The woman was switched from lisinopril to methyldopa during pregnancy because ACE inhibitors such as lisinopril are contraindicated during pregnancy.

After delivery, methyldopa should be stopped within 2 days and an appropriate postpartum antihypertensive should be started.

NICE specifically recommends stopping methyldopa within 2 days after birth and changing to an alternative antihypertensive.

Why switch back to lisinopril?

ACE inhibitors can be used postpartum; enalapril is NICE's preferred ACE inhibitor during the postnatal period, particularly when breastfeeding.

The reason for stopping methyldopa promptly is also that prolonged postpartum use is undesirable, including because of its association with depression.

👉 Exam point:

Methyldopa in pregnancy → stop within 2 days postpartum.

Q38. Correct answer: Atenolol

The question asks which drug has insufficient evidence regarding safety in breastfeeding mothers.

Among the options:

- * Amlodipine
- * Atenolol
- * Captopril
- * Enalapril
- * Metoprolol

Atenolol is the answer.

Atenolol passes into breast milk in relatively high amounts and is substantially renally excreted. This can lead to accumulation in a newborn, with possible:

- * Bradycardia
- * Hypotension
- * Hypoglycaemia

Current LactMed data also recommend preferring alternatives in newborn/preterm infants.

By contrast, enalapril is specifically recommended by NICE for postpartum hypertension, including during breastfeeding.

Exam point:

👉 Breastfeeding + antihypertensive → avoid/avoid preference for atenolol in a newborn; enalapril is preferred postpartum.

Q39. Correct answer: Fluid restriction to 125 mL/hour + magnesium sulfate + delivery

This woman has clear features of severe pre-eclampsia:

- * BP 160/110 mmHg
- * 3+ proteinuria
- * Headache
- * Blurring of vision
- * Brisk reflexes
- * 4 beats of ankle clonus
- * Protein/creatinine ratio 90 mg/mmol

At 37 weeks, the appropriate definitive treatment is delivery after maternal stabilisation.

Why magnesium sulfate?

The neurological symptoms and clonus indicate a high risk of eclampsia/seizures.

Magnesium sulfate is used for seizure prophylaxis/treatment in severe pre-eclampsia.

Why fluid restriction?

Women with severe pre-eclampsia are at increased risk of pulmonary oedema because of altered endothelial permeability and reduced intravascular oncotic pressure.

Therefore, avoid excessive IV fluids. The MCQ's 125 mL/hour fluid restriction is the intended answer.

Why not immediate delivery without magnesium?

The mother should first be stabilised, particularly with severe hypertension and imminent seizure risk.

👉 Exam sequence:

Severe pre-eclampsia → control BP + magnesium sulfate + fluid restriction → delivery.

Q40. Correct answer: Sirolimus

The options are:

1. Azathioprine
2. Cyclosporine
3. Hydroxychloroquine
4. Sirolimus
5. Tacrolimus

Sirolimus is contraindicated/should be avoided in pregnancy because of limited human safety data and concerning reproductive/fetal toxicity signals.

In contrast, commonly used transplant immunosuppressants that can be continued/used during pregnancy include:

- * Azathioprine
- * Tacrolimus
- * Cyclosporine
- * Corticosteroids such as prednisolone

The question also mentions mycophenolate, which she has been advised to stop. This is correct because mycophenolate is teratogenic and should be replaced before conception.

Important transplant pregnancy rule

Generally compatible:

- *  Azathioprine
- *  Tacrolimus
- *  Cyclosporine
- *  Prednisolone

Avoid/contraindicated:

- *  Mycophenolate
- *  Sirolimus

👉 Exam point:

Renal transplant + pregnancy → replace mycophenolate; sirolimus is also contraindicated/avoided.

Q41. Correct answer: Preeclampsia (PET)

A history of preeclampsia is associated with an increased long-term risk of cardiovascular disease, including ischaemic heart disease and myocardial infarction.

Preeclampsia reflects underlying endothelial dysfunction and cardiovascular risk, and women who have had preeclampsia have a higher lifetime risk of:

- * Chronic hypertension
- * Ischaemic heart disease/MI
- * Stroke
- * Heart failure

Why not the others?

- * Migraine → particularly associated with increased stroke risk.
- * Stroke → is an outcome, not a risk factor for MI in this context.
- * Pregnancy-induced hypertension → related, but preeclampsia is the more specific recognized risk marker.
- * Diabetes mellitus → certainly increases cardiovascular risk, but the intended obstetric answer is preeclampsia.

👉 Exam point: Preeclampsia = marker of increased future cardiovascular and MI risk.

Q42. Correct answer: Aortic root >45 mm

The major concern in Marfan syndrome is aortic root dilatation and aortic dissection.

Pregnancy increases:

- * Blood volume

- * Cardiac output
- * Haemodynamic stress on the aortic wall

Therefore, a markedly dilated aortic root carries a significant risk of life-threatening aortic dissection.

Current ACC/AHA guidance recommends aortic surgery before pregnancy when the aortic root is >4.5 cm, and pregnancy is generally avoided at this size.

For 40–45 mm, the decision is more individualized and depends on factors such as:

- * Family history of dissection
- * Rate of aortic enlargement
- * Other cardiovascular findings

👉 Exam point:

Marfan + aortic root >45 mm → advise against pregnancy / consider prophylactic aortic surgery.

Q43. Correct answer: CMV

Congenital cytomegalovirus (CMV) is classically associated with:

- * Symmetrical IUGR
- * Microcephaly
- * Periventricular intracranial calcifications
- * Sensorineural hearing loss
- * Chorioretinitis
- * Seizures

The periventricular calcification + microcephaly combination is particularly characteristic of congenital CMV.

Infection

Classic features

CMV

Microcephaly + periventricular calcification + hearing loss

Toxoplasmosis

Hydrocephalus + chorioretinitis + diffuse intracranial calcification

Rubella

Cataracts + PDA + deafness

Syphilis

Hepatosplenomegaly + rash + bone abnormalities

HSV

Skin/eye/mouth lesions + encephalitis

Q44. Correct answer: Central nervous system (CNS)

Toxoplasma gondii has an important tropism for the fetal brain and eyes.

The classic congenital toxoplasmosis triad is:

1. Chorioretinitis
2. Hydrocephalus
3. Intracranial calcifications

Neurological complications can include:

- * Hydrocephalus
- * Seizures
- * Developmental impairment
- * Intracranial calcifications

So among the options, the CNS is the best answer.

👉 Easy memory:

Toxoplasmosis → Brain + Eyes.

Q45. Correct answer: 12 months

The question asks about the recommended interval between a renal allograft transplant and conception.

The answer is at least 12 months.

KDIGO recommends waiting at least 1 year after kidney transplantation, provided that kidney function is stable and there is no significant proteinuria.

The 2023 SMFM guidance similarly recommends deferring pregnancy for at least 1 year after solid-organ transplantation or after an episode of acute cellular rejection.

Why wait?

The first year after transplantation is important because:

- * Graft function needs to become stable.
- * Risk of acute rejection is higher.
- * Immunosuppressive doses are being adjusted.
- * Mycophenolate and other teratogenic drugs need to be replaced.
- * Hypertension and infection need to be controlled.

Before conception, ideally there should be:

- * Stable graft function
- * Minimal/no proteinuria
- * No recent rejection
- * Controlled blood pressure
- * Pregnancy-compatible immunosuppression

Important nuance: Some older European guidance suggested 24 months, and some expert recommendations describe an ideal interval of 1–2 years. However, for this MCQ, with 12 months as an option, 12 months is the guideline-supported answer.

Q46.

A 42-year-old woman has chronic hypertension and was taking losartan before pregnancy. She was changed to labetalol at 5 weeks after a positive pregnancy test.

The options are:

1. Chronic hypertension
2. Diabetic nephropathy
3. Gastroenteritis
4. Ischaemic heart disease
5. Periodontal disease

Important learning point: Losartan in pregnancy

Losartan is an ARB (angiotensin-II receptor blocker) and should not be used during pregnancy.

It can cause:

- * Fetal renal dysfunction
- * Oligohydramnios
- * Impaired skull ossification
- * Neonatal renal failure
- * Fetal/neonatal morbidity, particularly with later exposure

Therefore, switching her to labetalol at 5 weeks was appropriate.

If the missing question was about a risk factor for pre-eclampsia

Then the answer would be chronic hypertension.

Chronic hypertension is a high-risk factor for pre-eclampsia, and women with chronic hypertension are generally considered for low-dose aspirin prophylaxis from 12 weeks (according to current guidance).

Other high-risk factors include:

- * Chronic kidney disease/diabetic nephropathy
- * Previous pre-eclampsia
- * Autoimmune disease
- * Diabetes
- * Multiple pregnancy

Why the other options?

- * Gastroenteritis → not a significant pre-eclampsia risk factor.
- * Periodontal disease → has been studied in relation to adverse pregnancy outcomes but is not a standard high-risk indication for aspirin.
- * Ischaemic heart disease → important maternal cardiovascular disease, but not the classic answer if the question is specifically asking about a high-risk indication for pre-eclampsia prevention.
- * Diabetic nephropathy → actually is a high-risk condition for pre-eclampsia, so if this is an aspirin question, the missing wording is essential because both chronic hypertension and diabetic nephropathy could be relevant.

Therefore, please send the page immediately before/after Q46 or a clearer screenshot showing the line between the stem and “Options.” That one missing sentence will determine the exact answer

Q47. Correct answer: Zidovudine for 2 weeks

The mother:

- * Is on combination ART from 20 weeks
- * Has two recent viral loads <50 copies/mL
- * Therefore has well-controlled HIV and a very low risk of vertical transmission

For a low-risk HIV-exposed infant, the MCQ’s intended neonatal prophylaxis is short-course zidovudine for 2 weeks.

The principle is:

Effective maternal ART + undetectable/very low viral load → very low transmission risk → short neonatal prophylaxis.

Longer prophylaxis regimens are used when maternal viral suppression is incomplete or transmission risk is higher.

👉 Exam point:

Maternal VL <50 copies/mL near delivery → low-risk infant → 2-week zidovudine regimen in this question.

Actual neonatal HIV prophylaxis should follow the current local/national guideline, because regimens have evolved.

Q48. Correct answer: Enalapril

The options are:

- * Enalapril
- * Nifedipine
- * Methyldopa
- * Labetalol

The question specifically asks for an ACE inhibitor suitable for the postnatal period.

Enalapril is the preferred ACE inhibitor postpartum and is compatible with breastfeeding.

The important distinction is:

During pregnancy:

❌ ACE inhibitors such as enalapril are contraindicated because of fetal renal toxicity and oligohydramnios.

After delivery:

✅ Enalapril can be started/used for maternal hypertension, including during breastfeeding.

NICE specifically recommends enalapril for postnatal hypertension and advises monitoring maternal renal function and potassium.

Why not the others?

- * Nifedipine → safe postpartum, but it is a calcium-channel blocker, not an ACE inhibitor.
- * Methyldopa → should generally be stopped within 2 days after birth.
- * Labetalol → can be used postpartum, but it is a β -blocker.

👉 Exam point:

Pregnancy → no ACE inhibitors.

Postpartum → enalapril is a preferred ACE inhibitor.

Q49. Intended answer: Stop apixaban 48 hours before the procedure

For a procedure with a significant bleeding risk, apixaban is generally interrupted beforehand, and 48 hours is the likely intended answer among the choices shown.

However, there is an important clinical problem with this MCQ:

 Mechanical heart valve + apixaban is inappropriate

Patients with mechanical prosthetic heart valves should generally receive a vitamin-K antagonist such as warfarin, rather than a DOAC such as apixaban.

Therefore, in real clinical practice, you should not simply stop apixaban for 48 hours. The patient's anticoagulation needs urgent specialist review, with an appropriate peri-procedural anticoagulation/bridging plan based on:

- * Type of mechanical valve
- * Valve position
- * Thromboembolic risk
- * Procedure bleeding risk

So:

For the MCQ → 48 hours.

For real clinical practice → the anticoagulant choice itself needs correction/review.

Q50. Correct answer: Steroid

The woman has ulcerative colitis with diarrhoea and fever, suggesting an active/severe flare.

For a significant UC flare during pregnancy, corticosteroids are appropriate and should not be withheld because of pregnancy. ECCO guidance states that pregnant women with IBD flares should generally be managed according to standard UC treatment, with corticosteroids among the preferred treatments.

Why steroids?

Systemic corticosteroids such as prednisolone:

- * Suppress intestinal inflammation rapidly.
- * Are effective for moderate-to-severe UC flares.
- * Have extensive pregnancy experience.
- * Are considered relatively low risk when used short term.

If this is acute severe ulcerative colitis requiring hospitalisation, IV corticosteroids are the recommended first-line treatment.

Why not the other options?

1. Sulfasalazine

- * Safe in pregnancy and useful for mild–moderate UC.
- * It is not adequate as the primary treatment for a significant/severe flare with systemic features such as fever.

2. Metronidazole

- * An antibiotic, not a standard treatment for a UC inflammatory flare.
- * Antibiotics may be used when there is a documented/suspected infection, but they do not treat the underlying UC flare.

3. Tacrolimus

- * Can be used as a rescue treatment in selected cases of severe, steroid-refractory UC.
- * It is not the first-line treatment for an initial flare.

 Important clinical point

Because she has fever and diarrhoea, infection should also be excluded—particularly *Clostridioides difficile* and other enteric infections—before attributing everything to a UC flare. But if this is a confirmed UC flare, steroids are the appropriate answer.

 Exam memory

Pregnancy + UC flare → treat the flare; don't leave active inflammation untreated.

- * Mild → 5-ASA
- * Moderate/severe → corticosteroids
- * Acute severe, hospitalized → IV corticosteroids
- * Steroid-refractory severe disease → specialist rescue therapy such as infliximab/ciclosporin

ECCO specifically emphasizes that active IBD during pregnancy should be treated promptly because uncontrolled disease itself can adversely affect pregnancy outcome

PAPER 2 ANSWER

Q1. Correct answer: Treat now for 5 days with acyclovir, then suppression from 36 weeks until delivery.

The question describes a pregnant woman at 7 weeks with a herpes lesion. The key issue is that this is early pregnancy, so the immediate episode should be treated rather than waiting until later pregnancy.

Why acyclovir?

Acyclovir is considered safe in pregnancy and can be used to treat genital herpes. Current RCOG/BASHH guidance confirms that genital herpes can be treated safely during pregnancy.

After treatment of the acute episode, suppressive therapy is used later in pregnancy to reduce recurrence and viral shedding at delivery.

Current UK guidance recommends suppressive aciclovir from 36 weeks for women with a history of genital herpes.

Why not the other options?

- * Start acyclovir from 32 weeks → not the standard timing for routine suppression; 36 weeks is the usual timing.
- * Start at 36 weeks and deliver vaginally → incomplete because the woman currently has an active episode that needs treatment now.
- * Suppression from 36 weeks + Caesarean section → routine Caesarean is not required simply because of a history of recurrent herpes. Mode of delivery depends particularly on whether lesions/prodromal symptoms are present at labour and whether the infection is a recent primary infection.
- * Acyclovir now + Caesarean section → unnecessary as a routine plan at 7 weeks.

 Remember

Early pregnancy HSV → treat the episode now → suppress later (usually from 36 weeks).

Q2. Correct answer: Treat now for 5 days with acyclovir, then suppression from 36 weeks until delivery.

This question is testing whether you recognize that an episode occurring during pregnancy should be treated at the time it occurs.

At 29 weeks, there is still enough time before delivery for the episode to resolve and for maternal antibodies to develop if this is a first episode.

Current RCOG guidance states that if a first episode occurs before 28 weeks, antiviral treatment is given at that time and again from 32 weeks; if it occurs after 28 weeks, treatment is continued until birth.

Therefore, the exact answer can depend on whether the question intends primary infection or recurrent herpes.

Important distinction

If this is a recurrent episode, treatment and subsequent suppression are appropriate.

If this is a first-ever genital herpes episode at 29 weeks, the modern RCOG/BASHH guidance is more cautious because a late primary infection carries a higher neonatal transmission risk, particularly within 6 weeks of delivery. A planned Caesarean may therefore be considered/recommended depending on timing and clinical circumstances.

So for this MCQ, the marked answer is based on the assumption that the episode is being managed as the usual pregnancy HSV scenario.

Q3. Correct answer: Migraine with aura (as marked in the question)

The woman has:

- * Generalised headache
- * Duration about 60 minutes
- * Photophobia

Migraine commonly causes headache with photophobia, and an aura can last 5–60 minutes. NICE describes typical migraine aura as fully reversible neurological symptoms developing gradually and lasting 5–60 minutes.

Why migraine?

Typical migraine features include:

- * Moderate/severe headache
- * Photophobia
- * Phonophobia
- * Nausea/vomiting
- * Sometimes visual or sensory aura

Why not the alternatives?

Tension headache

- * Usually mild–moderate
- * Pressing/tightening rather than severe migraine-type pain
- * Usually lacks prominent photophobia

Cluster headache

- * Severe unilateral orbital/temporal pain
- * Autonomic symptoms such as tearing, nasal congestion and conjunctival injection
- * Attacks are usually much shorter, typically 15–180 minutes

Idiopathic intracranial hypertension

- * Usually associated with papilloedema
- * Visual disturbances are prominent
- * Headache is often persistent rather than a typical migraine attack

Subarachnoid haemorrhage

- * Classically a sudden thunderclap headache
- * Often described as the worst headache of life
- * May have neck stiffness, vomiting or neurological abnormalities

⚠ Important pregnancy point

A new headache at 28 weeks should not automatically be diagnosed as migraine. In real clinical practice, you must first consider secondary causes, especially pre-eclampsia, cerebral venous thrombosis and intracranial haemorrhage. ACOG specifically emphasizes evaluation of both primary and secondary headaches during pregnancy.

Q4. Correct answer: Immediate induction of labour

- * She is 35 weeks pregnant with spontaneous rupture of membranes.
- * Her HIV viral load is very low (36 copies/mL), indicating excellent viral suppression on HAART.
- * With a suppressed viral load, the risk of mother-to-child HIV transmission during vaginal birth is very low.
- * At ≥ 34 weeks, PPRM generally warrants delivery rather than prolonged expectant management because infection and other complications increase with time.
- * Therefore, induction of labour is appropriate.
- * Caesarean section is not routinely required solely because she is HIV-positive when the viral load is suppressed.

- * Corticosteroids are generally not the best answer at 35 weeks when delivery is indicated and the pregnancy is otherwise uncomplicated.

Key point:

👉 HIV + very low viral load + PPRM at 35 weeks → deliver, usually by induction if no obstetric contraindication.

Q5. Correct answer: Acyclovir 400 mg three times daily until term and delivery by caesarean section

This is a primary first episode of genital herpes at 34 weeks.

- * Primary HSV infection late in pregnancy carries a significant risk of neonatal herpes, because the mother may not yet have developed protective antibodies.
- * Acyclovir is given to treat the maternal infection.
- * Continuing suppressive treatment until delivery reduces the likelihood of active lesions at labour.
- * If there are active genital lesions or prodromal symptoms at the onset of labour, caesarean delivery is recommended to reduce neonatal transmission.
- * Vaginal delivery would be considered only when there are no lesions or prodromal symptoms at labour.

Key point:

👉 Primary HSV late in pregnancy → acyclovir + specialist/consultant management; Caesarean if lesions/prodrome are present at labour.

Exam tip: The distinction between primary HSV infection and recurrent HSV is important because primary infection close to delivery has a much greater neonatal transmission risk.

Q6. Correct answer: Oseltamivir

The woman is 10 weeks pregnant and has had close household exposure to confirmed H1N1 influenza.

- * Pregnancy increases the risk of severe influenza complications.
- * Oseltamivir is the preferred antiviral for influenza treatment and is also used for post-exposure prophylaxis in high-risk individuals such as pregnant women when indicated.
- * The influenza vaccine is important during pregnancy, but it does not provide immediate post-exposure protection after a recent household exposure.
- * MMR, rabies vaccine and BCG have no role here.

Key point:

👉 Pregnant woman + significant exposure to influenza → consider oseltamivir prophylaxis.

Q7. Correct answer: Start oral acyclovir

She is 25 weeks pregnant, known to be non-immune to varicella, and develops a rash within the last 24 hours after exposure.

- * Varicella infection during pregnancy can cause serious maternal complications, particularly varicella pneumonia.
- * Antiviral treatment with oral acyclovir is recommended/considered when a pregnant woman develops chickenpox, particularly when treatment is started within 24 hours of rash onset.
- * VZIG is primarily used for post-exposure prophylaxis in susceptible pregnant women who have been exposed and do not yet have clinical infection.
- * Once the woman has developed the typical rash, the situation is no longer simply post-exposure prophylaxis.
- * Therefore, starting oral acyclovir promptly is the appropriate next step.

Key distinction:

Exposure but NO rash → VZIG may be indicated.

Varicella rash already developed → oral acyclovir.

Q8. Correct answer: Switch to nifedipine

The woman is taking enalapril, an ACE inhibitor.

- * ACE inhibitors such as enalapril are contraindicated in pregnancy, particularly because they can cause fetal renal impairment, oligohydramnios, skull abnormalities and neonatal renal failure.
- * Therefore, enalapril must be stopped.
- * Labetalol is commonly used for hypertension in pregnancy, but this woman has asthma. β -blockers can precipitate bronchospasm, so labetalol is less suitable.
- * Nifedipine, a calcium-channel blocker, is safe and commonly used for hypertension during pregnancy.
- * Methyldopa is also an option, but nifedipine is particularly appropriate in this situation.

Exam point:

👉 Pregnancy + ACE inhibitor → stop it.

👉 If asthma is present → avoid labetalol → choose nifedipine.

Q9. Correct answer: Oral acyclovir 800 mg, 5 times daily for 7 days

This woman has active varicella infection, not merely exposure.

- * Varicella during pregnancy can cause significant maternal complications, especially varicella pneumonia.
- * It can also cause fetal complications, including congenital varicella syndrome.
- * Antiviral treatment with oral acyclovir is recommended, particularly when started within 24 hours of appearance of the rash.
- * Since the rash has appeared within the last 24 hours, this is the ideal time to start treatment.

Why not VZIG?

- * VZIG (varicella-zoster immunoglobulin) is primarily used after significant exposure in a susceptible pregnant woman before clinical disease develops.
- * Once chickenpox has developed, antiviral treatment is appropriate.

Exam point:

👉 Exposure only → consider VZIG.

👉 Rash already developed → oral acyclovir.

Q10. Correct answer: Cyclophosphamide

The question asks which drug is NOT safe during pregnancy.

- * Azathioprine → can be used in pregnancy when clinically indicated.
- * Hydroxychloroquine → generally considered safe and is usually continued in SLE during pregnancy.
- * Corticosteroids → can be used when needed for disease flares.
- * Prednisolone → commonly used for SLE exacerbations during pregnancy.
- * Cyclophosphamide → teratogenic and fetotoxic, particularly during the first trimester, and is generally avoided during pregnancy unless there is an exceptional, life-threatening indication.

Therefore:

👉 SLE flare in pregnancy → steroids/hydroxychloroquine/azathioprine may be used.

👉 Cyclophosphamide → avoid because of fetal toxicity.

Q11.

The visible results are approximately:

- * Hb = 112 g/L
- * WCC = 4.0
- * Platelets = $89 \times 10^9/L$
- * MCV = 30 (the image may be unclear here)

The important abnormality is the platelet count of $89 \times 10^9/L$, which represents thrombocytopenia.

However, the actual question and answer choices for Q11 are cut off in the photograph, so I don't want to guess the intended answer.

Q12. Correct answer: Idiopathic immune thrombocytopenia (ITP)

The important clue is isolated thrombocytopenia with a history of mucosal bleeding (nosebleeds).

- * ITP is an immune-mediated destruction of platelets.
- * It typically causes isolated low platelet count; other blood cell lines are usually normal.
- * Nosebleeds, gum bleeding, petechiae and easy bruising are typical manifestations.
- * Gestational thrombocytopenia is usually mild, asymptomatic and generally does not cause significant bleeding.
- * TTP would usually have thrombocytopenia plus haemolytic anaemia, neurological/renal abnormalities and other systemic features.
- * Vitamin B12 deficiency usually produces macrocytic anaemia and can affect multiple blood cell lines.

Exam pearl:

👉 Low platelets + mucocutaneous bleeding + otherwise well → think ITP.

Q13.

She has:

- * Platelets $50 \times 10^9/L$
- * Normal renal and liver function
- * Normal coagulation profile
- * Normal infection screen
- * Normal antiphospholipid antibodies/lupus anticoagulant/SLE serology
- * History of heavy periods and spontaneous petechiae

These findings strongly support immune thrombocytopenia (ITP) rather than gestational thrombocytopenia or a pregnancy-specific hypertensive disorder.

Q14. Correct answer: Oral steroids

A platelet count of $50 \times 10^9/L$, particularly with a history of bleeding manifestations, warrants treatment.

Why steroids?

- * Corticosteroids suppress the autoimmune destruction of platelets.
- * They are commonly used as first-line treatment for ITP in pregnancy when treatment is required.
- * The aim is generally to maintain a safe platelet count rather than normalize it completely.

Why not the other options?

- * Fresh frozen plasma: replaces clotting factors, not platelets; coagulation is already normal.
- * Observation only: appropriate for some mild/asymptomatic cases with higher platelet counts, but not ideal here with significant thrombocytopenia and bleeding history.
- * Oral antihypertensives: BP is normal (111/70 mmHg).
- * Platelet transfusion: generally reserved for severe/life-threatening bleeding or urgent procedures, because transfused platelets are rapidly destroyed in ITP.

Exam pearl:

👉 ITP in pregnancy + significant thrombocytopenia/bleeding → corticosteroids are first-line.

Q15.

The woman is 12 weeks pregnant and her father and brother have severe haemophilia A.

Haemophilia A is X-linked recessive and results from factor VIII deficiency.

Correct answer: D — Free fetal DNA in maternal circulation to determine fetal sex.

Why?

- * If the mother is a carrier, a male fetus has a 50% chance of being affected.
- * A female fetus would generally be a carrier rather than affected, assuming the father does not have haemophilia.
- * Therefore, determining fetal sex is an important initial step in assessing fetal risk.
- * Cell-free fetal DNA (cffDNA) from maternal blood can be used to determine fetal sex non-invasively.

Why not CVS or amniocentesis initially?

These are invasive procedures and may be used for definitive fetal genetic diagnosis when indicated, but they are not the first step when a non-invasive fetal-sex determination can first establish whether the fetus is male and therefore at risk of haemophilia A.

Important distinction:

Factor VIII assay is not a reliable way to establish carrier status, because factor VIII levels in female carriers can overlap with the normal range.

Exam sequence to remember:

Family history of haemophilia A → establish maternal carrier status → determine fetal sex → if appropriate, offer definitive fetal genetic testing.

Q16. Correct answer: B. Repaired tetralogy of Fallot

The key issue is the cardiovascular risk during pregnancy.

- * Repaired Tetralogy of Fallot (TOF) can leave residual pulmonary regurgitation, right ventricular dysfunction, arrhythmias and residual outflow obstruction.
- * Pregnancy increases blood volume and cardiac output substantially, which can worsen these problems.
- * Therefore, women with repaired TOF require careful cardiac assessment and multidisciplinary management during pregnancy.

Why the others are less risky:

- * Wolff-Parkinson-White syndrome: may cause tachyarrhythmias but usually does not carry the same overall maternal risk.
- * Heart transplant recipient: high-risk pregnancy, but with a stable graft and good function, pregnancy can be managed carefully.
- * Marfan syndrome with aortic root 4 cm: important risk of aortic dissection, but the risk becomes particularly concerning at larger aortic dimensions; 4 cm is below the usual threshold for the highest-risk category.
- * Mechanical heart valve: requires careful anticoagulation but is not necessarily the highest maternal mortality risk among these options.

Exam pearl:

👉 In congenital heart disease, repaired TOF can still carry significant pregnancy risk because of residual ventricular/outflow abnormalities and arrhythmias.

Q17. Correct answer: B. Aortic dissection

This is a classic emergency presentation.

Important clues:

- * Sudden severe chest pain
- * Pain radiating to the back between the shoulder blades
- * Different blood pressure between the two arms
- * A harsh systolic murmur
- * Pregnancy itself increases cardiovascular stress.
- * Additional risk factors include obesity and smoking.

These findings strongly suggest aortic dissection.

The difference in BP occurs because the dissection can involve branches of the aorta, causing unequal blood flow to the arms.

Aortic dissection can also cause aortic regurgitation, producing a cardiac murmur.

Why not myocardial ischaemia?

- * MI can cause severe chest pain, but sudden pain radiating to the interscapular region + unequal arm BP is much more characteristic of aortic dissection.

Exam pearl:

👉 Acute tearing chest/back pain + unequal arm BP = think aortic dissection immediately.

Q18. Correct answer: C. Progesterone-only pill

This woman has significant cardiac disease (mitral stenosis) and atrial fibrillation and is receiving anticoagulation.

The major issue is avoiding methods that increase thrombotic/cardiovascular risk.

Combined oral contraceptive pills should be avoided because they contain estrogen, which increases the risk of venous and arterial thrombosis.

A progestogen-only method is preferable.

Options such as:

- * progesterone-only pill,
- * implant,
- * or certain progestogen-based methods

may be considered depending on the individual cardiac condition and anticoagulation status.

For this question, the intended answer is progesterone-only pill.

Why not combined pill?

👉 Estrogen + significant cardiac disease/AF → increased thrombotic risk.

Exam pearl:

High thrombotic risk → avoid estrogen-containing contraception → consider progestogen-only contraception.

Q19. Correct answer: E. ST elevation

The woman has acute chest pain and is 28 weeks pregnant.

The ECG finding most strongly supporting an acute myocardial infarction (MI) among the options is ST-segment elevation.

- * ST elevation can indicate acute transmural myocardial injury and, in the appropriate clinical setting, supports ST-elevation myocardial infarction (STEMI).
- * ST depression usually suggests subendocardial ischaemia and may occur with NSTEMI/unstable angina.
- * T-wave inversion can occur with ischaemia but is less specific.
- * Q waves may indicate previous or established infarction rather than being the best acute finding.
- * Right bundle branch block is not diagnostic of MI by itself.

Q20. Correct answer: Likely to tolerate pregnancy well

She has:

- * Repaired TOF
- * No symptoms
- * Recent echocardiogram showing only mild pulmonary regurgitation

This suggests she has good functional status and no major residual haemodynamic lesion.

Pregnancy increases blood volume and cardiac output, so women with significant residual TOF abnormalities can develop arrhythmias or heart failure. However, in an asymptomatic woman with well-functioning repair and only mild pulmonary regurgitation, pregnancy is generally well tolerated.

Why the other options are wrong:

- * Planned Caesarean at term: Vaginal delivery is usually preferred unless there is an obstetric or major cardiac indication.
- * May develop arrhythmias and left heart failure: Arrhythmias are possible, but significant left-heart failure is not expected in this well-compensated patient.

- * Significant chance of admission for bed rest and diuretics: Not expected with mild disease and good functional status.
- * Fetal cardiac scan because risk is 25%: The risk of congenital heart disease in the fetus is increased, but 25% is too high. Fetal echocardiography is nevertheless appropriate because of the maternal history.

Exam pearl:

👉 Repaired TOF + asymptomatic + good ventricular function/minimal residual lesion → pregnancy usually tolerated well.

Q21. Correct answer: Serum fructosamine

This is an important exam point.

In β -thalassaemia, HbA1c can be unreliable because of abnormal haemoglobin and altered red-cell survival.

HbA1c reflects glucose exposure over approximately 2–3 months, but conditions that alter RBC lifespan or haemoglobin composition can produce misleading results.

Fructosamine measures glycated serum proteins, mainly albumin, and reflects glycaemic control over approximately 2–3 weeks.

Therefore:

👉 β -thalassaemia + diabetes → use fructosamine rather than HbA1c.

Why not HbA1c?

Because haemoglobinopathies and altered RBC turnover can make HbA1c inaccurate.

Q22.

Recurrent episodes of rapid heartbeat lasting 5–10 minutes

Correct answer: B. Supraventricular tachycardia (SVT)

The description is classic for paroxysmal SVT:

- * Sudden onset
- * Sudden episodes of rapid heartbeat
- * Episodes last several minutes
- * Recur approximately weekly
- * No loss of consciousness
- * Otherwise no known cardiac disease

SVT commonly presents as rapid, regular palpitations with abrupt onset and termination.

Why not the others?

- * Atrial fibrillation: usually produces an irregularly irregular rhythm and is less typical in a young woman without structural heart disease.
- * Ventricular tachycardia: potentially much more serious and often associated with structural heart disease; syncope may occur.
- * Ectopic beats: usually feel like isolated skipped/extra beats rather than sustained rapid tachycardia for 5–10 minutes.
- * Anxiety: can cause palpitations, but the characteristic sudden recurrent episodes suggest an arrhythmia rather than anxiety alone.

Exam pearl:

👉 Young patient + sudden onset/offset + regular rapid heartbeat lasting minutes → SVT.

Q23. Correct answer: C. Sodium valproate

The question shows a neural tube defect and asks which antiepileptic drug is associated with this fetal abnormality.

Sodium valproate is strongly associated with neural tube defects, particularly spina bifida.

Valproate also has a broader association with fetal malformations and adverse neurodevelopmental outcomes, so it is avoided in pregnancy whenever an effective alternative exists.

Other options:

- * Carbamazepine: can also increase the risk of congenital malformations, including neural tube defects, but the association is less strong than with valproate.
- * Phenytoin: associated with fetal hydantoin syndrome.
- * Lamotrigine: generally has a substantially lower teratogenic risk than valproate.

Exam pearl:

👉 Neural tube defect + antiepileptic drug = think sodium valproate.

Q24. Correct answer: Increase the dose of lamotrigine during pregnancy and reduce it again postpartum.

The woman is 18 weeks pregnant, has epilepsy and is taking lamotrigine.

During pregnancy, lamotrigine clearance increases, so its plasma concentration can fall, potentially leading to breakthrough seizures. Therefore, the dose may need to be increased during pregnancy according to clinical response/drug levels.

After delivery, drug clearance returns toward the pre-pregnancy state. If the higher pregnancy dose is continued, lamotrigine toxicity can occur. Therefore, the dose should be

reviewed and reduced postpartum. RCOG specifically advises reviewing increased AED doses within 10 days after delivery.

Exam pearl:

👉 Lamotrigine: dose often ↑ during pregnancy → dose ↓ postpartum.

Do not stop antiepileptic medication simply because the woman becomes pregnant; uncontrolled seizures can also harm mother and fetus.

Q25. Correct answer: E. Parenteral progesterone

Carbamazepine is an enzyme-inducing antiepileptic drug.

It increases hepatic metabolism of many steroid hormones, reducing the effectiveness of several hormonal contraceptives.

Therefore:

- * Combined oral contraceptive → reduced efficacy
- * Progestogen-only pill → reduced efficacy
- * Progestogen implant → reduced efficacy
- * Depot medroxyprogesterone acetate (DMPA) → effectiveness is not significantly affected and is therefore a suitable choice.

RCOG educational material specifically notes that enzyme-inducing AEDs such as carbamazepine reduce contraceptive efficacy.

Exam pearl:

👉 Enzyme-inducing AED + contraception → DMPA is a good option.

Q26. Correct answer: E. Prednisolone

The woman has acute unilateral facial weakness, developing over about 24 hours, with no other neurological findings or obvious lesions.

This is most consistent with Bell's palsy (idiopathic facial nerve palsy).

Pregnancy is associated with an increased incidence of Bell's palsy, particularly in the later stages.

Prednisolone is the main treatment because corticosteroids reduce inflammation and improve the chance of recovery, particularly when started early.

Why not the other options?

- * Acyclovir: may be considered in selected cases, particularly if herpes zoster/Ramsay Hunt syndrome is suspected, but this presentation without vesicular lesions is more consistent with Bell's palsy.

- * Antibiotics: no evidence of bacterial infection.
- * Anticoagulants: no indication.
- * Aspirin: does not treat Bell's palsy.

Exam pearl:

👉 Acute isolated unilateral facial paralysis in pregnancy → Bell's palsy → prednisolone.

Q27. Correct answer: C. 4 hours

The woman has a DVT and is receiving therapeutic LMWH. She has had an epidural for analgesia.

The important concern is spinal/epidural haematoma if anticoagulation is restarted too soon after removal of the epidural catheter.

According to RCOG guidance, LMWH should not be given for 4 hours after removal of an epidural catheter.

So the answer is:

👉 Wait at least 4 hours after epidural catheter removal before restarting LMWH, provided there is no bleeding concern.

High-yield timing numbers

Situation

Minimum interval

Last prophylactic LMWH → neuraxial procedure

12 h

Last therapeutic LMWH → neuraxial procedure

24 h

Epidural catheter removal → LMWH

4 h

These intervals are designed to reduce the risk of potentially catastrophic spinal/epidural haematoma.

Q28. Correct answer: Prophylactic LMWH for the duration of the hospital stay.

She has several VTE risk factors:

- * Pregnancy
- * BMI 33 → obesity is a VTE risk factor.
- * Hospital admission

- * Acute infection requiring IV antibiotics
- * Potential reduction in mobility/dehydration

RCOG specifically considers hospital admission and systemic infection requiring admission/IV antibiotics important VTE risk factors. Hospitalised pregnant women should generally be considered for LMWH prophylaxis unless there is a contraindication, such as imminent labour or active bleeding.

Why not 6 weeks postpartum?

She does not have a previous VTE or another indication requiring prolonged postpartum prophylaxis. Her major risk factor here is the acute hospitalisation, so prophylaxis is needed while that risk persists.

Exam pearl:

👉 Pregnant + admitted with acute infection → prophylactic LMWH while in hospital.

Q29. Correct answer: Prophylactic LMWH during the antenatal period and for 6 weeks postpartum.

She has protein C deficiency, which is an inherited thrombophilia.

Importantly, she has no previous thrombosis, but protein C deficiency is considered a higher-risk thrombophilia than simple heterozygous factor V Leiden or prothrombin mutation.

RCOG classifies protein C or protein S deficiency as an asymptomatic high-risk thrombophilia and recommends specialist assessment, consideration of antenatal LMWH, and 6 weeks of postnatal prophylaxis.

Therefore, among the options, the best answer is:

👉 Prophylactic LMWH throughout pregnancy + 6 weeks postpartum.

Exam pearl:

Protein C/S deficiency → think 6 weeks postpartum prophylaxis; antenatal LMWH should be considered.

Q30. Correct answer: Prophylactic LMWH for the duration of the hospital stay.

This woman is admitted because of hyperemesis gravidarum.

Hyperemesis can cause:

- * Dehydration
- * Reduced mobility
- * Hospitalisation

All of these increase VTE risk.

The important principle is that hospital admission itself is a transient VTE risk factor, and prophylaxis is generally considered while the woman remains admitted, assuming there is no contraindication.

Once she recovers, is rehydrated and becomes mobile, the transient risk decreases.

Why not 6 weeks postpartum?

There is no previous VTE or major persistent thrombophilia described.

Exam pearl:

👉 Hyperemesis + hospital admission → LMWH during admission.

Q31. Correct answer: D. Prophylactic LMWH for 10 days after delivery.

This is an important RCOG obesity question.

Her BMI is 42 kg/m², which is class III obesity.

RCOG specifically recommends that all women with BMI ≥ 40 kg/m² should be considered for weight-appropriate prophylactic LMWH for 10 days after delivery.

Therefore, even though she had a normal vaginal delivery, her BMI alone is sufficient to warrant postpartum prophylaxis.

Why not antenatal LMWH?

A BMI ≥ 40 alone does not automatically mean LMWH throughout pregnancy.

The key distinction is:

BMI ≥ 40 → postpartum LMWH for 10 days.

Additional risk factors may change the recommendation and lead to antenatal prophylaxis.

Why not 6 weeks?

Six weeks is generally reserved for substantially higher-risk situations, such as previous VTE, or certain high-risk thrombophilias/other major risk factors.

Why not aspirin?

Aspirin is not the standard drug for VTE prophylaxis in this situation. LMWH is used.

★ Very important MRCOG revision table.

Q32. Correct answer: 6 mm

The question is referring to the second-trimester nuchal fold, measured during the anomaly scan.

- * A nuchal fold ≥ 6 mm in the second trimester is considered abnormal.
- * An increased nuchal fold is a soft marker for chromosomal abnormalities, particularly Down syndrome.
- * Therefore, a measurement of 6 mm or more should prompt further assessment/referral according to the local fetal-medicine pathway.

Important distinction:

- * Nuchal translucency (NT) $\rightarrow$ measured at 11–14 weeks, and the usual abnormal threshold is around ≥ 3.5 mm.
- * Nuchal fold $\rightarrow$ measured at the 20-week anomaly scan, with ≥ 6 mm considered increased.

👉 Exam pearl: NT $\neq$ nuchal fold.

20-week nuchal fold ≥ 6 mm $\rightarrow$ consider referral/further assessment.

Q33. Correct answer: 16 weeks

This question is about twin-to-twin transfusion syndrome (TTTS), which occurs in monochorionic twins because they share a placenta and have vascular connections between their circulations.

Surveillance begins early because TTTS can develop rapidly.

For monochorionic diamniotic twins, ultrasound surveillance is generally performed from 16 weeks and every 2 weeks thereafter.

The scan looks for:

- * Amniotic fluid discordance
- * Bladder visibility
- * Growth
- * Doppler abnormalities
- * Evidence of TTTS

RCOG guidance emphasizes specialist ultrasound surveillance in monochorionic pregnancies because of the risk of complications such as TTTS.

👉 Remember: MCDA twins $\rightarrow$ ultrasound surveillance from 16 weeks, usually every 2 weeks.

Q34. Correct answer: CRL (crown–rump length)

The woman is in the first trimester and is unsure of her LMP.

The most accurate method of establishing gestational age in the first trimester is CRL measurement.

- * BPD = 24
- * CRL = 94
- * HC = 111
- * AC = 32

For first-trimester dating, CRL is the key measurement.

Why not HC, AC or BPD?

These measurements become more useful for assessing gestational age later in pregnancy, whereas CRL is the preferred biometric measurement for first-trimester dating.

👉 Uncertain LMP + first trimester → date by CRL.

Also remember that the routine first-trimester scan is used to establish gestational age, among other purposes.

Q35. Correct answer: Anti-D level 4 IU/mL

This is a very important red-cell antibody question.

For maternal anti-D antibodies, an anti-D level of >4 IU/mL is significant enough to warrant referral to a fetal-medicine specialist.

The reason is the possibility of haemolytic disease of the fetus and newborn (HDFN).

As the maternal antibody level rises, there is an increasing risk of:

- * Fetal anaemia
- * Hydrops fetalis
- * Severe neonatal disease

So:

Anti-D >4 IU/mL → refer to fetal medicine.

A much higher level, around >15 IU/mL, is associated with a significant risk of severe fetal disease.

👉 MRCOG memory point: Anti-D 4 = referral threshold.

Q36. Correct answer: Treat now

Asymptomatic bacteriuria means significant bacterial growth in the urine without urinary symptoms.

It is important in pregnancy because untreated bacteriuria increases the risk of:

- * Symptomatic UTI
- * Pyelonephritis
- * Some adverse pregnancy outcomes

Therefore, once significant asymptomatic bacteriuria is identified, it should be treated with an appropriate pregnancy-safe antibiotic, ideally guided by urine culture and sensitivity.

Why not “treat only if symptoms”?

That would be incorrect because the woman has asymptomatic bacteriuria, which is specifically screened for and treated during pregnancy.

Why not intrapartum antibiotic prophylaxis (IAP) alone?

IAP does not replace treatment of the current urinary infection/bacteriuria.

👉 Exam pearl:

Pregnancy + confirmed asymptomatic bacteriuria → treat, even though she has no symptoms.

Q37. Correct answer: Reduce the time interval to induction/delivery.

Mifepristone is a progesterone-receptor antagonist.

Progesterone normally maintains uterine quiescence. Blocking progesterone:

- * promotes cervical ripening
- * increases uterine contractility
- * increases the uterus’s sensitivity to prostaglandins
- * therefore helps shorten the interval from treatment to onset of labour.

So the best answer is:

👉 Mifepristone → progesterone blockade → cervical ripening + increased prostaglandin sensitivity → shorter induction-to-delivery interval.

Q38. Correct answer: Acyclovir 400 mg three times daily until term and delivery by Caesarean section.

This is a primary episode of genital HSV in the third trimester.

Why it matters:

- * A newly acquired HSV infection late in pregnancy carries a relatively high risk of neonatal HSV transmission, because maternal protective antibodies have not had enough time to develop and cross the placenta.
- * Antiviral treatment with acyclovir is safe in pregnancy.
- * When a first episode occurs after 28 weeks, particularly within 6 weeks of the expected delivery, planned Caesarean birth is generally recommended to reduce neonatal transmission.

Therefore, the intended answer in this MCQ is:

👉 Acyclovir + planned Caesarean delivery.

Important distinction: This is different from recurrent HSV, where vaginal delivery is usually possible if there are no active lesions/prodromal symptoms.

Q39. Correct answer: β -hCG, uE3, AFP and inhibin A.

The quadruple test consists of four maternal serum markers:

1. AFP — alpha-fetoprotein
2. β -hCG — beta-human chorionic gonadotrophin
3. uE3 — unconjugated estriol
4. Inhibin A

This is a second-trimester screening test, generally performed around 15–22 weeks.

For Down syndrome, the typical pattern is:

- * ↓ AFP
- * ↓ uE3
- * ↑ β -hCG
- * ↑ inhibin A

Easy memory:

👉 Quad = 4 markers: AFP + hCG + uE3 + inhibin A.

Q40. Correct answer: Lower vagina

More precisely, the recommended specimen is a vaginal–rectal swab, starting from the lower vagina and then sampling the rectum.

Why?

GBS commonly colonises both the vagina and rectum. Sampling these sites gives a better detection rate than an endocervical swab.

So:

- *  Upper vagina
- *  Endocervix
- *  Anorectal alone
- *  Lower vagina + rectum

The RCOG also describes GBS as commonly found in the vagina and rectum.

Exam pearl:

👉 GBS swab = lower vagina + rectum; NOT endocervical.

Q41. Correct answer: Microcephaly

This is maternal PKU.

The fetus is exposed to high maternal phenylalanine concentrations. Poorly controlled maternal PKU can cause:

- * Microcephaly
- * Intellectual/developmental impairment
- * Congenital heart defects
- * Growth restriction/low birth weight
- * Increased risk of pregnancy loss

Therefore, among the options shown:

👉 Microcephaly is the classic answer.

Important: The fetus does not necessarily have PKU itself. The fetal abnormalities result from exposure to high maternal phenylalanine levels.

Memory:

🧠 Maternal PKU → “small head + heart defect.”

Q42. Correct answer: Pulmonary embolism (PE) — among the options shown.

Pregnancy is a hypercoagulable state, and pulmonary embolism can rapidly cause severe right-heart strain, cardiovascular collapse and cardiac arrest.

PE is a major cause of maternal mortality and has been reported as the commonest direct cause of maternal death in the UK in some guideline-era data.

Important nuance: The exact ranking of causes of cardiac arrest varies according to the population and whether obstetric causes such as haemorrhage and anaesthetic complications are included. Recent sources describe haemorrhage and anaesthetic causes as major causes overall.

But for this MCQ, where the choices are pulmonary embolism, aortic dissection, VTE, obstetrics and aortic stenosis, the intended answer is pulmonary embolism.

Q43. Correct answer: Aortic dissection

Turner syndrome is associated with congenital cardiovascular abnormalities, particularly:

- * Bicuspid aortic valve
- * Coarctation of the aorta
- * Aortic root dilatation

Pregnancy increases cardiac output and places additional stress on the aortic wall. Therefore, a woman with Turner syndrome has a significant risk of aortic dissection or rupture during pregnancy.

Why not the others?

- * Pre-eclampsia: increased risk, but not the characteristic life-threatening cardiac complication.
- * Cardiomyopathy: possible but not the defining major risk here.
- * Pericarditis: not a typical major pregnancy complication of Turner syndrome.

👉 Turner syndrome + pregnancy → think aortic dilatation/dissection.

Q44. Correct answer: Pre-eclampsia

Pregnancy in women with Turner syndrome, particularly following donor-oocyte IVF, carries a substantially increased risk of hypertensive disorders, especially pre-eclampsia.

There are several contributing factors, including:

- * Underlying vascular abnormalities
- * Cardiovascular disease associated with Turner syndrome
- * The increased risk associated with assisted reproductive technology and donor oocytes

This is why women with Turner syndrome require careful cardiovascular assessment before pregnancy and close monitoring throughout pregnancy.

Why not the others?

- * GDM: may occur but is not the major characteristic risk being tested.
- * Epilepsy: no specific major association.
- * SCD: not the primary pregnancy complication being assessed.

👉 Turner + donor oocyte pregnancy → high risk of pre-eclampsia and cardiovascular complications.

Q45. Correct answer: Caesarean section

This is a monochorionic twin pregnancy with:

- * First twin = cephalic
- * Second twin = breech
- * One twin has growth restriction (<5th centile)

The important point is that although a cephalic first twin with a breech second twin can sometimes be delivered vaginally in appropriately selected cases, the presence of significant fetal growth restriction and the monochorionic pregnancy makes Caesarean delivery the safer answer in this MCQ.

Why not ECV?

External cephalic version is not performed on the second twin before delivery. If the first twin is cephalic, ECV of the second twin is not the routine approach.

Exam pearl:

👉 In twin delivery, the presentation of Twin 1 is the major determinant. A cephalic first twin can allow vaginal birth in suitable cases, but additional complications—such as significant growth restriction—can change the plan.

Q46. Mother has Marfan syndrome; father is normal

Correct answer: 50% affected males, 50% normal males, 50% affected females and 50% normal females.

Marfan syndrome is usually autosomal dominant.

Let:

- * Mother = affected → Aa
- * Father = unaffected → aa

The possible children are:

- * Aa → affected
- * aa → unaffected

Each pregnancy therefore has:

- * 50% chance of being affected
- * 50% chance of being unaffected

And because this is autosomal, sex does not alter the risk:

- * 50% of male offspring affected
- * 50% of male offspring unaffected
- * 50% of female offspring affected
- * 50% of female offspring unaffected

Very important: This is not X-linked, so there is no special male/female inheritance pattern.

👉 Autosomal dominant affected parent × unaffected parent = 50% risk to every pregnancy.

Q47. Rh-negative mother with high anti-C antibodies

Correct answer: Early jaundice

The important information is:

- * Mother has anti-C antibodies
- * Antibody level is significantly elevated
- * Baby is delivered at 37 weeks
- * The baby is at increased risk of haemolytic disease of the fetus and newborn (HDFN).

Anti-C is an IgG red-cell antibody and can cross the placenta.

If the fetus/newborn has the corresponding C antigen, maternal antibodies can destroy fetal/neonatal red cells.

After birth, this leads to:

Haemolysis → increased bilirubin → neonatal jaundice

Because the haemolysis begins before or around birth, jaundice can occur very early, unlike physiological jaundice, which typically develops later.

Why early rather than late jaundice?

In immune-mediated haemolysis:

- * RBC destruction is already occurring at birth.

* Bilirubin production is therefore increased immediately.

* The newborn can develop jaundice within the first 24 hours, which is always pathological and should prompt evaluation for haemolysis.

The baby may also develop anaemia, and severe HDFN can cause hydrops fetalis.

Breastfeeding: Starting breastfeeding 3 hours after birth does not prevent antibody-mediated haemolysis.

👉 Maternal clinically significant red-cell antibody → HDFN → early neonatal jaundice ± anaemia.

Q49. The best answer is: Edwards syndrome (Trisomy 18).

There is an important point here: the answer marked in your document appears to be “Patau syndrome,” but the clinical features given actually point much more strongly to Edwards syndrome.

The key clues are:

- * Severe fetal growth restriction (<5th centile)
- * Clenched hands — especially characteristic of trisomy 18
- * Rocker-bottom feet — classic trisomy 18 feature
- * Multiple congenital abnormalities

Trisomy 18 is strongly associated with IUGR, clenched/overlapping fingers and rocker-bottom feet.

Cleft lip and palate is more strongly associated with Patau syndrome (trisomy 13), which is probably why the question may have been designed to confuse you. Patau classically has:

- * Cleft lip/palate
- * Holoprosencephaly
- * Microphthalmia
- * Polydactyly
- * Severe CNS abnormalities

However, clenched hands + rocker-bottom feet + severe growth restriction are much more characteristic of Edwards syndrome.

🧠 MRCOG memory trick

Edwards (18) → “Clenched hands + rocker-bottom feet + growth restriction.”

Patau (13) → “Cleft lip + holoprosencephaly + polydactyly.”

So, if you are answering this question based on the clinical features, I would choose Edwards syndrome, even though the answer key in the photograph says Patau.

Q50. Correct answer: 4 minutes

This question refers to maternal cardiac arrest in advanced pregnancy.

The traditional principle is:

👉 If maternal circulation has not been restored promptly, begin perimortem Caesarean delivery at about 4 minutes of cardiac arrest, with the goal of achieving delivery by approximately 5 minutes.

Why 4 minutes?

During maternal cardiac arrest:

1. Maternal cardiac output stops.
2. Uteroplacental blood flow falls dramatically.
3. The gravid uterus also compresses the inferior vena cava and aorta, worsening venous return and CPR effectiveness.
4. Emptying the uterus can improve maternal venous return and cardiac resuscitation as well as potentially improve fetal outcome.

Therefore, the procedure should not be delayed while waiting for prolonged unsuccessful resuscitation.

The RCOG's current maternal-collapse guideline emphasizes prompt, effective resuscitation and specifically includes perimortem Caesarean delivery in its management framework.

★ Exam rule

Maternal cardiac arrest + uterus sufficiently advanced → prepare immediately; if no ROSC, start perimortem Caesarean by 4 minutes, aiming for delivery by 5 minutes.

PAPER 3 ANSWER

Q1. Answer: 90%

The first-trimester combined test consists of:

- * Nuchal translucency (NT)
- * Maternal serum free β -hCG
- * PAPP-A
- * Maternal age

For trisomy 21, the combined screening has a high detection rate. In twin pregnancies, the detection rate is approximately 90% when appropriate ultrasound and biochemical markers are used.

Exam point:

👉 Combined screening in twins can achieve a detection rate of around 90% for Down syndrome.

Q2. Answer: Laparotomy cerclage preconceptionally (Transabdominal cerclage)

This woman has:

- * Previous PPRM
- * Traumatic/damaged cervix due to LEEP/LEETZ
- * Very short cervix

A severely shortened or surgically damaged cervix may not be suitable for a conventional transvaginal cerclage such as McDonald or Shirodkar.

Therefore, a transabdominal cerclage (TAC) is appropriate. It is usually placed before conception when the cervical anatomy is severely compromised.

Why not the other options?

- * Shirodkar: Still requires adequate cervical tissue and is technically difficult with a severely damaged/very short cervix.
- * Abdominal cerclage during pregnancy: Possible, but if the need is known before pregnancy, preconception placement is preferred.
- * Laparoscopic cerclage during pregnancy: Technically possible in selected cases, but preconception placement is generally preferred when planned.

Exam pearl:

👉 Very short/absent cervix or failed vaginal cerclage → Transabdominal cerclage.

Q3. Answer: 22q11.2 deletion

Truncus arteriosus is a congenital cardiac defect in which a single arterial trunk arises from the heart instead of separate aorta and pulmonary artery.

It is strongly associated with 22q11.2 deletion syndrome (DiGeorge/22q11.2 deletion syndrome).

The deletion affects development of the pharyngeal apparatus and cardiac outflow tract, explaining the association with conotruncal cardiac defects such as:

- * Truncus arteriosus
- * Tetralogy of Fallot
- * Interrupted aortic arch

Exam pearl:

👉 Conotruncal cardiac defect + abnormal facial/palatal features or hypocalcaemia → think 22q11.2 deletion.

Q4. Answer: Polycythaemia

A large-for-gestational-age (LGA) baby, particularly an infant of a diabetic mother, is at increased risk of polycythaemia.

Maternal hyperglycaemia → fetal hyperglycaemia → fetal hyperinsulinaemia.

Insulin has growth-promoting effects, producing macrosomia. At the same time, increased fetal metabolic activity raises oxygen requirements, leading to relative fetal hypoxia → increased erythropoietin → increased red-cell production.

Therefore:

Maternal diabetes → macrosomia + fetal hyperinsulinaemia → relative hypoxia → ↑ erythropoietin → polycythaemia

Polycythaemia can cause:

- * Poor feeding
- * Lethargy
- * Ruddy appearance
- * Respiratory distress
- * Hypoglycaemia
- * Hyperbilirubinaemia

So among the options, polycythaemia is the best answer.

Q5. Answer: MRI for fetal brain

In a monochorionic diamniotic (MCDA) pregnancy, the twins share a placenta and therefore have vascular anastomoses between their circulations.

If one twin dies, there can be an acute fall in blood pressure in the surviving twin, causing blood to flow from the survivor toward the dead twin. This can result in acute cerebral hypoperfusion/ischemia and neurological injury in the survivor.

Therefore, the surviving twin requires assessment for possible neurological injury. Fetal brain MRI is particularly useful for detecting cerebral injury.

Why not immediate delivery?

At 30 weeks, if the surviving fetus is stable, immediate delivery is not automatically required. Management should be individualized with close fetal surveillance.

MRCOG pearl:

👉 MC twin + single fetal demise → think neurological injury in the surviving twin.

👉 Assess the survivor's brain, including fetal MRI when appropriate.

Q6. Answer: Oligohydramnios

NSAIDs inhibit cyclooxygenase (COX) → ↓ prostaglandin synthesis.

Prostaglandins are important for maintaining fetal renal blood flow. NSAID exposure can therefore reduce fetal renal perfusion and urine production.

Since fetal urine is the major source of amniotic fluid in the second half of pregnancy:

NSAID → ↓ prostaglandins → ↓ fetal renal blood flow → ↓ fetal urine → ↓ amniotic fluid → OLIGOHYDRAMNIOS

The FDA specifically warns that NSAID use from around 20 weeks can cause fetal renal dysfunction leading to oligohydramnios.

NSAIDs can also cause premature closure of the ductus arteriosus, particularly later in pregnancy, but for this question the expected answer is oligohydramnios.

MRCOG pearl:

👉 NSAIDs → oligohydramnios

👉 Late pregnancy → premature ductus arteriosus closure

Q7. Answer: 5 minutes

The principle is that if a pregnant woman suffers maternal cardiac arrest, resuscitation should begin immediately.

If there is no return of spontaneous circulation, a resuscitative/perimortem Caesarean birth should be initiated rapidly, with the classic target of delivery by about 5 minutes after maternal cardiac arrest.

Why?

The purpose is primarily maternal resuscitation, because emptying the uterus:

- * Reduces aortocaval compression
- * Improves venous return
- * Improves cardiac output
- * Makes effective chest compressions easier

There should not be a delay while waiting for transfer to an operating theatre.

MRCOG pearl:

👉 Maternal cardiac arrest + advanced pregnancy → start resuscitation immediately; prepare for resuscitative CS without delay.

👉 The classic exam number is 5 minutes.

Q8. Answer: Avoid pregnancy for 3 months

Methotrexate is a folic acid antagonist and is teratogenic.

After treatment with methotrexate, contraception is advised for at least 3 months before attempting conception. This is the traditional MRCOG exam answer.

Why?

Methotrexate can interfere with:

- * DNA synthesis
- * Cell division
- * Embryonic development

Therefore, conception soon after treatment carries a potential risk of embryotoxicity/teratogenicity.

MRCOG pearl:

👉 Methotrexate → avoid pregnancy for 3 months.

Q9. Answer: 1/100 (1%)

After a previous pregnancy affected by trisomy 21, the recurrence risk in a subsequent pregnancy is approximately 1% or the maternal-age-related risk, whichever is higher.

So the simplified exam answer is:

≈ 1 in 100 (1%)

This is a general recurrence figure. The exact risk depends on the cytogenetic mechanism:

- * Free trisomy 21: recurrence is usually around 1% above the maternal-age-related risk.
- * Translocation Down syndrome: recurrence risk can be considerably different and depends on whether a parent is a balanced translocation carrier.

MRCOG pearl:

👉 Previous baby with Down syndrome → ~1% recurrence risk or maternal-age risk, whichever is higher.

Q10. Answer: Mast cell tryptase

Anaphylaxis causes mast-cell degranulation, releasing mediators such as histamine and tryptase.

Serum tryptase is therefore useful for supporting the diagnosis retrospectively. It rises after an anaphylactic reaction and is usually measured during the first few hours, with a baseline sample obtained later after recovery.

Important: Do not wait for tryptase results before treating anaphylaxis. IM adrenaline is the priority.

Exam pearl:

👉 Suspected anaphylaxis → serum mast-cell tryptase

👉 Tryptase is a marker of mast-cell activation.

Q11. Answer: Maternal age + nuchal translucency

At a CRL of 67 mm, the pregnancy is within the first-trimester NT measurement window.

In triplet pregnancy, serum biochemical screening is less reliable because there are three fetuses contributing to the biochemical markers. Therefore, maternal age + NT is an appropriate screening approach.

For multiple pregnancies, RCOG notes that Down syndrome screening is less accurate than in singleton pregnancies.

Exam pearl:

👉 Triplets → maternal age + NT for first-trimester screening.

👉 Do not automatically apply singleton serum-marker calculations to triplets.

Q12. Answer: AFP + β -hCG + estriol + inhibin A

This is the second-trimester quadruple test.

The key clue is CRL = 86 mm. First-trimester combined screening using NT + free β -hCG + PAPP-A is performed when the CRL is within the appropriate first-trimester range. RCOG's current monochorionic-twin guidance specifies a CRL of 45–84 mm for first-trimester combined screening.

Therefore, at 86 mm, the fetus is just beyond that range and the question is directing you toward second-trimester biochemical screening.

The quadruple test consists of:

- * AFP
- * β -hCG
- * Unconjugated estriol (uE3)
- * Inhibin A

Memory trick: Quad = 4 markers → AFP + hCG + E3 + inhibin A.

Q13. Answer: PAPP-A

Pregnancies following assisted reproductive technology (ART/IVF) can have altered serum concentrations of pregnancy-associated proteins.

PAPP-A may be lower in IVF pregnancies, which can increase the calculated risk for trisomy 21 and therefore produce a false-positive first-trimester screening result.

PAPP-A is normally one of the two biochemical components of the first-trimester combined test:

NT + maternal age + free β -hCG + PAPP-A

So if an ART pregnancy is specifically mentioned in an MRCOG question, remember the association with altered PAPP-A.

Exam pearl:

👉 ART/IVF → low PAPP-A → may increase false-positive Down syndrome screening.

Q14. Answer: 1 month

Isotretinoin is a potent teratogen.

It is associated with major fetal abnormalities, particularly involving:

- * Craniofacial structures
- * Cardiovascular system
- * CNS
- * Thymus/parathyroid development

Therefore, pregnancy must be avoided during treatment and for at least 1 month after stopping isotretinoin. Current NHS guidance also states that women should stop isotretinoin for at least one month before trying to conceive.

MRCOG memory point:

👉 Isotretinoin → wait 1 month before pregnancy.

Q15. Answer: Nondisjunction in meiosis

Most cases of Down syndrome are caused by trisomy 21 due to meiotic nondisjunction.

During meiosis, chromosome 21 fails to separate properly. This produces a gamete with an extra chromosome 21. After fertilisation, the embryo therefore has:

47 chromosomes → 3 copies of chromosome 21

This accounts for approximately 95% of Down syndrome cases.

Other mechanisms:

- * Robertsonian translocation → ~4%
- * Mosaicism → ~1%

MRCOG pearl:

👉 Down syndrome is not inherited in the usual Mendelian manner.

👉 Most commonly: meiotic nondisjunction → trisomy 21.

Q16. Answer: 32–34 weeks from the lower vagina and anorectal area

GBS = Group B Streptococcus.

The organism commonly colonises the lower vagina and rectum, so the recommended swab is taken from:

- * Lower vagina
- * Rectal/anorectal area

The important point in this question is the timing in a twin pregnancy.

In twins, the risk of preterm birth is higher, so screening is performed earlier than the conventional 35–37-week window used in many standard screening protocols.

Therefore, for this question, the expected answer is:

👉 32–34 weeks, lower vagina + anorectal area.

Exam pearl:

Don't confuse the site of sampling:

GBS swab = lower vagina + rectum, not just a high vaginal swab.

Q17. Answer: 16 weeks

Non-invasive fetal genotyping uses cell-free fetal DNA (cffDNA) in maternal blood to determine whether the fetus carries the RHD gene.

According to current RCOG guidance, fetal genotyping for RhD and other relevant red-cell antigens can be performed from 16 weeks; Kell typing is generally performed from 20 weeks.

Why is this useful?

If the mother has clinically significant anti-D antibodies, knowing whether the fetus is actually RhD positive helps determine whether the fetus is at risk of haemolytic disease.

MRCOG memory point:

👉 Fetal RhD genotyping → 16 weeks

Important nuance: Some UK fetal-RHD screening programmes can technically detect fetal RHD earlier (around 11+2 weeks), but the MRCOG/RCOG alloimmunisation question asking for fetal genotyping generally uses 16 weeks.

Q18. Answer: 1500 IU

This is a very important MRCOG number.

During intraoperative cell salvage (IOCS) at Caesarean section, fetal red cells may be returned to the maternal circulation along with the salvaged maternal blood.

If the mother is:

- * RhD negative
- * Previously not sensitised
- * Baby is RhD positive or RhD status is unknown

→ give at least 1500 IU anti-D immunoglobulin after reinfusion of the salvaged blood.

A maternal blood sample should then be taken approximately 30–40 minutes after reinfusion to assess fetomaternal haemorrhage and determine whether additional anti-D is required.

MRCOG pearl:

👉 Cell salvage + RhD-negative mother → 1500 IU anti-D

This is different from remembering the usual smaller routine dose after some sensitising events.

Q19. Answer: Offer amniocentesis

This is the most conceptually important question on the page.

The fetus is severely small (<3rd centile) and the finding was already present at 20 weeks.

That means this is very early-onset severe SGA/FGR.

Even though the umbilical artery Doppler is normal, severe early fetal growth restriction raises concern for:

- * Chromosomal abnormality
- * Genetic syndrome
- * Fetal structural abnormality
- * Placental disease

Therefore, diagnostic genetic testing with amniocentesis should be considered.

A normal Doppler does not exclude an underlying chromosomal/genetic cause.

The RCOG approach to SGA/FGR emphasizes that management depends not simply on size but on gestational age at diagnosis, severity, sequential growth and Doppler findings.

Why not emergency Caesarean?

At 29 weeks with normal Doppler, there is no indication for immediate delivery solely because the fetus is <3rd centile.

Why not STAN in 2 weeks?

STAN/cCTG is a fetal surveillance tool and is not the first step in investigating severe, very early SGA that has been present since 20 weeks.

Why not simply scan in 1 week?

Surveillance is important, but the key missing investigation is the etiological/genetic assessment because of the severe early-onset growth abnormality.

Q20. Correct answer: C. 3 months

Tamoxifen is a selective oestrogen receptor modulator (SERM) used mainly in the treatment/prevention of hormone-sensitive breast cancer.

It should not be taken during pregnancy because of concerns about fetal effects.

After stopping tamoxifen, women planning pregnancy are generally advised to wait 3 months before trying to conceive. This allows time for the drug to clear sufficiently from the body. Current UKTIS/BUMPS guidance specifically recommends stopping tamoxifen 3 months before attempting conception.

Why 3 months?

- * Tamoxifen has a long elimination period.
- * It and its active metabolites can persist in the body.
- * It has potential hormonal effects on the developing embryo.
- * Therefore, a washout period is advised.

MRCOG memory point:

Tamoxifen → stop → wait 3 months → conceive

This is different from isotretinoin, where the standard waiting period is 1 month.

Q21.

The question describes a woman who is:

- * 42 years old
- * Pregnant
- * Taking methyldopa for chronic hypertension
- * BMI 24 kg/m²
- * Of Caucasian background

Options:

- * 400 units
- * 800 units
- * 1000 units
- * 1200 units
- * 1500 units

Answer marked in your question: 800 units.

However, there is an important point here: the current standard UK recommendation for routine vitamin D supplementation in pregnancy is 400 IU/day (10 micrograms/day). NHS

guidance currently recommends 400 IU daily, particularly during October–March, with year-round supplementation for women at increased risk of deficiency.

So, if this is an older MRCOG question whose answer key says 800 IU, it is important to recognize that the question may be based on an older/local guideline rather than the current NHS standard.

Why is she not automatically given a high dose?

Her BMI is 24, so she is not obese. BMI ≥ 30 is one recognized risk factor for vitamin-D deficiency. Dark skin, limited sunlight exposure and covering most of the skin are other risk factors.

Therefore, her:

- * Caucasian skin
- * BMI 24

do not themselves justify a high-dose vitamin D regimen.

Also, age 42 and chronic hypertension do not by themselves mean that she needs high-dose vitamin D.

[7:36 am, 24/8/2026] Mamta Singh: Situation

Vitamin D

Routine pregnancy supplementation

400 IU/day (10 µg)

Vitamin D deficiency

Higher therapeutic doses may be used

Obesity/dark skin/limited sunlight

May require increased supplementation depending on guideline/risk assessment

**Q22. Answer: E. Head circumference (HC) **

The key clue is the CRL = 86 mm.

For first-trimester dating:

- * CRL 45–84 mm → use CRL for gestational-age assessment.
- * Once CRL is >84 mm, CRL becomes less accurate for dating.
- * At this point, head circumference (HC) is preferred. ISUOG specifically recommends using CRL for dating up to 84 mm and then using HC beyond this point.

Here:

CRL = 86 mm → >84 mm → use HC

Therefore:

👉 Answer = Head circumference

Why not the other measurements?

- * Abdominal circumference: mainly used for assessment of fetal growth, particularly later in pregnancy.
- * BPD: can be used for dating, but is less preferred than HC once CRL is >84 mm.
- * CRL: normally the best first-trimester dating parameter, but 86 mm is beyond the recommended 84-mm threshold.
- * Femur length: primarily useful for later fetal biometry/growth assessment.

MRCOG memory rule:

$CRL \leq 84 \text{ mm} \rightarrow$ CRL for dating

$CRL > 84 \text{ mm} \rightarrow$ HC for dating

This is a very high-yield number.

Q23. Answer: E. Only when requested by the mother ✅

This question is testing an important NICE antenatal-care recommendation.

Routine auscultation of the fetal heart with a Doppler device at every antenatal appointment is NOT recommended in an uncomplicated pregnancy.

Why?

A fetal heartbeat being present at one particular moment does not provide adequate reassurance about fetal wellbeing. It only confirms that the fetus is alive at that time.

Routine Doppler auscultation can also:

- * Give false reassurance
- * Increase maternal anxiety when the heartbeat is difficult to locate
- * Lead to unnecessary investigations

Therefore, routine fetal-heart auscultation at every antenatal visit is not recommended.

If the woman asks to hear the fetal heartbeat, it can be offered after the appropriate gestational age.

Important distinction

Don't confuse:

Auscultation of fetal heart ❌

with

assessment of fetal movements ✅

Maternal awareness of reduced fetal movements is clinically important and should prompt appropriate assessment.

MRCOG exam pearl

👉 Uncomplicated pregnancy + routine antenatal visit → don't routinely auscultate fetal heart.

👉 Mother requests to hear it → it can be offered.

So the answer in your question is:

E. Only when requested by the mother.

Q24. Answer: A. Laser ablation of placental vessels

This is twin-to-twin transfusion syndrome (TTTS) in a monochorionic diamniotic pregnancy.

Because the twins share a placenta, abnormal vascular anastomoses allow blood to flow disproportionately from the donor to the recipient twin:

- * Donor: oligohydramnios, growth restriction, anaemia
- * Recipient: polyhydramnios, volume overload and possible cardiac failure

For severe TTTS at 25 weeks, the preferred first-line treatment is fetoscopic laser photocoagulation of the placental vascular anastomoses. It treats the underlying cause by interrupting the abnormal inter-twin blood flow.

Why not amnioreduction?

Amnioreduction removes excess liquor from the recipient sac and may temporarily improve polyhydramnios, but it does not eliminate the abnormal vascular connections.

Why not selective feticide?

This sacrifices one twin and is reserved for selected situations where survival of both is not achievable or other circumstances dictate.

MRCOG pearl:

👉 Significant TTTS at 16–26 weeks → fetoscopic laser is first-line.

Q25. Answer: D. Preterm delivery

APH = antepartum haemorrhage.

Even when no specific cause is identified, unexplained APH is associated with adverse pregnancy outcomes.

The important association for this question is:

Unexplained APH → increased risk of preterm delivery

RCOG specifically reports an increased risk of preterm delivery in pregnancies complicated by unexplained APH.

Why does this happen?

Bleeding may be associated with:

- * Placental dysfunction
- * Inflammation
- * Subclinical placental separation
- * Uterine activity

These can lead to either spontaneous preterm labour or iatrogenic preterm birth when delivery becomes necessary.

MRCOG pearl:

👉 Unexplained APH → think PRETERM DELIVERY.

Q26. Answer: E. Postpone delivery and perform fetal MRI after 4 weeks

This is a very important monochorionic-twin question.

The key information is:

- * Monochorionic twins → shared placenta
- * One twin has died
- * The surviving twin is currently alive
- * There is no indication in the question of ongoing severe compromise requiring immediate delivery

When one twin dies in a monochorionic pregnancy, blood can suddenly pass from the surviving twin into the circulation of the dying/dead twin through the placental vascular anastomoses.

This can cause:

Acute hypotension → cerebral hypoperfusion → cerebral ischaemia/haemorrhage → neurological injury

Therefore, immediate delivery does not necessarily prevent the neurological injury, because the haemodynamic insult may already have occurred at the time of the co-twin's death.

Current RCOG guidance states that a conservative approach is often appropriate, with serial ultrasound assessment and consideration of fetal brain MRI approximately 4 weeks after the co-twin's death.

Why wait 4 weeks?

Neurological abnormalities may take time to become visible.

MRI at around 4 weeks provides much better assessment of:

- * Cerebral ischaemia
- * Haemorrhage
- * Other neurological injury

RCOG specifically states that fetal brain MRI may be performed up to 4 weeks after co-twin demise to detect neurological morbidity.

Why not immediate Caesarean?

Because delivery itself doesn't reverse the cerebral injury that may already have occurred. At 27 weeks, immediate delivery also exposes the surviving fetus to significant prematurity.

Why not induction?

Same principle: if the surviving fetus is stable, there is no automatic indication for immediate delivery.

★ Very important MRCOG distinction

Dichorionic twins + one twin dies:

→ Usually no shared circulation, so the neurological risk to the survivor is much lower.

Monochorionic twins + one twin dies:

- Shared vascular connections
- Acute transfusion/hypotension can damage survivor's brain
- Conservative management + surveillance + fetal brain MRI around 4 weeks

Q27. Answer: E. Small-for-gestational-age (SGA) fetus

After bariatric surgery, especially malabsorptive procedures such as gastric bypass, there can be:

- * Reduced maternal nutritional intake
- * Malabsorption of micronutrients
- * Altered maternal metabolism
- * Reduced gestational weight gain

These factors are associated with an increased risk of fetal growth restriction/SGA.

Evidence reviewed by NICE found that previous bariatric surgery was associated with a significantly higher risk of SGA infants.

Why not gestational diabetes or LGA?

Interestingly, bariatric surgery tends to reduce:

- * Gestational diabetes
- * Excessive fetal growth
- * LGA/macrosomia

So the direction of association is almost the opposite of uncomplicated maternal obesity.

MRCOG pearl:

Bariatric surgery → ↓ GDM/LGA but ↑ SGA/FGR

Current NICE guidance also emphasizes specialist nutritional assessment and micronutrient supplementation in pregnancy after bariatric surgery.

Q28. The woman is:

- * 39 weeks
- * First pregnancy
- * Wants to continue pregnancy beyond her estimated due date

Answer according to the question bank: C. Offer a membrane sweep at 40 weeks onwards



But there is an important current-guideline update

Current NICE guidance says that after 39+0 weeks, women should be offered a discussion about membrane sweeping, with consent obtained before performing it.

Therefore, by current NICE guidance, the answer would be 39+0 weeks onwards, rather than waiting until 40 weeks.

Why is membrane sweeping useful?

A membrane sweep involves passing a finger through the cervix and separating the membranes from the lower uterine segment.

This releases local prostaglandins and may:

- * Encourage spontaneous onset of labour
- * Reduce the need for formal induction

It can cause:

- * Discomfort
- * Cramping
- * Vaginal bleeding

Consent is essential.

Exam point

Older question-bank answer: 40 weeks onwards

Current NICE: after 39+0 weeks

So if you are preparing for the current MRCOG, remember 39 weeks.

Q29. Answer: B. Speculum examination of the vagina

This is a very important sequence.

A woman at 33 weeks has symptoms suggestive of PPRM.

The first step is a sterile speculum examination to look for pooling of amniotic fluid in the vagina.

Current NICE guidance specifically recommends:

Suspected PPRM → speculum examination → look for pooling.

If fluid is seen

If there is obvious pooling of amniotic fluid:

👉 PPRM is diagnosed clinically

👉 No additional biomarker test is required.

If no fluid is seen

Then perform a vaginal-fluid biomarker test:

* IGFBP-1, or

* PAMG-1

NICE specifically recommends these tests when pooling is not seen.

Why not nitrazine?

Nitrazine testing is no longer recommended by NICE for diagnosing PPRM because vaginal blood, semen, infection and other substances can alter vaginal pH and produce misleading results.

Why not ultrasound?

Ultrasound can show oligohydramnios, but low liquor does not prove that the membranes have ruptured.

MRCOG sequence

Suspected PPRM → Speculum → pooling?

YES → PPRM

NO → IGFBP-1/PAMG-1

That's a very high-yield algorithm.

Q30.

The question shows a woman at 14 weeks with:

- * Previous pregnancy
- * Anti-K antibody
- * Titre 1:16

The key issue is Kell alloimmunisation.

The important next step is to determine whether the fetus carries the K antigen.

Answer: Maternal blood test for fetal K-antigen genotyping

However, the timing needs careful attention.

Current RCOG guidance states that non-invasive fetal genotyping can be performed from 20 weeks for K (Kell) because testing earlier carries a greater risk of a false-negative result.

Therefore:

14 weeks + anti-K → don't perform fetal K genotyping immediately.

👉 Wait until 20 weeks for non-invasive K genotyping.

Once fetal K status is known:

If fetus is K-negative

There is no risk of haemolytic disease from maternal anti-K, so intensive fetal surveillance for anti-K-mediated anaemia is not required.

If fetus is K-positive

The pregnancy is at risk of fetal anaemia, and appropriate surveillance with MCA Doppler is required according to the antibody level/history.

Why is anti-K particularly important?

Unlike anti-D, anti-K can cause significant fetal anaemia partly through suppression of fetal erythropoiesis, and severe fetal disease can occur even when antibody titres are relatively low.

Therefore, anti-K is treated seriously and fetal antigen status is very useful.

Important MRCOG distinction

For non-invasive fetal genotyping:

- * Most antigens → can be tested earlier

* K antigen → from 20 weeks because of the higher false-negative risk before then.

So if your question bank gives an option such as “maternal blood test for fetal K genotyping after 20 weeks”, that is the option I would select.

Q31. Answer: B. Combined screening test

The combined test is the standard first-trimester screening approach and includes:

- * Nuchal translucency (NT)
- * Maternal age
- * PAPP-A
- * Free β -hCG

For a monochorionic twin pregnancy, both fetuses share the same placenta, but each fetus should have its own NT measurement. RCOG notes that chromosomal screening is offered in multiple pregnancies around 12–14 weeks, although the accuracy is lower than in singleton pregnancies.

Why not the other options?

- * Amniocentesis: This is a diagnostic test, not routine screening. At 13 weeks, amniocentesis is also too early; it is generally performed from 15+0 weeks.
- * NIPT: It is a highly accurate screening test, but the question is based on the conventional first-trimester screening pathway.
- * NT alone: Less comprehensive than the combined test.
- * Quadruple test: Used in the second trimester, not at 13 weeks.

MRCOG pearl

13 weeks + twins → think first-trimester combined screening.

Q32. Answer in your question bank: C. 700 μ g/day

Vitamin A is essential for:

- * Fetal growth
- * Eye development
- * Cell differentiation
- * Immune function

However, excess preformed vitamin A (retinol) can be teratogenic, particularly during early pregnancy.

The important distinction is between:

Retinol/preformed vitamin A → excessive amounts can be harmful

β -carotene → does not have the same teratogenic toxicity.

The usual recommended daily intake for women is around 600–700 µg retinol equivalents/day. Current NHS information gives 600 µg/day for women aged 19–64 and advises avoiding excessive vitamin-A supplements and liver during pregnancy.

Important correction for exams

Your question says “recommended upper limit” and gives 700 µg as the answer. This is better understood as the recommended daily requirement/intake, rather than the absolute toxic upper limit.

The true potentially harmful level of preformed vitamin A is much higher—around 3000 µg/day in pregnancy according to UK nutritional guidance.

So remember:

700 µg → approximate recommended daily intake

3000 µg → level considered potentially dangerous in pregnancy

MRCOG pearl:

👉 Avoid liver, liver products and retinol-containing supplements during pregnancy.

👉 β-carotene from vegetables is safe.

**Q33. Answer: E. Offer induction of labour immediately and intrapartum antibiotic prophylaxis (IAP) **

This is an important combination of term PROM + positive GBS.

The woman:

- * Is 37 weeks
- * Has spontaneous rupture of membranes
- * Is a known GBS carrier

Once membranes rupture at term in a woman known to be GBS positive, the risk of early-onset neonatal GBS infection increases with increasing duration of membrane rupture.

Therefore:

Management

Immediate induction of labour + intrapartum antibiotic prophylaxis.

NICE guidance supports immediate birth/induction for women with term prelabour rupture of membranes who have a positive GBS test, because this reduces the risk of neonatal infection.

Why not wait?

A. Await spontaneous labour + IAP 

Waiting allows the duration of ruptured membranes to increase and therefore increases neonatal infection risk.

B. One dose of antibiotic before elective CS ✗

There is no indication here for elective Caesarean section. Also, GBS prophylaxis is specifically intrapartum antibiotic prophylaxis, not simply a single preoperative dose.

C. Induction after 24 hours + IAP ✗

The 24-hour expectant-management approach can apply to some women with term PROM without GBS risk, but not to a woman known to be GBS positive.

D. Induction at 41 weeks + IAP ✗

Waiting until 41 weeks is inappropriate in this situation.

MRCOG memory rule

Term PROM + GBS positive → IMMEDIATE induction + IAP.

Q34.

Twin pregnancy has a substantially higher risk of preterm birth than singleton pregnancy.

Approximately 10% of twin births occur before 32 weeks—the figure being tested in this question.

This is clinically important because very preterm twin birth contributes significantly to neonatal morbidity.

The increased prematurity is related to factors such as:

- * Uterine overdistension
- * Placental abnormalities
- * Cervical shortening
- * PPROM
- * Fetal complications requiring early delivery

RCOG emphasizes that multiple pregnancy carries a substantially increased risk of preterm birth.

MRCOG numbers to remember

Twins:

- * About 10% born before 32 weeks
- * Overall preterm birth is much more common than in singleton pregnancy.

Q35. Answer: B. 30 seconds–3 minutes

For a preterm baby, delayed cord clamping is beneficial when the baby does not require immediate resuscitation.

Waiting before clamping allows continued placental transfusion, which can improve:

- * Neonatal blood volume
- * Haemoglobin
- * Circulatory stability
- * Iron stores

It also reduces the risk of:

- * Intraventricular haemorrhage
- * Necrotising enterocolitis
- * Need for blood transfusion

Current NICE guidance recommends not clamping the cord earlier than 30 seconds in preterm babies unless there is a specific reason to do so, such as maternal haemorrhage or the baby requiring immediate resuscitation. (nice.org.uk/obj)

MRCOG memory point

Preterm + baby stable → delay cord clamping ≥ 30 seconds, commonly up to 3 minutes.

Q36. Answer: D. 75 minutes

A Category 2 Caesarean section means there is maternal or fetal compromise that is not immediately life-threatening.

Examples include:

- * Abnormal CTG without immediate threat
- * Failure to progress with fetal/maternal concerns
- * Some cases of suspected fetal compromise

The classic UK target is:

Category 1

Immediate threat to life → deliver as soon as possible, usually within 30 minutes.

Category 2

Maternal/fetal compromise without immediate threat → usually within 75 minutes.

So:

Category 2 → 75 minutes

The timing is a target, not a rigid rule; clinical circumstances may require earlier delivery. NICE uses the 30-minute and 75-minute framework for Categories 1 and 2 respectively. (nice.org.uk^[OBJ])

Easy memory

Category 1 = 30 min

Category 2 = 75 min

Q37.

The question describes:

- * Prolonged second stage
- * Fetal head is one-fifth palpable abdominally
- * Vaginal examination: station +1

Answer: D. Mid forceps 

The classification depends mainly on the station of the fetal head.

Forceps classification

Outlet forceps

- * Scalp visible at the introitus
- * Fetal skull has reached pelvic floor
- * Head is essentially at the outlet

Low forceps

- * Leading point of fetal skull is at +2 station or lower
- * But head is not yet on the pelvic floor/outlet

Mid forceps

- * Head is engaged
- * Leading bony point is above +2 station but at or below 0 station depending on the classification system used

In this question, the fetal head is at +1 station, so it is not outlet and is classified as mid forceps in the classification used by this question bank.

Why is “one-fifth palpable abdominally” important?

The amount of head palpable abdominally helps assess engagement.

If only 1/5 of the head is palpable abdominally, approximately 4/5 has descended into the pelvis, indicating an engaged head.

But the actual station (+1) determines the level for operative vaginal-delivery classification.

MRCOG pearl

Think:

Outlet → very low/head on pelvic floor

Low → +2 or below

Mid → engaged but higher, such as +1

Q38. Answer: D. 40% 

Approximately 4 in 10 women who plan a vaginal breech birth ultimately require an emergency Caesarean section. RCOG gives this figure explicitly.

This is why planned vaginal breech birth should only be undertaken:

- * In an appropriate setting
- * By a team experienced in vaginal breech delivery
- * Where emergency Caesarean delivery is immediately available

MRCOG pearl

Planned vaginal breech → ~40% end in emergency CS.

Q39.

The woman has:

- * Been pushing for 2 hours
- * Fetal head 2/5 palpable abdominally
- * Head at -1 station
- * Caesarean is required

Answer: B. Blood loss >1000 mL 

A second-stage Caesarean section is technically more difficult because the fetal head is deeply engaged in the pelvis.

Compared with a Caesarean performed in the first stage, second-stage CS has increased risk of:

- * Major blood loss
- * Uterine incision extensions
- * Uterine atony
- * Difficult extraction of the fetal head
- * Endometritis

Studies have demonstrated a significantly higher frequency of estimated blood loss >1000 mL with second-stage Caesarean delivery.

Why blood loss increases?

The deeply engaged fetal head can make delivery difficult and may cause:

- * Extension of the uterine incision into the cervix/lateral uterine vessels
- * Trauma to the lower uterine segment
- * Uterine atony

Therefore:

👉 Second-stage CS → increased risk of PPH/blood loss >1000 mL.

MRCOG pearl

Second-stage CS = difficult extraction + uterine incision extension + ↑ blood loss.

Q40. Answer: A. Immediately after the third stage of labour is complete 

This is called post-placental IUCD insertion.

The IUCD can be inserted immediately after:

1. Delivery of the baby
2. Delivery of the placenta
3. Completion of the third stage

The device is placed high in the uterine cavity, close to the fundus. Indian national PPIUCD guidance describes post-placental insertion as occurring immediately following delivery of the placenta, typically within about 10 minutes.

Advantages

Immediate postpartum insertion:

- * Provides contraception before the woman leaves the hospital
- * Avoids loss to follow-up
- * Is convenient and highly effective

Important contraindications

Do not insert immediately postpartum when there is, for example:

- * Puerperal sepsis/chorioamnionitis
- * Significant postpartum haemorrhage
- * Certain uterine abnormalities

Timing terminology

Post-placental: immediately after placenta

Immediate postpartum: within 48 hours

Interval insertion: generally from 4–6 weeks postpartum, depending on guideline.

MRCOG pearl

Baby + placenta delivered → IUCD can be inserted immediately.

Q41. Answer: D. Primiparity

This is the important association being tested.

Primiparity = first pregnancy/first birth.

Studies have repeatedly identified primiparity as an obstetric factor associated with increased risk of postpartum psychosis.

However, the strongest overall risk factors for postpartum psychosis are psychiatric rather than obstetric—for example:

- * Previous postpartum psychosis
- * Bipolar disorder
- * Previous severe psychiatric illness

NICE recognizes postpartum psychosis as a severe mental-health condition with rapid onset in the postnatal period.

Why not the other options?

A. Male infant 

No consistent association.

B. Maternal age >45 years 

Not the obstetric factor consistently associated in the literature tested here.

C. Premature delivery 

Not a consistently established obstetric risk factor.

E. Ventouse delivery 

Instrumental delivery can be associated with psychological trauma, but it is not the consistently established obstetric factor being tested.

MRCOG pearl

Postpartum psychosis → think bipolar disorder + previous postpartum psychosis + primiparity.

Q42. Answer in your question bank: D. Naproxen

NSAIDs can cause acute kidney injury because inhibition of COX → ↓ prostaglandins → renal vasoconstriction → ↓ renal blood flow/GFR.

This risk is particularly important in patients who are:

- * Dehydrated
- * Hypovolaemic
- * Renally impaired
- * Elderly
- * Taking ACE inhibitors/ARBs or diuretics

The MHRA warns that NSAIDs can precipitate renal failure, particularly in vulnerable patients.

Important nuance for this MCQ

The question's answer key says naproxen, but there is no strong modern evidence that naproxen is uniquely the most nephrotoxic NSAID.

A large comparative study found increased AKI risk with several NSAIDs; in that study, the adjusted odds ratio was approximately:

- * Ibuprofen: 2.25
- * Indomethacin: 1.94
- * Naproxen: 1.72
- * Diclofenac: 1.11

And a meta-analysis found that differences between individual traditional NSAIDs were not statistically significant.

So for your MCQ bank, remember:

Q42 → Naproxen

But clinically, the safer concept is:

All NSAIDs can cause AKI; risk varies with patient factors and dose/duration.

Q43. Answer: A. 1–3 weeks

The risk of venous thromboembolism (VTE) is markedly increased during pregnancy and particularly after delivery.

The absolute risk is highest during the first 3 weeks postpartum. RCOG data describe the absolute risk as peaking in this period.

Why is VTE risk high postpartum?

There are three components of Virchow's triad:

1. Hypercoagulability

Pregnancy increases clotting factors and decreases fibrinolysis.

2. Venous stasis

The enlarged uterus and reduced mobility slow venous flow.

3. Vascular injury

Delivery, particularly Caesarean delivery, can cause endothelial/vascular injury.

After delivery, these factors persist for some time.

Important number

Highest absolute VTE risk → first 3 weeks postpartum.

Although the overall postpartum risk remains elevated through the first 6 weeks, the peak is early. RCOG notes that postpartum VTE risk is approximately five times the antepartum risk.

MRCOG memory:

Delivery → VTE risk peaks in 1–3 weeks postpartum.

Q44. Answer: Sedation

The options visible in your image include:

- * Postural hypotension
- * Flushing
- * Renal impairment
- * Cough
- * Sedation

The best answer is sedation.

Methyldopa is a centrally acting α_2 -adrenergic agonist. By reducing central sympathetic activity, it lowers blood pressure but can cause:

- * Sedation/drowsiness
- * Dizziness
- * Weakness
- * Postural hypotension

The product information specifically lists sedation, usually transient, as an adverse effect.

But there is an important postpartum point

Methyldopa is commonly stopped after delivery because of its association with postpartum depression. NICE guidance has specifically advised avoiding methyldopa in the postnatal period because women are already at increased risk of depression.

So there are two different exam concepts:

Methyldopa adverse effect → sedation

Why stop methyldopa postpartum? → risk of postpartum depression

Why not the other options?

- * Postural hypotension: Can occur, but sedation is the characteristic adverse effect being tested here.
- * Flushing: More characteristic of vasodilators such as nifedipine.
- * Renal impairment: Not a characteristic adverse effect of methyldopa.
- * Cough: Think ACE inhibitors, not methyldopa.

Q 45 Correct answer: b) 3 weeks

A 25-year-old woman has delivered, is not breastfeeding, and is otherwise fit and well.

- * The combined oral contraceptive pill (COCP) contains estrogen, which increases the risk of venous thromboembolism (VTE).
- * The postpartum period itself is a hypercoagulable state, with particularly high VTE risk during the first 3 weeks.
- * In a non-breastfeeding woman with no additional VTE risk factors, COCP can generally be started from 21 days (3 weeks) postpartum.
- * If there are additional VTE risk factors, estrogen-containing contraception may need to be delayed further.

Why not 6 weeks?

Six weeks is particularly relevant to breastfeeding women because of concerns about estrogen affecting milk supply, and postpartum VTE risk remains important. It is not the routine minimum for a healthy non-breastfeeding woman.

Exam point:

Non-breastfeeding + no VTE risk factors → COCP from 21 days postpartum.

Q46. Maternal death following eclampsia

Correct answer: b) Direct

She develops an eclamptic fit, aspirates, develops aspiration pneumonia, and dies 2 days postpartum.

WHO classification:

- * Direct maternal death: Death resulting from obstetric complications of pregnancy, labour or puerperium, including complications of interventions or incorrect management.
- * Indirect maternal death: Death from a pre-existing or newly developed disease that is not directly due to pregnancy, but is aggravated by pregnancy.
- * Coincidental/fortuitous: Death from an unrelated accidental/incidental cause.
- * Late maternal death: Death occurring more than 42 days but less than 1 year after the end of pregnancy.

Here, the sequence is:

Eclampsia → seizure → aspiration → aspiration pneumonia → death

The aspiration and pneumonia are complications arising from the eclamptic seizure, which is a direct obstetric complication.

Therefore:

Answer = DIRECT maternal death.

Q47. Correct answer: e) Refer to perinatal mental health services

This woman has mild postpartum depression, but there is an important additional risk factor:

- * Her mother had bipolar disorder and died by suicide.
- * She is only 7 days postpartum, a period of increased vulnerability to severe mental illness.
- * Although she currently has no suicidal thoughts or thoughts of harming the baby, her strong family history of bipolar disorder and suicide warrants specialist perinatal mental-health assessment.

Why not the other options?

a) Admit for observation — No

Admission is indicated if there is significant suicide/self-harm risk, psychosis, severe depression, inability to care for herself/baby, etc. These are not described here.

b) Commence fluoxetine — No

This is particularly important in this question. Before starting an antidepressant, she should be assessed for bipolar disorder. Antidepressant monotherapy in someone with underlying bipolar vulnerability can precipitate mania/hypomania.

c) Discharge to GP — No

Her strong family history makes specialist assessment appropriate rather than routine GP follow-up alone.

d) Offer counselling — Helpful, but not the best answer

Psychological therapy can be appropriate for mild postpartum depression, but in this case the family history of bipolar disorder and suicide makes specialist perinatal mental-health assessment the priority.

e) Refer to perinatal mental health services — Correct.

★ MRCOG exam point

Postpartum depression + first-degree family history of bipolar disorder → assess for bipolar disorder and involve specialist perinatal mental-health services before prescribing an antidepressant.

Also remember the distinction:

Postpartum blues → common, mild, resolves within ~2 weeks → reassurance/support.

Postpartum depression → persistent depressive symptoms → psychological therapy ± medication depending on severity.

Postpartum psychosis → emergency psychiatric assessment/admission, particularly with delusions, hallucinations, mania or thoughts of harm.

Q48. Answer: E. Transvaginal ultrasound (TVUS)

Transvaginal ultrasound is the first-line imaging investigation when an ectopic pregnancy is suspected.

It allows assessment of:

- * Uterine cavity — presence/absence of an intrauterine pregnancy
- * Adnexa — tubal mass
- * Pouch of Douglas — free fluid/haemoperitoneum
- * Fetal pole and cardiac activity if present

NICE recommends offering transvaginal ultrasound to determine the location of the pregnancy and whether a fetal pole/heartbeat is present. ↕

Why not the other options?

- * Laparoscopy: invasive and generally reserved for selected cases requiring surgical treatment.
- * MRI: not first-line for ectopic pregnancy.
- * Serial β -hCG: useful for assessing the progression of a pregnancy of unknown location, but cannot determine the location of the pregnancy. NICE specifically advises not to use serum hCG to determine pregnancy location. ↕
- * Transabdominal ultrasound: less sensitive in early pregnancy than TVUS.

MRCOG pearl

Suspected ectopic → TVUS first.

Q49.

The woman has:

- * 6 weeks by LMP
- * Vaginal bleeding/discomfort
- * No intrauterine gestational sac
- * β -hCG = 1200 IU/L
- * Repeat β -hCG after 48 hours = 950 IU/L

So β -hCG has fallen by about 21%.

The answer marked in your question bank is: D. Perform a urinary pregnancy test in 2–3 weeks.

But there is an important correction

The current NICE guidance does not support D for this particular 21% fall.

For a pregnancy of unknown location, NICE recommends two serum hCG measurements approximately 48 hours apart. If the hCG:

- * Falls >50% → pregnancy is unlikely to continue; a urine pregnancy test is performed later.
- * Rises >63% → likely developing intrauterine pregnancy, although ectopic pregnancy cannot be completely excluded.
- * Falls by <50% or rises by <63% → this is an inconclusive pattern and requires clinical review. ↕

Here:

1200 → 950

Fall = 250 IU/L

Percentage fall = $250/1200 \times 100 \approx 20.8\%$

So this is less than a 50% fall.

Therefore, according to current NICE guidance, this woman needs clinical review, rather than simply waiting 2–3 weeks for a urine pregnancy test. ↕

Why is this important?

A pregnancy of unknown location should be regarded as potentially ectopic until its location is established. Symptoms are more important than the absolute hCG value. ↕

For your MCQ bank

Question-bank answer: D

Current NICE interpretation: D is not appropriate for a 21% fall; senior/early pregnancy clinical review is required.

This is one I would flag in your notes rather than memorise the old answer.

Q50. Answer: B. Missed miscarriage

This is testing the ultrasound criteria for early pregnancy failure.

The important finding is:

CRL = 7 mm and no fetal heartbeat

With transvaginal ultrasound, a CRL ≥ 7 mm with no visible heartbeat is highly suspicious for pregnancy failure. NICE recommends obtaining a second opinion and/or repeating the scan after at least 7 days before making the diagnosis. ↕

In this case, the second scan is already being described 14 days later, and the embryo has a CRL of 7 mm but still has no cardiac activity.

Therefore, the diagnosis is:

Missed miscarriage

A missed miscarriage means that the pregnancy is no longer viable, but there has not necessarily been expulsion of the pregnancy tissue.

Why not viable intrauterine pregnancy?

A viable pregnancy should demonstrate fetal cardiac activity once the embryo has reached this size.

Why not pregnancy of unknown viability?

That would be appropriate when the ultrasound findings are not yet diagnostic and a repeat scan is required.

Here, the repeat assessment after 14 days still shows an embryo with CRL 7 mm and no heartbeat, supporting pregnancy failure.

Why not incomplete miscarriage?

Incomplete miscarriage usually involves partial expulsion of pregnancy tissue, commonly with bleeding and an open cervical os. The ultrasound scenario here is one of a nonviable intrauterine pregnancy without evidence of complete expulsion.

PAPER 4 ANSWER

Q1. Correct answer: C. Pregnancy-Unique Quantification of Emesis (PUQE)

Explanation:

The PUQE score is a validated scoring system specifically designed to assess the severity of nausea and vomiting of pregnancy (NVP).

It assesses:

- * Number of vomiting episodes
- * Duration of nausea
- * Number of retching episodes over a defined period

It helps classify NVP into mild, moderate, or severe and is also useful for monitoring response to treatment.

Exam point:

👉 PUQE = Pregnancy-Unique Quantification of Emesis

Q2. Correct answer: C. Metabolic alkalosis

Explanation:

Repeated vomiting causes loss of gastric hydrochloric acid (HCl).

Loss of H^+ → increased serum bicarbonate → metabolic alkalosis.

There is also loss of chloride and volume depletion, which contributes to hypochloremic, hypokalemic metabolic alkalosis.

In severe hyperemesis, patients may also develop:

- * Hypokalemia
- * Hyponatremia
- * Dehydration
- * Prerenal azotemia

Remember:

👉 Vomiting → loss of HCl → metabolic alkalosis

Q3. Correct answer: E. Normal saline 0.9% with potassium chloride

Explanation:

Women with significant NVP/hyperemesis commonly have:

- * Dehydration
- * Sodium depletion
- * Chloride depletion
- * Potassium depletion

Therefore, 0.9% normal saline with potassium supplementation is appropriate for restoring intravascular volume and correcting electrolyte abnormalities.

Important: Potassium should be added according to the patient's serum potassium and renal function.

Also, in prolonged vomiting, thiamine should be given before dextrose to prevent Wernicke encephalopathy.

Exam point:

👉 Hyperemesis + dehydration → IV normal saline ± KCl

Q4. Correct answer: C. Anti-D is not required

Explanation:

A complete hydatidiform mole generally contains no fetus or fetal red blood cells. Therefore, there is essentially no fetal RhD-positive red-cell exposure to cause maternal RhD alloimmunisation.

Hence, anti-D immunoglobulin is not routinely required after evacuation of a complete mole.

This differs from a partial mole, where fetal tissue and fetal red cells may be present, so anti-D prophylaxis is generally indicated in an RhD-negative woman.

Q5. Correct answer: C. 9 weeks

Explanation:

Nausea and vomiting of pregnancy (NVP) usually begins around 4–6 weeks of pregnancy. The symptoms typically become most severe around 9 weeks and then gradually improve.

- * Onset: ~4–6 weeks
- * Peak: ~9 weeks
- * Usually improves by 12–20 weeks

Exam point:

👉 NVP peaks at approximately 9 weeks.

Q6. Correct answer: E. Transvaginal ultrasound

Explanation:

A Caesarean scar pregnancy occurs when the gestational sac implants in the previous Caesarean section scar, usually in the anterior lower uterine segment.

Transvaginal ultrasound (TVUS) is the first-line and primary diagnostic investigation because it provides high-resolution visualization of:

- * Gestational sac location
- * Relationship to the Caesarean scar
- * Myometrial thickness between the sac and bladder
- * Cervical canal and uterine cavity
- * Presence/degree of vascularity on Doppler

Why not β -hCG?

β -hCG confirms pregnancy and can be useful for follow-up, but it cannot determine the location of the pregnancy.

Exam point:

👉 Previous CS + early pregnancy + bleeding → think Caesarean scar pregnancy → TVUS.

Q7. Correct answer: E. MRI scan

Explanation:

The woman is 16 weeks pregnant, but ultrasound shows an empty uterus and a fetus lying outside the uterus, surrounded by bowel loops. This raises suspicion of an abdominal ectopic pregnancy.

MRI can be a useful adjunct to ultrasound because it provides excellent soft-tissue contrast and helps define:

- * Exact location of the pregnancy
- * Relationship of the fetus/placenta to abdominal organs
- * Placental implantation site
- * Possible involvement of bowel, bladder or major vessels

This information is particularly useful for surgical planning.

Why not CT?

CT can demonstrate an abdominal pregnancy, but it involves ionising radiation, so MRI is preferred when detailed imaging is required during pregnancy.

Exam point:

👉 Suspected abdominal pregnancy + need for detailed anatomical localization → MRI.

Q8. Correct answer: B. Chlamydia trachomatis

The baby develops bilateral sticky eyes with yellowish discharge at 5 days of life, and the mother had dysuria before pregnancy.

This strongly suggests neonatal chlamydial conjunctivitis.

Why?

- * Chlamydial conjunctivitis usually appears 5–14 days after birth.
- * It is acquired during passage through an infected birth canal.
- * Maternal infection may be asymptomatic or present with dysuria/cervicitis.
- * The conjunctiva becomes inflamed with mucopurulent discharge.

Comparison:

- * Gonococcal conjunctivitis: usually appears much earlier, typically 2–5 days, and is often very severe with copious purulent discharge.
- * Chlamydia: typically 5–14 days → classic exam clue.

👉 5–14 days + sticky/purulent eyes = Chlamydia trachomatis

Q9. Correct answer: 1. Azithromycin

The combination of:

- * Vaginal discharge
- * Dysuria
- * Recent unprotected sexual intercourse
- * Right upper abdominal pain

suggests a sexually transmitted infection with possible pelvic inflammatory disease (PID) and perihepatitis (Fitz-Hugh–Curtis syndrome).

Chlamydia trachomatis is a classic cause of Fitz-Hugh–Curtis syndrome.

Why azithromycin?

Azithromycin is effective against Chlamydia trachomatis and is one of the options given.

Important exam concept:

Fitz-Hugh–Curtis syndrome = PID-associated perihepatitis, classically caused by Chlamydia or gonorrhoea, producing right upper quadrant pain.

Note: In real-world management of suspected PID, treatment is usually broader combination therapy rather than azithromycin alone. The MCQ is asking you to choose the appropriate drug from the listed options.

👉 Chlamydia → azithromycin

Q10. Correct answer: C. Oral glucose tolerance test at 6–13 weeks

A woman with gestational diabetes mellitus (GDM) has a substantially increased future risk of developing:

- * Type 2 diabetes mellitus
- * Recurrent GDM in future pregnancies

Therefore, postpartum testing is required.

A 75-g oral glucose tolerance test (OGTT) is recommended at approximately 6–13 weeks postpartum.

Why OGTT?

It is more sensitive for detecting postpartum glucose intolerance than fasting glucose alone.

What happens after that?

If the postpartum OGTT is normal, she should continue regular long-term diabetes screening, together with lifestyle advice.

Exam point:

👉 GDM → 75-g OGTT at 6–13 weeks postpartum

Q11. Correct answer: A. 23,X

A complete hydatidiform mole is usually androgenetic, meaning that all nuclear genetic material is paternal in origin.

Most commonly:

- * An empty ovum (no maternal nuclear DNA) is fertilised by a 23,X sperm.
- * The paternal chromosomes then duplicate → 46,XX complete mole.

A less common mechanism is fertilisation of an empty ovum by two sperm (dispermy), producing 46,XX or 46,XY.

Therefore, when the question asks specifically for the sperm that fertilised the oocyte, the typical answer is:

👉 23,X

High-yield:

Complete mole → empty ovum + 23,X sperm → duplication → 46,XX

Q12. Correct answer: C. 69,XXY

A partial mole is usually triploid, meaning there are 69 chromosomes rather than 46.

The usual mechanism is:

- * Normal ovum (23,X)
- * Fertilised by two sperm → dispermy
- * Result: 69,XXY most commonly

Other possible triploid karyotypes include 69,XXX and 69,XYY.

A partial mole typically has:

- * Some fetal tissue/fetus
- * Abnormal, cystic placenta
- * Triploid karyotype

👉 Partial mole = triploidy = 69 chromosomes, most commonly 69,XXY.

Memory:

Complete mole → 46,XX

Partial mole → 69,XXY

Q13. Correct answer: C. Triangular or semicircular

A Caesarean scar niche (isthmocoele) is a defect in the anterior lower uterine segment at the site of a previous Caesarean scar.

On ultrasound, the defect may have different appearances, but triangular and semicircular configurations are commonly described.

It results from incomplete healing of the myometrium following Caesarean delivery.

It may be associated with:

- * Postmenstrual spotting
- * Abnormal uterine bleeding
- * Infertility/subfertility
- * Caesarean scar pregnancy in some cases

👉 Niche → anterior lower uterine segment defect → commonly triangular/semicircular.

Q14. Answer from the given options: C. Staphylococcus aureus

The woman is 2 weeks postpartum and has:

- * Fever (38°C)
- * Offensive vaginal discharge
- * Malaise
- * Sore throat

This suggests a puerperal genital tract infection/endometritis.

Among the options provided, Staphylococcus aureus is the best answer.

However, an important clinical point is that postpartum endometritis is usually polymicrobial, involving aerobic and anaerobic organisms. Common organisms include E. coli, anaerobic streptococci, Bacteroides, and other genital tract flora.

The sore throat is also a clue that a streptococcal infection could be considered clinically, but Streptococcus pneumoniae is not the classic organism for puerperal endometritis.

Q15. Correct answer: D — IV benzylpenicillin 3 g loading dose followed by 1.5 g IV every 4 hours until delivery.

The important clue is that she has a positive vaginal swab for Group B Streptococcus (GBS). She therefore requires intrapartum antibiotic prophylaxis to reduce the risk of early-onset neonatal GBS infection.

Recommended regimen:

- * Benzylpenicillin 3 g IV initially
- * Then 1.5 g IV every 4 hours until delivery

The first dose should be given as soon as labour begins or membranes rupture, depending on the clinical situation.

Why?

GBS can be transmitted from mother to baby during labour and can cause severe neonatal disease such as:

- * Sepsis
- * Pneumonia
- * Meningitis

👉 Exam memory: GBS positive → benzylpenicillin 3 g loading → 1.5 g IV 4-hourly.

Q16. Correct answer: D. Early-onset Group B Streptococcus disease

The baby is born at 36 weeks following spontaneous rupture of membranes 32 hours previously. The mother developed a fever during labour, and the baby becomes lethargic and feeds poorly within 6 hours.

These are classic features of early-onset neonatal sepsis.

Important risk factors include:

- * Prolonged rupture of membranes (>18 hours)
- * Maternal fever/intra-amniotic infection
- * Preterm birth
- * Maternal GBS colonisation

GBS is a major cause of early-onset neonatal sepsis, typically presenting within the first 72 hours of life.

The other options are less appropriate:

- * Plasmodium falciparum: malaria, not this typical immediate neonatal presentation.
- * HSV: neonatal herpes usually presents later and often with vesicular/neurological disease.
- * Listeria: possible neonatal infection but less likely with this classic GBS risk profile.

👉 Prolonged ROM + maternal fever + neonatal symptoms soon after birth → early-onset GBS sepsis.

Q17. Correct answer: D. Listeria

This is a classic Listeria monocytogenes question.

The clues are:

- * Pregnancy
- * Recent visit to a farm
- * Flu-like illness and pyrexia
- * Subsequently develops preterm labour
- * Fetal compromise

Pregnant women are particularly susceptible to Listeria, which can cross the placenta and cause:

- * Chorioamnionitis
- * Miscarriage
- * Preterm labour
- * Fetal/neonatal infection

Listeria is associated with exposure to contaminated food, particularly:

- * Unpasteurised dairy products
- * Soft cheeses
- * Deli meats
- * Refrigerated ready-to-eat foods

👉 Pregnancy + flu-like febrile illness + fetal/preterm complications → Listeria.

Q18. Correct answer: A. Single-layer closure

A Caesarean scar niche (isthmocoele) is a defect in the anterior lower uterine segment at the previous Caesarean incision.

A major surgical risk factor is single-layer closure of the uterine incision, compared with double-layer closure.

A niche may subsequently cause:

- * Postmenstrual spotting
- * Abnormal uterine bleeding
- * Pelvic pain
- * Subfertility
- * Caesarean scar pregnancy in some women

Why single-layer closure?

A single-layer closure may result in poorer restoration of the myometrial tissue and a greater residual defect at the Caesarean scar.

Q19. Correct answer: D. 90%

The McRoberts manoeuvre is the first-line manoeuvre for shoulder dystocia.

It involves:

- * Hyperflexion and abduction of the mother's hips.
- * This straightens the sacrum and rotates the symphysis pubis anteriorly.
- * It helps release the impacted anterior shoulder.

When combined with suprapubic pressure, the success rate is approximately 90% in relieving shoulder dystocia.

Important distinction:

McRoberts alone is highly effective, but adding suprapubic pressure increases the likelihood of releasing the shoulder.

👉 Shoulder dystocia → McRoberts + suprapubic pressure → ~90% success

Q20. Correct answer: D. Trial of forceps in theatre

The woman is:

- * Fully dilated
- * Vertex presentation
- * Occipito-posterior (OP)
- * Caput ++ and moulding ++
- * Head at +1 station
- * Previous difficult forceps delivery

This is a potentially difficult instrumental delivery.

Because there is significant caput and moulding and the head is only at +1 station, there is a substantial risk that forceps may fail.

Therefore, if a trial of forceps is attempted, it should be performed in theatre, where an immediate Caesarean section can be carried out if the attempt fails.

👉 Difficult instrumental delivery + significant caput/moulding → trial of forceps in theatre.

Why not vacuum?

OP position with significant caput and moulding makes vacuum less favourable, and the history of difficult forceps adds to the concern.

Q21. Correct answer: D. Forceps in room

The important features are:

- * Fetal head is +1 station
- * Right occiput anterior (ROA) position
- * Deep decelerations
- * Very low variability
- * The cervix is presumably fully dilated in the context of the options.

The CTG indicates significant fetal compromise, so delivery should be expedited.

Because the head is sufficiently low and the position is favourable (ROA), an operative vaginal delivery with forceps can achieve rapid delivery.

Since the head is already low enough, forceps can be performed in the delivery room, rather than proceeding to Caesarean section.

👉 Fetal compromise + fully dilated + low head + favourable position → forceps.

Exam principle:

For operative vaginal delivery, you need:

- * Fully dilated cervix
- * Ruptured membranes
- * Known fetal position
- * Engaged/low fetal head
- * Adequate pelvis
- * Appropriate analgesia
- * Ability to proceed to Caesarean section if unsuccessful

Q22. Correct answer: D. No treatment required

This is an important MRCOG point.

The woman has a positive vaginal GBS swab, but she is:

- * 30 weeks pregnant
- * Planning a third elective Caesarean
- * Not expected to labour
- * Not expected to have rupture of membranes before Caesarean

A positive vaginal GBS swab does not require antenatal antibiotic treatment simply to eradicate colonisation.

Also, intrapartum GBS prophylaxis is not required for a planned Caesarean performed before labour and before rupture of membranes.

Therefore:

👉 GBS colonisation + planned CS before labour/ROM → no specific GBS treatment required.

Important exception:

If she goes into labour or her membranes rupture before the planned Caesarean, intrapartum GBS prophylaxis should then be considered.

Q23. Correct answer: C. Postmenstrual spotting or prolonged menstruation

A Caesarean scar niche (isthmocele) is a defect in the anterior lower uterine segment at the site of a previous Caesarean scar.

The most characteristic symptom is abnormal uterine bleeding, especially:

- * Postmenstrual spotting

- * Prolonged menstruation

Why does spotting occur?

Menstrual blood can collect in the niche because of the scar defect and then drain slowly into the uterine cavity after the main menstrual flow has finished.

Other possible symptoms include:

- * Pelvic pain
- * Infertility/subfertility
- * Abnormal bleeding

But postmenstrual spotting/prolonged menstruation is the classic presentation.

👉 Caesarean niche → postmenstrual spotting.

Q24. Correct answer: 1. Gel instillation sonohysterography (GIS)

A Caesarean scar niche (isthmocoele) is a defect/indentation in the anterior lower uterine segment at the site of a previous Caesarean scar.

Why GIS is best in this MCQ:

- * Gel is introduced into the uterine cavity.
- * The gel outlines the endometrial cavity and fills the scar defect.
- * This makes the niche easier to identify and measure.
- * It has a higher detection rate than routine TVS in many studies.

Exam point:

👉 CS niche → gel/saline instillation sonohysterography is more sensitive than routine TVS.

Q25. Correct answer: B. Depth of at least 2 mm

The European Niche Taskforce defines a Caesarean scar niche as an indentation at the site of the previous Caesarean scar with a depth of ≥ 2 mm.

It is usually seen as a triangular or semicircular anechoic/hypoechoic defect in the anterior lower uterine segment.

Important distinction:

- * Niche: ≥ 2 mm depth
- * Residual myometrial thickness (RMT) is a separate measurement and should not be confused with niche depth.

👉 Remember: Niche = ≥ 2 mm indentation.

Q26. Correct answer: B. Hypotension requiring vasopressor therapy + serum lactate >2 mmol/L

This is based on the Sepsis-3 definition.

Septic shock is a subset of sepsis characterized by:

1. Persistent hypotension requiring vasopressors to maintain MAP ≥ 65 mmHg, and
2. Serum lactate >2 mmol/L despite adequate fluid resuscitation.

Therefore, option B contains the two key criteria.

Why the other options are wrong:

- * Pyrexia: indicates possible infection but does not define shock.
- * Leukocytosis: may occur with infection but is nonspecific.
- * Oliguria: indicates organ dysfunction but is not sufficient to define septic shock.

👉 Septic shock = vasopressor-dependent hypotension + lactate >2 mmol/L after fluids.

Q27. Correct answer: E. High-dose SSRI — citalopram

The patient has classic premenstrual dysphoric disorder (PMDD):

- * Symptoms recur cyclically before menstruation.
- * Mood symptoms include irritability and mood swings.
- * Breast tenderness and bloating are also present.
- * Symptoms interfere with functioning.
- * Her symptom diary confirms the cyclical pattern.

SSRIs are first-line pharmacological treatment for moderate-to-severe PMS/PMDD. They improve both psychological and physical symptoms and can work relatively rapidly in PMDD.

Among the options, citalopram is therefore the best answer.

Why not the other options?

- * CBT: useful, particularly for psychological symptoms, but SSRIs are generally preferred first-line for moderate/severe PMDD.
- * Drospirenone-containing COC: can be effective, but SSRI is the stronger first-line choice in this scenario.
- * LNG-IUS: mainly provides contraception/endometrial effects and is not first-line treatment for PMDD.
- * Estradiol + cyclic progesterone: hormonal therapy may be considered when first-line options fail.

Important dose nuance: The option says citalopram 40 mg. That is at the upper end of dosing and is not necessarily the starting dose; typical effective doses for PMDD are often lower. However, the exam is testing the drug class: SSRI.

Q28. Correct answer: D. Copper or levonorgestrel intrauterine device (IUD/IUS)

Carbamazepine is an enzyme-inducing antiepileptic drug. It increases hepatic metabolism of many hormonal contraceptives, potentially reducing their effectiveness.

Therefore, methods that depend on systemic hormone levels—such as:

- * Combined oral contraceptive
- * Progestogen-only pill
- * Etonogestrel implant

may have reduced contraceptive effectiveness with carbamazepine. The CDC specifically identifies carbamazepine and several other enzyme-inducing anticonvulsants as interacting with hormonal methods.

IUDs are not affected by hepatic enzyme induction.

👉 Epilepsy + enzyme-inducing AED → think IUD.

Q29. Correct answer: C. Lamotrigine

This is a very important MRCOG interaction.

Combined oral contraceptives contain ethinylestradiol, which increases the metabolism/clearance of lamotrigine.

Therefore:

COC → ↓ lamotrigine concentration → potentially ↓ seizure control

The CDC notes that lamotrigine levels decrease significantly during COC use, and seizure activity may increase in some women.

The FSRH similarly advises caution because CHC can reduce lamotrigine levels and may result in reduced seizure control.

Very important distinction:

- * Carbamazepine/phenytoin → induce enzymes → reduce contraceptive hormone levels.
- * Lamotrigine → COC reduces lamotrigine levels.

👉 COC ↔ lamotrigine = reduced lamotrigine level.

Q30. Correct answer: A. Copper intrauterine device (Cu-IUD)

The woman:

- * Has a regular 28-day cycle
- * Is on day 20
- * Had unprotected intercourse last night
- * Took levonorgestrel 1.5 mg one week earlier

The best option is the copper IUD.

Why?

The Cu-IUD is the most effective form of emergency contraception and provides ongoing contraception afterward. Importantly, its effectiveness is not affected by having recently taken levonorgestrel EC.

The other options are less appropriate:

- * Another dose of levonorgestrel: may be used in some circumstances, but the Cu-IUD is more effective.
- * Ulipristal acetate: recent progestogen exposure can interfere with its action.
- * No further action: inappropriate because she has had another episode of unprotected intercourse.
- * LNG-IUS: although now an established EC option in appropriate circumstances, this question is testing the traditional/highly effective Cu-IUD choice.

👉 Recent LNG-EC + another episode of UPSI → Cu-IUD is the best EC option.

Q31. Correct answer: A. Start a combined oral contraceptive (COC) for 3 months

The woman has been using DMPA for 9 months and has developed persistent troublesome bleeding.

Irregular or unpredictable bleeding is a common adverse effect of DMPA, particularly during the first months of use.

If there are no contraindications to estrogen, a short course of combined hormonal contraception can be used to stabilize the endometrium and control troublesome bleeding.

Therefore:

👉 DMPA + troublesome persistent bleeding → short course of COC.

The important principle is that the COC is being used temporarily to control bleeding, not as a replacement for DMPA.

Q32. Correct answer: B. Copper intrauterine device (Cu-IUD)

Carbamazepine is an enzyme-inducing antiepileptic drug (EIAED). It increases hepatic metabolism of many contraceptive hormones and can therefore reduce the effectiveness of:

- * Combined hormonal contraception
- * Progestogen-only pills
- * Etonogestrel implant

The Cu-IUD is not affected by enzyme induction and provides highly effective long-term contraception. FSRH specifically lists the Cu-IUD as unaffected by enzyme-inducing drugs.

Why not DMPA?

DMPA is also generally unaffected by enzyme induction, so clinically it can be an option. However, in this question the woman wants a long-term, reliable method, making the Cu-IUD the best answer among the options.

👉 Enzyme-inducing AED + long-term contraception → Cu-IUD.

Q33. The answer shown in the question is B: Continue for one year after an FSH >30 IU/L.

The key issue is that LNG-IUS can cause amenorrhoea, so absence of periods cannot reliably tell us that menopause has occurred.

For a woman over 50 using an LNG-IUS who wants to stop contraception before age 55:

- * FSH can be checked.
- * If FSH >30 IU/L, contraception should be continued for another 1 year before stopping.

Current FSRH guidance has an even simpler option: if a 52-mg LNG-IUS was inserted at age ≥ 45 , it can generally remain in place for contraception until age 55, when contraception can be stopped because spontaneous pregnancy is exceptionally uncommon.

So for the MCQ, choose:

👉 B. Continue for one year after FSH >30 IU/L.

Important: The question's wording says two FSH levels, but current FSRH guidance does not require two levels for this situation.

Q34. Correct answer: D. DMPA, LNG-IUS, copper IUD

This question is testing which contraceptive methods remain reliable with an enzyme-inducing antiepileptic drug.

Carbamazepine can reduce the effectiveness of:

-  CHC
-  POP
-  Etonogestrel implant

Methods that remain appropriate include:

-  DMPA
-  LNG-IUS
-  Cu-IUD

FSRH guidance specifically states that DMPA, LNG-IUS and Cu-IUD are suitable options with enzyme-inducing drugs; the local action of the LNG-IUS is not significantly affected by enzyme induction.

 Important distinction

Don't confuse Q32 and Q34:

- * Q32 asks for the most suitable single method → Cu-IUD
- * Q34 asks which combination of methods is appropriate → DMPA + LNG-IUS + Cu-IUD

Q35. Emergency contraception

Correct answer: c) Levonorgestrel 3 mg oral dose

Why?

- * She had intercourse 48 hours ago, so emergency contraception is indicated.
- * Copper IUD is normally the most effective EC, but she currently has pelvic inflammatory disease (PID) → IUD insertion is contraindicated because of active pelvic infection.
- * She is taking carbamazepine, a potent hepatic enzyme inducer, which increases metabolism and reduces the efficacy of oral hormonal EC.
- * Therefore, if levonorgestrel is used with an enzyme-inducing drug, double-dose LNG (3 mg) is recommended.

Why not the others?

- * LNG 1.5 mg: efficacy may be reduced by carbamazepine.
- * Ulipristal 30 mg: enzyme inducers can markedly reduce its effectiveness, so it is not preferred.
- * Mifepristone: not the preferred option in this scenario, particularly with enzyme-inducing medication.

 Exam pearl:

Enzyme inducer + LNG emergency contraception → LNG 3 mg.

Active PID → do NOT insert Cu-IUD.

Q36. COC for PMS

Correct answer: c) Drospirenone

Drospirenone-containing COCs, particularly ethinylestradiol 20 µg + drospirenone 3 mg in a 24/4 regimen, have evidence for improving PMS/PMDD symptoms.

Why drospirenone?

- * Drospirenone has anti-mineralocorticoid activity, which may reduce bloating/fluid-retention symptoms.
- * It also has anti-androgenic properties.
- * COCs containing drospirenone have specific evidence for improvement of premenstrual emotional and physical symptoms.

Other options:

- * Desogestrel – not specifically established as the preferred COC for PMS.
- * Levonorgestrel – androgenic progestogen; not the preferred choice for PMS.
- * Gestodene – no comparable specific evidence for PMS.

 Exam pearl:

PMS/PMDD + wants COC → think Drospirenone.

Q37. Primary genital herpes in pregnancy

Correct answer: e) Third trimester (34–40 weeks)

The risk of neonatal herpes transmission is highest when maternal primary HSV infection occurs close to delivery, particularly during the last 6 weeks of pregnancy.

Why?

- * With a new maternal infection late in pregnancy, there is insufficient time for the mother to develop and transfer protective HSV-specific antibodies to the fetus.

- * Viral shedding is also likely to be present at delivery.
- * Consequently, neonatal transmission risk can be very high (around 30–50%) with primary genital HSV infection near delivery.

By contrast, recurrent herpes has a much lower transmission risk because maternal antibodies provide protection.

Q38. Correct answer: D. Commence IV aciclovir for the mother and offer the neonate IV aciclovir.

The key clue is primary genital herpes infection at/near term. A first episode close to delivery carries a significant risk of vertical transmission of HSV to the newborn, because the mother has not yet had sufficient time to develop and transfer protective antibodies.

RCOG guidance notes that a first episode late in pregnancy, particularly within 6 weeks of the due date, carries a high neonatal transmission risk; caesarean delivery is generally recommended when appropriate.

Because she is already in labour and has a primary infection, the important management is:

- * Maternal antiviral treatment with aciclovir
- * Caesarean delivery where appropriate
- * Urgent neonatal assessment
- * Neonatal antiviral treatment when indicated because of the high-risk exposure

The MCQ therefore selects D.

Why the other options are wrong:

- * A/B: Herpes immunoglobulin → not the standard treatment for maternal primary genital HSV.
- * C: Vaginal delivery + prophylactic aciclovir → inappropriate in a high-risk primary infection at term.
- * E: Oral aciclovir for both → inadequate for the high-risk maternal/neonatal situation described.

👉 Primary HSV near delivery = high neonatal risk → aciclovir + appropriate delivery/neonatal management.

Q39. Correct answer: C. Administer 1500 IU anti-D and take maternal blood 30–45 minutes after cell-salvage infusion.

This is a classic cell-salvage + RhD-negative question.

The woman is:

- * RhD negative
- * Not known to be sensitised
- * Undergoing Caesarean section
- * Having intraoperative cell salvage (ICS)
- * Baby's blood group is unknown

The important point is that cell salvage returns red blood cells, including potentially fetal RhD-positive cells, to the mother. Therefore, anti-D prophylaxis is required if the baby is RhD positive or the blood group is unknown.

RCOG guidance recommends a minimum of 1500 IU anti-D after reinfusion of salvaged red cells, followed by a maternal blood sample for estimation of fetomaternal haemorrhage approximately 30–40 minutes later, to determine whether additional anti-D is required.

Therefore:

👉 1500 IU anti-D → after reinfusion → maternal FMH sample 30–45 min later.

Why not E?

E suggests waiting for the FMH sample before administering anti-D. That is not the preferred approach after cell salvage because anti-D should be given promptly after reinfusion, while the subsequent FMH assessment determines whether additional anti-D is required.

MRCOG memory:

RhD– + cell salvage → 1500 IU anti-D AFTER reinfusion + Kleihauer/flow cytometry ~30–40 min later.

Q40. Correct answer: C. The bleeding is repetitive or associated with pain.

The question asks when anti-D prophylaxis should be considered in an RhD-negative woman with bleeding in early pregnancy.

The important distinction is that not every small episode of painless bleeding in early pregnancy requires anti-D.

Anti-D becomes more relevant when there is:

- * Recurrent/repetitive bleeding, particularly repeated episodes
- * Bleeding associated with abdominal/pelvic pain

- * Increasing gestation or a more significant sensitising event

Therefore, among the options, repetitive bleeding or bleeding associated with pain is the best answer.

👉 11 weeks + RhD negative + recurrent/painful bleeding → consider anti-D.

Important exam nuance

Anti-D recommendations can differ according to the gestational age, type of pregnancy event, and local guideline. For MRCOG questions, pay close attention to whether the bleeding is single and minor versus recurrent/significant or painful.

Q41. Correct answer: (e) Start acyclovir within 5 days with fetal medicine follow-up in 2 weeks

Why?

She has:

- * Pregnancy at 19+2 weeks
- * New itchy vesicular rash
- * Fever
- * Diagnosis of chickenpox

There are two separate issues:

1. Maternal treatment

Aciclovir is used to reduce the severity and duration of maternal chickenpox. RCOG recommends oral aciclovir when the woman presents within 24 hours of rash onset, particularly from 20 weeks onward; treatment before 20 weeks can also be considered after discussing risks and benefits.

This is why the question's option involving aciclovir is preferred over VZIG once the rash has already appeared.

2. Fetal surveillance

Chickenpox acquired in the first half of pregnancy carries a small risk of fetal varicella syndrome.

Because she is around 20 weeks, she should have fetal medicine follow-up and ultrasound assessment after maternal infection.

Why not VZIG?

This is a very important exam point:

VZIG = post-exposure prophylaxis.

Once the woman has developed the chickenpox rash, VZIG does not provide therapeutic benefit and should not be used as treatment.

So:

Exposure without rash → consider VZIG/antiviral post-exposure prophylaxis

Established chickenpox rash → aciclovir, NOT VZIG

Exam pearl

VZIG prevents/modifies infection after exposure; aciclovir treats established chickenpox.

Q42. Correct answer: d) Wide local excision

Why?

- * Vulval squamous cell carcinoma with stromal invasion ≤ 1 mm is considered microinvasive disease (FIGO stage IA).
- * At 0.8 mm invasion, the risk of lymph-node metastasis is extremely low, so groin node assessment is not indicated.
- * However, the biopsy has positive margins, meaning residual tumour may remain.
- * Therefore, the next step is re-excision to obtain clear margins.

Why not sentinel node biopsy?

Sentinel lymph-node assessment is generally considered when invasion is >1 mm, provided the tumour is otherwise suitable for sentinel-node staging.

 Answer: d) Wide local excision

Q43. Answer: Superficial inguinal lymph nodes.

Explanation:

The vulva has an important lymphatic pathway:

Vulva → superficial inguinal nodes → deep inguinal/femoral nodes → pelvic nodes

For a non-clitoral vulval lesion, the initial drainage is typically to the superficial inguinal lymph nodes.

The clitoris and anterior midline structures have more complex/bilateral drainage and can drain toward deep inguinal and pelvic nodes.

Exam point:

 Vulval cancer → superficial inguinal nodes first

✚ Then → deep inguinal/femoral → pelvic nodes.

Q44. Correct answer: a) Removal of tumour and adjacent structures including bladder and vagina

Explanation:

Pelvic exenteration is classified according to which pelvic organs are removed:

Type

Main organs removed

Anterior exenteration

Bladder + urethra + vagina ± tumour

Posterior exenteration

Rectum/bowel + vagina ± tumour

Total exenteration

Bladder + bowel/rectum + vagina

Therefore, an anterior exenteration is essentially removal of the tumour together with the anterior pelvic viscera, particularly the bladder, and usually the vagina.

✅ Answer: a)

High-yield memory trick

Anterior → urinary system → bladder

Posterior → bowel → rectum

Total → both bladder + bowel

Q45. Correct answer: A. HPV wart (genital wart/condyloma acuminatum)

The patient is young and has a painless, sessile growth on the perineum, without itching or pain. The most likely diagnosis is an anogenital wart caused by human papillomavirus (HPV).

Why HPV wart?

Genital warts are usually:

- * Painless
- * Flesh-coloured or pink
- * Papillary, verrucous, or sometimes sessile
- * Occur around the vulva, vagina, cervix, perineum or anus
- * Caused predominantly by HPV types 6 and 11

They are low-risk HPV types, meaning they are associated with genital warts rather than the major oncogenic HPV-associated cancers.

Why not vulval carcinoma?

Vulval carcinoma is much less likely in a 25-year-old with an asymptomatic, benign-looking sessile lesion. Cancer is more concerning when there is:

- * Ulceration
- * Bleeding
- * Persistent itching
- * Pain
- * An indurated or irregular lesion
- * A suspicious mass

Why not molluscum contagiosum?

Molluscum typically produces multiple small, smooth, pearly papules with central umbilication, rather than a sessile wart-like mass.

Why not melanoma?

Melanoma would generally be pigmented or otherwise clinically suspicious, rather than a typical painless sessile wart.

Why not VIN?

VIN is a precancerous vulval epithelial lesion, often presenting as abnormal pigmented, white, red or thickened areas rather than a typical exophytic wart.

★ MRCOG memory

HPV 6 & 11 → genital warts

HPV 16 & 18 → high-risk oncogenic types

Q46. Correct answer: Uveitis

Ocular syphilis can involve almost any structure of the eye, but uveitis is a classic presentation.

Uveitis = inflammation of the uveal tract, which consists of:

- * Iris
- * Ciliary body
- * Choroid

Patients may present with:

- * Blurred vision

- * Eye pain
- * Photophobia
- * Floaters
- * Redness
- * Visual loss

Syphilis is sometimes called a “great imitator” because ocular involvement can resemble many other inflammatory or infectious eye diseases.

Why the other options are wrong?

Primary open-angle glaucoma exclusively ❌

Syphilis is not characteristically associated with isolated primary open-angle glaucoma.

Retinal detachment without inflammation ❌

Syphilis can cause retinal/chorioretinal inflammation, but isolated retinal detachment is not the typical presentation.

Isolated conjunctivitis only ❌

Ocular syphilis can involve deeper ocular structures; it is not limited to conjunctivitis.

★ Important MRCOG point

Ocular syphilis is treated as neurosyphilis, even if there are no neurological symptoms, because of the potential CNS involvement.

PAPER 5 ANSWER

Question 1

Answer: E. Simultaneous easy passage of the fetal thighs and trunk through the pelvis

Explanation:

In vaginal breech delivery, the fetal buttocks, then shoulders and finally the after-coming head must pass through the maternal pelvis.

The most reassuring sign that the pelvis is adequate is easy passage of the fetal thighs and trunk. If these larger parts pass easily, it suggests that the pelvis is sufficiently roomy and that the head is also likely to pass.

- * A. Clinically adequate pelvis: reassuring, but clinical pelvic assessment alone is less predictive.
- * B. EFW <3800 g: lower fetal weight is favourable, but it does not directly demonstrate pelvic adequacy.
- * C. Frank breech: is generally a favourable breech presentation, but does not prove absence of CPD.
- * D. Good progress to full dilatation: reassuring for labour progress but does not specifically establish that the pelvis can accommodate the fetal head.
- * E. Easy passage of thighs and trunk: direct evidence that the pelvis is allowing the fetus to pass → best answer.

Question 2

Answer: D. Incise the cervix at 3 and 7 o'clock positions

Explanation:

This is an after-coming head entrapment during breech delivery. The cervix is only 8 cm dilated, and the fetal head cannot pass.

When the cervix is incompletely dilated and is trapping the after-coming head, cervical incisions (Dührssen-type incisions) can be used to enlarge the cervical opening.

The incisions are classically made at 12, 3 and 9 o'clock, depending on the situation; however, in the question's options, 3 and 7 o'clock is the keyed answer.

Why the other options are less appropriate:

- * Forceps: can assist with the after-coming head when the cervix is fully dilated, but they don't solve cervical entrapment.
- * Burns–Marshall: technique for delivering the after-coming head, but again requires adequate cervical dilatation.
- * Mauriceau–Smellie–Veit: another technique for delivering the after-coming head, not for an incompletely dilated cervix trapping it.
- * Symphysiotomy: not the first-line solution for cervical entrapment.

Exam point:

👉 Breech + after-coming head trapped by incompletely dilated cervix → cervical incisions (Dührssen incisions).

Question 3

The options visible are approximately:

- * A. 30–37%
- * B. 38–45%
- * C. 46–55%
- * D. 56–64%
- * E. 65–70%

Answer: approximately 40–45% in a primigravida.

Therefore, B. 38–45% is the best answer.

Explanation:

ECV is generally more successful in multiparous women than in primigravidas.

Typical success rates:

- * Primigravida: around 40%
- * Multiparous woman: around 60% or more

Factors increasing ECV success include:

- * Multiparity
- * Adequate amniotic fluid
- * Unengaged presenting part
- * Transverse/oblique lie
- * Posterior placenta
- * Relaxed uterus

So for a primigravida undergoing ECV at 36 weeks, quote a success rate of roughly 40–45%.

Q4. Answer: D. Lovset's manoeuvre

Why?

During a breech delivery, if the fetal arms are extended or become nuchal/raised above the head, Lovset's manoeuvre is used.

Lovset's manoeuvre:

- * Hold the baby by the bony pelvis.
- * Rotate the fetal trunk 180° so that one shoulder comes anteriorly.
- * The posterior arm can then be swept down across the chest and delivered.
- * Rotate the baby 180° in the opposite direction to deliver the other arm.

[8:48 pm, 24/8/2026] Mamta Singh: Problem in breech

Manoeuvre

Extended/raised arms

Lovset manoeuvre

After-coming head

Mauriceau–Smellie–Veit

After-coming head with controlled flexion

Burns–Marshall

Q5. Answer: D. Ophthalmic shingles

The important point is that shingles can transmit VZV to a susceptible pregnant woman, causing primary varicella (chickenpox).

Not all shingles exposures carry the same risk.

Ophthalmic shingles is particularly important because it involves an exposed area of the face/eye, making transmission more likely. RCOG guidance states that shingles is a significant exposure when it is disseminated or occurs in an exposed area such as ophthalmic shingles. In contrast, covered thoracolumbar shingles carries a very small/remote risk.

If the pregnant woman is non-immune, she should have her VZV immunity assessed and receive appropriate post-exposure prophylaxis after significant exposure. Current UK guidance uses an antiviral such as aciclovir as the preferred PEP for susceptible pregnant women.

MRCOG pearl:

👉 Exposed/disseminated shingles = significant exposure

👉 Ophthalmic shingles = particularly important

So Q5 = D. Ophthalmic shingles.

Q6. Answer: C. Administer VZIG IgG to the baby with or without oral acyclovir

This is a very important neonatal varicella question.

The mother developed a chickenpox rash 3 days before delivery.

The highest risk to the newborn occurs when maternal chickenpox develops approximately 5 days before to 2 days after delivery.

Why?

The mother has not had enough time to develop and transfer protective varicella-specific antibodies (IgG) across the placenta before delivery. Therefore, the newborn may develop severe neonatal varicella.

The baby should therefore receive VZIG (varicella-zoster immunoglobulin).

The maternal treatment with aciclovir does not eliminate the need for neonatal prophylaxis.

Why the other options are wrong:

* A. Stop breastfeeding for 4 days — ❌

Breastfeeding is not routinely contraindicated simply because the mother has varicella.

* B. VZIG alone — ⚠️

The key management is VZIG; depending on current neonatal/local guidance and clinical circumstances, antiviral treatment may also be considered.

* C. VZIG ± oral acyclovir — ✅

This captures the appropriate neonatal prophylaxis/treatment approach.

* D. Educate and discharge — ❌

This baby is at significant risk and requires active prophylaxis and observation.

* E. Oral acyclovir for 1 week alone — ❌

Antiviral therapy does not replace the indicated immunoglobulin prophylaxis.

★ Easy way to remember

Maternal chickenpox around delivery → think NEONATAL VARICELLA.

Maternal rash -5 days to +2 days around delivery → highest neonatal risk → VZIG for the baby.

Final answers:

Q4 → D. Lovset's manoeuvre

Q5 → D. Ophthalmic shingles

Q6 → C. VZIG IgG ± oral acyclovir

Q7. Answer: Early jaundice

The mother is Rh-negative but has developed a significant anti-C red-cell antibody. Anti-C can cross the placenta and cause haemolytic disease of the fetus and newborn (HDFN). RCOG lists anti-C among antibodies that can cause significant fetal/neonatal disease, including anaemia and jaundice.

Mechanism:

Maternal anti-C IgG

→ crosses placenta

→ binds fetal C-positive red cells

→ fetal/neonatal haemolysis

→ ↑ bilirubin after birth

→ early neonatal jaundice ± anaemia

So the best answer is early jaundice.

MRCOG pearl:

👉 Maternal clinically significant IgG antibody → think HDFN → fetal anaemia + neonatal jaundice.

Q8. Answer: C. Once a week

This woman has placenta praevia, so she is at high risk of sudden major haemorrhage and emergency transfusion.

She also has atypical/clinically significant antibodies, making it more difficult for the blood bank to find compatible blood quickly.

Therefore, regular group-and-screen/crossmatch samples are required.

RCOG guidance specifically states that in a woman at high risk of emergency transfusion, such as placenta praevia, a group-and-screen sample should be sent once a week to identify new antibodies and ensure blood can be made available if required.

Why weekly?

The blood sample used for provision of blood should be less than 3 days old, so frequent testing helps the blood bank maintain an up-to-date antibody status and prepare compatible blood.

Answer → C. Once a week

★ Exam association:

Placenta praevia + high transfusion risk → weekly group & screen.

Q9. Answer: C. 16 weeks

MCDA = monochorionic diamniotic twins.

They share a single placenta, so vascular connections between the two fetal circulations can occur. This creates the risk of twin-to-twin transfusion syndrome (TTTS).

Therefore, surveillance begins at 16 weeks and is generally performed every 2 weeks.

Current RCOG information states that MCDA/MCMA pregnancies should have ultrasound surveillance at least every 2 weeks from 16 weeks.

Why not 12 weeks?

At 11–14 weeks, we establish chorionicity, but regular TTTS surveillance starts later.

Why not 24 or 28 weeks?

That would be too late because TTTS can develop in the second trimester.

Answer → C. 16 weeks

★ Memory:

MC twins → 16 weeks → scan every 2 weeks.

Q10. Answer: E. Lambda sign

At 11–14 weeks, ultrasound is the best time to determine chorionicity.

The lambda (twin-peak) sign indicates dichorionicity.

Lambda sign

In a dichorionic diamniotic (DCDA) pregnancy:

Two chorions + intervening membranes

→ triangular wedge of chorionic tissue between the membranes

→ lambda/twin-peak sign

In a monochorionic diamniotic (MCDA) pregnancy:

There is no intervening chorionic tissue

→ membranes meet in a T-shape
→ T-sign.

Therefore:

Lambda sign → DCDA

T-sign → MCDA

The other options are less reliable:

- * Concordant fetal sex: doesn't establish chorionicity.
- * Number of placentas: may be misleading because two placentas can appear fused.
- * Membrane thickness: can help, but the ultrasound signs are more useful.
- * How membrane attaches to placenta: essentially describes the lambda sign, but the named sonographic sign is the best answer.

Q11. Answer: A. 2 weeks

After an influenza vaccination, the immune system needs time to produce a protective antibody response. Protection generally develops in about 2 weeks.

So:

Influenza vaccine → protective immunity $\approx$ 2 weeks

MRCOG pearl: The vaccine does not provide immediate protection; antibodies rise substantially during the first 2 weeks.

 Answer: 2 weeks

Q12. Answer: A. 1:1

Marfan syndrome is autosomal dominant.

The mother has Marfan syndrome and the father is normal:

- * Mother: affected → one abnormal FBN1 allele + one normal allele
- * Father: normal → two normal alleles

For every pregnancy:

- * 50% (1/2) chance of inheriting the affected allele
- * 50% (1/2) chance of inheriting the normal allele

Therefore, the risk is $1:1 = 50\%$.

Important: This risk applies to every pregnancy independently; having one affected child does not change the 50% risk for the next pregnancy.

 Answer: 1:1

Q13. Answer: A. Give IV acyclovir (as keyed in the question)

This is a primary genital HSV infection late in pregnancy.

The important issue is that a primary HSV infection acquired late in pregnancy carries a significant risk of neonatal herpes, because the mother may not have developed enough protective antibodies to transfer to the fetus.

The woman developed HSV at 36 weeks, which is very close to term. She has already received acyclovir, but now she is 9 cm dilated and refusing emergency LSCS.

Ideally, with a first episode after 28 weeks, particularly close to delivery, a planned caesarean is recommended because of the high risk of neonatal transmission with vaginal birth.

If she refuses caesarean, management becomes a balance between maternal autonomy and neonatal risk. Antiviral therapy should be continued, and the neonatal team should be involved.

Exam point:

Primary genital HSV late in pregnancy → CS is normally recommended.

If vaginal delivery occurs/refuses CS → antiviral therapy + neonatal assessment/management.

So for the options shown, the keyed answer is:

☒ A. Give IV acyclovir

Q14. Answer: C. Anti-K

This is a very important MRCOG antibody question.

Anti-K (Kell antibody) can cause severe fetal anaemia through two mechanisms:

1. Haemolysis of fetal red cells
2. Suppression of fetal erythropoiesis in the fetal bone marrow

Therefore, even relatively low levels/titres of anti-K can be associated with significant fetal anaemia.

This is why anti-K is treated differently from many other red-cell antibodies.

If clinically significant anti-K is detected, the pregnancy should be referred to an appropriate fetal medicine service for assessment and surveillance.

Q17 and Q18. Here is the explanation:

Q15. Answer: C. Offer amniocentesis (according to the answer key shown)

The question describes an ultrasound finding that was confirmed on a repeat scan. The important next step depends on exactly what the echogenic abnormality represents and whether it is an isolated finding.

If the finding is a structural fetal abnormality rather than simply a benign soft marker, diagnostic testing such as amniocentesis may be offered to look for chromosomal abnormalities.

MRCOG principle:

- * Soft marker alone → assess the overall risk and previous screening results.
- * Confirmed structural anomaly → offer detailed fetal assessment and consider diagnostic genetic testing.
- * Do not simply dismiss a persistent abnormal finding as cosmetic.

So, for this question's keyed answer:

 Q15 → C. Offer amniocentesis

Q16.

The woman has:

- * β -hCG → normal for gestation
- * NT → normal for gestation
- * PAPP-A = 0.33 MoM
- * Other values normal

Q17. Answer: C. Serial growth scans

The key issue is PAPP-A.

PAPP-A (pregnancy-associated plasma protein-A) is one component of the first-trimester combined screening test.

A low PAPP-A is associated not only with chromosomal abnormalities but also with placental dysfunction, particularly:

- * Fetal growth restriction
- * Pre-eclampsia
- * Placental complications

Therefore, women with significantly low PAPP-A may require additional fetal growth surveillance later in pregnancy.

In this question, the value is 0.33 MoM, and the reference range printed is 0.25–0.40. The question's answer key therefore considers the appropriate management to be surveillance rather than an invasive diagnostic test.

Why not the other options?

A. Amniocentesis — 

Amniocentesis is a diagnostic test, but there is no indication here for invasive testing based simply on this isolated screening finding.

B. CVS — 

CVS is also diagnostic and is not routinely indicated just because PAPP-A is low.

C. Serial growth scans — 

This monitors for fetal growth restriction resulting from placental dysfunction.

D. cfDNA — 

cfDNA/NIPT is a more accurate screening test for common trisomies, but it does not replace appropriate obstetric surveillance for low PAPP-A.

E. Reassurance — 

Although most pregnancies with low PAPP-A have a good outcome, the association with placental dysfunction means additional surveillance may be appropriate.

★ MRCOG pearl:

Low PAPP-A → think placenta → think fetal growth restriction → growth surveillance.

Q18. Answer: A. Admit for 24-hour observation and intravenous antibiotics (according to the answer key shown)

The scenario is:

- * 3-mm hysteroscope
- * Uterine perforation identified
- * Patient is clinically stable
- * No bleeding
- * No evidence of visceral injury

This is a small, uncomplicated uterine perforation in a stable patient.

RCOG notes that uterine perforation is a recognized complication of hysteroscopy. Small uncomplicated perforations may be managed conservatively, whereas suspected injury to bowel, bladder or major vessels, significant bleeding, or clinical deterioration requires operative assessment.

Why not laparoscopy?

B. Urgent laparoscopy — ✗

Not automatically required in a stable woman with a small uncomplicated perforation and no evidence of visceral injury.

Why not laparotomy?

C. Urgent laparotomy — ✗

This would be excessive without haemodynamic instability, significant bleeding or suspected major visceral injury.

Why catheterisation?

D. Urinary catheter + 12-hour observation — ✗

A catheter may be appropriate if there is concern about urinary tract injury, but it does not by itself constitute the appropriate management of a straightforward small perforation.

Key concept

Small perforation + stable patient + no bleeding/visceral injury → conservative management.

The RCOG patient information also states that uterine perforation is usually uncomplicated and often requires no further treatment, although some patients require hospital observation or surgery depending on the circumstances.

Q19. Answer: E. Visceral damage (bladder or bowel)

A hysterectomy involves dissection around the bladder, ureters and bowel, particularly when the uterus is enlarged by fibroids or there are adhesions.

Compared with myomectomy, hysterectomy generally involves more extensive pelvic dissection, so the risk of injury to adjacent pelvic organs—especially the bladder and ureters—is higher.

Why not the others?

- * Haemorrhage: both procedures can cause significant bleeding, particularly with large fibroids.
- * Infection: possible with both.
- * Ovarian artery thrombosis: not the characteristic distinguishing complication.
- * Return to theatre: may occur after either operation, usually because of bleeding or other complications.

★ MRCOG pearl:

Hysterectomy → think ureter/bladder injury, because the ureters run close to the uterine vessels and cervix.

✅ Q19 → E. Visceral damage

Q20. Answer: A. Laparoscopic-assisted vaginal hysterectomy (LAVH)

Bladder injury is particularly associated with hysterectomy, because the bladder has to be dissected away from the cervix and lower uterine segment.

Among the options, LAVH involves both laparoscopic pelvic dissection and the vaginal hysterectomy component, making urinary tract injury an important recognised complication.

The risk is particularly increased with:

- * Previous caesarean section
- * Pelvic adhesions
- * Endometriosis
- * Large uterus
- * Previous pelvic surgery

Why not ovarian cystectomy/myomectomy?

These procedures usually involve less extensive dissection of the bladder and ureters.

★ Memory:

Laparoscopic hysterectomy → bladder/ureter injury is a key complication.

✅ Q20 → A. LAVH

Q21. Answer: E. Umbilical port

The question describes a woman undergoing laparoscopic ovarian cystectomy. The tumour is placed in a retrieval bag before removal to reduce spillage.

A 6-cm specimen can generally be removed through the umbilical port, particularly if the port is appropriately sized or enlarged slightly if necessary.

The umbilicus is commonly used because:

- * It provides a relatively direct route to the abdominal cavity.
- * The scar is cosmetically favourable.
- * It can be extended if the specimen needs a slightly larger opening.

Why not McBurney's point?

That is an incision traditionally associated with appendicectomy, not routine laparoscopic specimen retrieval.

Why not Palmer's point?

Palmer's point is primarily an alternative site for abdominal entry, especially when umbilical entry is undesirable because of previous surgery/adhesions.

★ MRCOG pearl:

For laparoscopic specimen removal → use a retrieval bag to minimise tissue spillage, and the umbilical port is a common extraction site.

✅ Q21 → E. Umbilical port

Q22. Answer: D. Open abdominal sacrocolpopexy

Sacrocolpopexy is considered one of the most effective procedures for durable treatment of apical/vaginal vault prolapse.

In abdominal sacrocolpopexy, the vaginal apex is attached to the sacral promontory using a mesh, restoring the normal vaginal axis and providing strong apical support.

It has a lower recurrence rate than many vaginal suspension procedures.

Compare the procedures:

- * High uterosacral ligament suspension: good vaginal approach, but recurrence can be higher.
- * High McCall culdoplasty: mainly used at hysterectomy to support the vaginal apex and prevent enterocele.
- * Sacrospinous fixation: effective, but has recognised recurrence, particularly anterior compartment prolapse.
- * High levator plication: less durable and can produce vaginal narrowing.
- * Open abdominal sacrocolpopexy: excellent long-term apical support and lowest recurrence among these options.

★ High-yield memory:

Vault prolapse + best long-term anatomical success → sacrocolpopexy.

Q23. Answer: C. 12 mmHg

During laparoscopy in pregnancy, pneumoperitoneum pressure should be kept at the lowest pressure that provides adequate surgical exposure. A pressure of around 10–12 mmHg is generally recommended, with 12 mmHg commonly used as the maximum in pregnancy.

At 18 weeks, the uterus is enlarged, so careful positioning and avoidance of excessive intra-abdominal pressure are important.

Why not 15 or 20 mmHg?

Higher pressures can increase maternal cardiovascular/respiratory effects and potentially reduce uteroplacental perfusion.

★ MRCOG memory:

Laparoscopy in pregnancy → CO₂ pneumoperitoneum → keep pressure ≤12 mmHg.

✅ Q23 → 12 mmHg

Q24. Answer: D. 12 hours

After spinal anaesthesia, bladder sensation and detrusor function can remain impaired for several hours. Instrumental delivery also increases the risk of postpartum urinary retention and asymptomatic bladder overdistension.

Keeping the catheter in place for at least 12 hours reduces the risk of the bladder becoming overdistended while sensation is still impaired.

★ Exam point:

Spinal/epidural + instrumental delivery → increased risk of urinary retention → prolonged catheterisation/monitoring.

✅ Q24 → 12 hours

Q25. Answer: D. 6 months

A midurethral tape (TVT/TOT) is used to treat stress urinary incontinence.

One recognised delayed complication is mesh/tape erosion, which may present as:

- * Vaginal exposure of the tape
- * Dyspareunia
- * Vaginal discharge or bleeding
- * Recurrent urinary symptoms
- * Recurrent UTI
- * Sometimes urinary tract erosion

A follow-up assessment at around 6 months allows evaluation for complications, including tape erosion.

★ MRCOG memory:

Midurethral sling → follow-up → check continence + voiding function + mesh complications.

✅ Q25 → 6 months

Q26. Answer: A. Leave catheter in situ and repeat cystogram in 1 week

This is a healing bladder injury that was recognised intraoperatively and repaired.

The catheter allows the bladder to remain decompressed, reducing pressure on the repair and allowing the bladder wall to heal.

At 2 weeks, the woman is clinically well, but the cystogram still shows a leak.

Therefore, the appropriate management is continued bladder drainage, followed by repeat imaging to confirm that the leak has resolved.

Why not immediate surgery?

Because:

- * She is clinically well.
- * The injury was already repaired.
- * There is no evidence of sepsis or significant ongoing complication.
- * A persistent small leak can often be managed conservatively with continued catheter drainage.

If the leak persists despite prolonged drainage, further urological assessment/intervention may be necessary.

★ Very important principle:

Bladder repair → keep catheter → cystogram before catheter removal.

If cystogram shows a leak:

Do NOT remove catheter → continue drainage → repeat cystogram.

✅ Q26 → A. Leave catheter in situ and repeat cystogram in 1 week

Q27. Answer: E. Vesicovaginal fistula

The woman underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy. Seven days later she develops:

- * Vaginal loss of watery fluid
- * Blood-stained urine
- * Uncomplicated immediate recovery

This combination strongly suggests a urinary tract injury, particularly a vesicovaginal fistula (VVF).

Why does a fistula develop?

During hysterectomy, the bladder is dissected away from the uterus/cervix. A bladder injury may occasionally be missed initially. If the injury is not recognised, urine can subsequently pass through an abnormal connection between the bladder and vagina.

Typical presentation:

👉 Continuous watery vaginal leakage, often appearing several days after surgery.

Why not the other options?

- * Detrusor overactivity: causes urgency/frequency, not continuous watery vaginal leakage.
- * Urinary retention with overflow: causes leakage through the urethra, not urine through the vagina.
- * UTI: may cause dysuria, frequency and haematuria but does not usually produce continuous watery vaginal discharge.
- * Vaginal candidiasis: causes itching and abnormal discharge, not urine leakage.

★ MRCOG pearl:

Post-hysterectomy + continuous watery vaginal discharge → think vesicovaginal fistula.

✅ Q27 → E. Vesicovaginal fistula

Q28. Answer: D. Uncontrolled tonic-clonic seizures

The question asks for the strongest risk factor for sudden unexpected death in epilepsy (SUDEP).

The answer is uncontrolled/generalised tonic-clonic seizures.

RCOG specifically identifies uncontrolled tonic-clonic seizures as the strongest risk factor for SUDEP and notes that SUDEP is an important cause of death in pregnant women with epilepsy.

Why?

A generalised tonic-clonic seizure can cause:

- * Apnoea
- * Hypoxia
- * Cardiac arrhythmia
- * Autonomic dysfunction

Repeated or uncontrolled seizures therefore substantially increase the risk of SUDEP.

Other options

- * Failure to comply with medication: increases seizure risk, but is not itself the strongest direct risk factor.

- * Sudden discontinuation: can precipitate seizures and is dangerous, but the resulting uncontrolled tonic-clonic seizures are the major risk.
- * Tonic-clonic seizure with the patient asleep: sleep may be relevant to SUDEP, but uncontrolled tonic-clonic seizures are the major risk factor.
- * Very frequent repeated seizures: again reflects poor seizure control.

★ Remember:

SUDEP → uncontrolled tonic-clonic seizures.

Also, women with epilepsy should not stop or change antiseizure medication without specialist advice, because uncontrolled seizures can be dangerous to both mother and fetus.

✓ Q28 → D. Uncontrolled tonic-clonic seizures

Q29. Answer: C. Change AED to the lowest effective and least teratogenic AED dose + folic acid 5 mg/day for at least 3 months before pregnancy

This is an important preconception counselling question.

Sodium valproate is associated with a significant risk of:

- * Major congenital malformations, particularly neural tube defects
- * Neurodevelopmental problems
- * Developmental delay and behavioural problems

Therefore, when a woman taking valproate is planning pregnancy, her epilepsy specialist should review the medication and, where clinically appropriate, change to a safer alternative before conception. RCOG specifically recommends minimising valproate exposure by changing medication prior to conception after specialist assessment.

Why 5 mg folic acid?

Women taking antiseizure medication are considered at increased risk of neural tube defects, so high-dose folic acid 5 mg daily is recommended before conception and during early pregnancy. RCOG advises ideally taking it for 3 months before conception and continuing through the first trimester.

Why not simply stop valproate?

✗ Never abruptly stop an effective antiseizure medication.

A sudden withdrawal can precipitate seizures, including potentially life-threatening tonic-clonic seizures. Medication changes should be planned with the neurologist/epilepsy specialist. RCOG explicitly advises not stopping or changing epilepsy medication without specialist advice.

Why C is better than D?

D: Reduce valproate to the lowest effective dose + folic acid.

Although using the lowest effective dose is important, valproate itself is the problem when a suitable alternative can control the epilepsy. Therefore, the preferred strategy is to switch to a less teratogenic antiseizure medication before conception, under specialist supervision.

Current safety note: NICE/MHRA guidance is even more restrictive about valproate in women of childbearing potential because of fetal and developmental risks.

★ High-yield MRCOG memory

Woman with epilepsy planning pregnancy:

Specialist review → safest effective AED → lowest effective dose → folic acid 5 mg → ideally start ≥ 3 months before conception.

And:

Valproate → avoid if a suitable alternative is available.

Q30. Answer: D. Failure of recognition of signs of sepsis

The important clue is that she was admitted with an apparently relatively common illness but deteriorated rapidly and died from sepsis.

The question asks for the most common aspect of substandard care associated with severe maternal morbidity or mortality from sepsis.

The key problem is failure to recognise that a pregnant woman is becoming septic.

RCOG emphasises that maternal sepsis can progress rapidly and that early recognition is crucial. Clinical signs can include tachycardia, tachypnoea, hypotension, hypoxia, oliguria, altered consciousness and failure to respond to treatment.

Why this matters

In pregnancy, physiological changes can make early sepsis difficult to recognise. Therefore:

Unwell pregnant woman → actively consider sepsis → assess vital signs → investigate → start treatment promptly.

Once sepsis is suspected, treatment should not be delayed while waiting for confirmation. RCOG highlights early diagnosis and rapid initiation of broad-spectrum antibiotics as key measures to prevent avoidable deaths.

Why not the other options?

- * A. Delay in antibiotics: important, but the preceding failure is often failure to recognise the clinical deterioration.
- * B. Failure to institute antibiotics: similarly occurs after failure to identify sepsis.
- * C. Failure of resuscitation: occurs later in the sequence.

- * E. Failure to recognise symptoms: symptoms may be nonspecific; the critical clinical failure is recognising the signs of systemic deterioration/sepsis.

★ MRCOG pearl:

Maternal sepsis → Think Sepsis early. Recognition is the first and most important step.

✓ Q30 → D. Failure of recognition of signs of sepsis

Q31. Answer: A. Ascending genital tract

The question describes genital sepsis occurring at 30 weeks.

The most important source of genital tract infection in pregnancy is an ascending infection from the lower genital tract.

Pathway

Vagina/cervix → ascending bacteria → membranes/decidua → intra-amniotic infection → chorioamnionitis → maternal sepsis/septic shock

This is particularly important when there is:

- * PPROM
- * Prolonged rupture of membranes
- * Cervical infection
- * Intrauterine infection

RCOG guidance recognises bacterial infections arising from the genital tract as an important cause of maternal sepsis.

Why not the other sources?

- * Gastrointestinal: can cause sepsis, but is not the typical source of genital tract sepsis.
- * Pharyngeal: possible systemic infection but not the usual source.
- * Pulmonary: pneumonia can cause maternal sepsis, but not specifically genital tract sepsis.
- * Urinary tract: common source of maternal sepsis but does not explain genital tract sepsis.

★ Memory:

Genital tract sepsis → think ascending infection.

✓ Q31 → A. Ascending genital tract

Q32. Answer: B. Genital tract sepsis

This is an important clinical reasoning question.

The woman has:

- * 30 weeks' gestation
- * Severe, constant abdominal pain for 3 days
- * Abdominal tenderness
- * Tachycardia
- * No specific localising signs
- * Normal blood pressure
- * Normal fetal heart tracing
- * Urinalysis negative
- * Pain persists despite analgesia

The answer is genital tract sepsis.

Why?

Maternal sepsis does not necessarily present with fever. In pregnancy, a woman can have serious infection with relatively nonspecific symptoms such as:

- * Severe abdominal pain
- * Tachycardia
- * Malaise
- * Uterine/abdominal tenderness
- * Gastrointestinal symptoms
- * Rapid clinical deterioration

RCOG specifically warns that the classical signs of sepsis, including pyrexia, may not always be present.

Therefore, the combination of persistent severe abdominal pain + tenderness + maternal tachycardia should raise suspicion of infection even when the fetal CTG is reassuring.

Why not placental abruption?

Placental abruption usually raises concern when there is:

- * Vaginal bleeding, although concealed abruption can occur without bleeding
- * Uterine tenderness/hypertonicity
- * Fetal compromise in significant cases

However, the question deliberately gives features pointing toward infection/sepsis and provides a normal CTG.

Why not pyelonephritis?

Pyelonephritis usually produces:

- * Fever
- * Flank/loin pain

* Urinary symptoms or positive urine findings

The urinalysis is negative, making this less likely.

Why not ovarian torsion?

Ovarian torsion usually causes acute, often unilateral/localised pelvic pain, rather than this persistent diffuse abdominal tenderness in a 30-week pregnancy.

Why not red degeneration of fibroid?

Red degeneration can cause severe constant pain in pregnancy, but there is no history of fibroids in the question. The associated maternal tachycardia and the question's sepsis context favour genital tract infection.

★ Key MRCOG lesson:

A normal fetal CTG does NOT exclude maternal sepsis.

Maternal assessment is essential because maternal infection can initially occur while fetal observations remain reassuring.

RCOG's current sepsis guidance stresses maintaining a high level of suspicion in any unwell pregnant woman and acting early.

Q33. Answer: E. To record accelerations and decelerations if heard

For a low-risk woman in established first-stage labour, NICE recommends intermittent auscultation (IA) rather than routine continuous CTG.

The current NICE recommendation is:

- * Auscultate immediately after a contraction
- * Continue for at least 1 minute
- * Repeat at least every 15 minutes in the first stage
- * Record the fetal heart rate as a single rate
- * Record any accelerations or decelerations if heard
- * Check the maternal pulse to distinguish maternal from fetal heart rate.

Why the other options are wrong?

A. Stop CTG after 30 minutes if normal — ✗

CTG is not routinely recommended for low-risk women in established labour in the first place.

B. CTG for all women — ✗

NICE recommends intermittent auscultation for low-risk women rather than routine CTG.

C. Discontinue CTG once normal — ✗

A normal CTG does not mean continuous monitoring should simply be stopped if there is an indication for CTG.

D. IA every 10–15 minutes — ❌

The NICE wording is at least every 15 minutes in established first-stage labour, immediately after a contraction, for at least 1 minute.

E. Record accelerations and decelerations — ✅

★ MRCOG memory:

Low-risk established 1st stage → IA → after contraction → ≥ 1 min → ≥ 15 min intervals → record accelerations/decelerations.

Q34. Answer: C. Either raised diastolic BP of 90 mmHg or more OR raised systolic BP of 140 mmHg or more on 2 consecutive readings 30 minutes apart

This is testing recognition of hypertension developing during labour.

A blood pressure of:

* SBP ≥ 140 mmHg, or

* DBP ≥ 90 mmHg

is abnormal and requires assessment.

The key is that the question gives two consecutive readings 30 minutes apart, confirming that the abnormal blood pressure is persistent rather than a single isolated measurement.

Why the other options are wrong?

A. Pulse >110 on two occasions 30 min apart — ❌

Tachycardia requires assessment, but this isn't the specific transfer criterion being tested here.

B. Single DBP 100 or SBP 150 — ❌

Although these are clearly elevated, the question is testing the threshold of 140/90 confirmed on two readings.

D. Rupture of membranes 12 h before established labour — ❌

This alone does not automatically require transfer in an otherwise low-risk woman.

E. Single strand of meconium — ❌

Non-significant meconium does not necessarily require transfer to obstetric-led care. The significance depends on the amount/type of meconium and the overall clinical picture.

★ Exam memory:

140/90 = hypertension threshold.

Persistent hypertension in labour → reassess risk and consider transfer to obstetric-led care.

Q35.

She has:

- * Regular contractions for 3 hours
- * Intact membranes
- * Previously uncomplicated pregnancy
- * Low-risk status

The question asks what should be done regarding the fetal heart rate during the initial assessment.

Answer: A. Auscultate the fetal heart at the first contact with the woman in labour and at each further assessment

For a low-risk woman, NICE recommends intermittent auscultation, rather than routine continuous CTG.

The current NICE guidance states that intermittent auscultation should be offered to low-risk women in established first-stage labour, using a Pinard stethoscope or Doppler. It should be performed immediately after a contraction for at least 1 minute and repeated at least every 15 minutes.

Why not B?

B. Auscultate for 30 seconds immediately after a contraction — ✗

The recommended duration is at least 1 minute, not 30 seconds.

Why not C?

C. Give the woman a choice of continuous or intermittent monitoring — ✗

For a genuinely low-risk woman, routine CTG is not recommended simply as a choice of monitoring method because it increases interventions without demonstrated improvement in neonatal outcomes. NICE recommends IA.

Why not D?

D. Palpate maternal pulse to differentiate if fetal rate is similar — ✗

Maternal pulse assessment is important, but it is not the primary answer to the question. It is used particularly when there is concern that the maternal and fetal heart rates could be confused.

Why not E?

E. Perform CTG on admission just to establish a normal baseline — ❌

Routine admission CTG is not recommended for low-risk women.

Q36. Answer: E. Real-time ultrasound with colour Doppler

A 25-year-old woman reports absent fetal movements for 24 hours. The absence of movements alone does not diagnose IUFD.

The diagnosis requires confirmation that there is no fetal cardiac activity.

Why ultrasound?

Real-time ultrasound allows direct visualization of:

- * Fetal heart activity
- * Fetal movement
- * Cardiac activity

Colour Doppler can help demonstrate the absence of cardiac blood flow, although the essential diagnostic finding is absence of fetal cardiac activity on real-time ultrasound.

Why not the other options?

- * A. CTG showing absent heartbeat — ❌

CTG is not used to definitively diagnose IUFD. An absent trace can occur because of technical problems or incorrect placement of the transducer.

- * B. Auscultation with a sonicaid — ❌

Failure to hear the heartbeat does not prove fetal death.

- * C. Doppler ultrasound scan — ❌

Doppler alone is not the preferred definitive diagnostic method.

- * D. Real-time ultrasound — close, but the question's keyed answer specifically includes colour Doppler.

★ MRCOG pearl:

Absent fetal movements → confirm fetal viability with real-time ultrasound.

✅ Q36 → E. Real-time ultrasound with colour Doppler

Q37. Answer: E. No antibiotics are indicated

This is an important distinction.

The woman is a known Group B Streptococcus (GBS) carrier, but the fetus has already died at 34 weeks.

Normally, a GBS-positive woman in labour would receive intrapartum antibiotic prophylaxis to prevent early-onset neonatal GBS infection.

But in this situation there is no live fetus/newborn to protect from neonatal GBS infection.

Therefore, GBS status does not require intrapartum antibiotic prophylaxis after IUFD.

Why not give antibiotics?

The purpose of intrapartum GBS prophylaxis is to prevent vertical transmission to a newborn during labour.

With IUFD:

No live newborn → no neonatal GBS prevention benefit → no GBS prophylaxis.

Of course, antibiotics may be indicated for another clinical reason, such as maternal infection, prolonged rupture of membranes with infection, etc., but GBS carriage alone is not an indication here.

★ Memory aid:

GBS antibiotics = protect the baby.

IUFD = no baby to protect → no routine GBS prophylaxis.

✅ Q37 → E. No antibiotics are indicated

Q38. Answer: C. Her father is affected OR she has an affected son and an affected relative in the maternal line

Haemophilia A and B are X-linked recessive disorders.

The key genetics

A woman has two X chromosomes:

XX

A man has:

XY

An affected man has the disease-causing mutation on his only X chromosome.

Situation 1: Affected father

If the woman's father is affected, he gives his affected X chromosome to all his daughters.

Therefore:

Affected father → all daughters inherit his affected X → daughter is an obligate carrier.

So an affected father alone makes her an obligate carrier.

Situation 2: Affected son + affected male relative on maternal side

A son receives his X chromosome from his mother.

Therefore:

Affected son → mother must have transmitted the haemophilia-associated X chromosome.

If she also has an affected male relative in the maternal line, this provides strong evidence of the familial X-linked mutation, making her an obligate carrier in the context of the question.

Why the other options are less appropriate?

A. Father is a carrier — ✗

A male cannot be described simply as a “carrier” for an X-linked recessive disorder. He either has the disease or does not.

B. Father affected OR affected son + carrier/affected relative — wording does not fit the established inheritance pattern as well.

D. Father is a carrier — ✗

Again, males with an X-linked recessive mutation are generally affected, not asymptomatic carriers.

E. She has an affected son — not necessarily obligate in isolation

Although an affected son strongly suggests maternal carrier status, rare possibilities such as a de novo mutation mean that an affected son alone does not establish the familial carrier state with the same certainty.

F. She has an affected son and her father is a carrier — ✗

A man is not an asymptomatic carrier in X-linked recessive inheritance.

★ Very high-yield genetics point:

X-linked recessive:

- * Affected father → all daughters are carriers
- * Carrier mother → 50% of sons affected
- * Carrier mother → 50% of daughters carriers
- * Affected father → no affected sons through him, because sons receive his Y chromosome

Q39. Answer: D.

Those with severe haemophilia bleed spontaneously into muscles and joints, while those with mild/moderate forms may bleed following trauma or invasive procedures.

The severity of haemophilia A or B is determined mainly by the baseline factor VIII or IX activity.

Severity

Factor activity

Typical bleeding

Severe

<1%

Spontaneous joint/muscle bleeding

Moderate

1–5%

Bleeding after minor trauma/procedures; occasional spontaneous bleeding

Mild

>5–<40%

Usually bleeding only after significant trauma/surgery

Why D is correct

In severe haemophilia, the factor level is extremely low, so there is insufficient coagulation activity even without an obvious injury.

This leads to characteristic:

- * Haemarthroses — bleeding into joints
- * Muscle haematomas
- * Spontaneous or minimally provoked bleeding

In mild/moderate disease, bleeding is more often triggered by:

- * Surgery
- * Dental procedures
- * Significant trauma
- * Invasive procedures

Why the other options are wrong

- A.  Haemophilia is not primarily treated with tranexamic acid for all joint/muscle bleeding; factor replacement is central.

- B. ✗ Severe haemophilia is characterised by spontaneous bleeding, not simply poor response to factor correction.
- C. ✗ Severe disease doesn't merely cause easier bleeding after trauma; spontaneous bleeding is the distinguishing feature.
- E. ✗ Haemophilia is a coagulation factor deficiency, not a platelet-count disorder. Platelet counts are generally normal.

★ MRCOG memory:

<1% = Severe → spontaneous haemarthrosis

1–5% = Moderate → bleeding with minor trauma

>5% = Mild → bleeding mainly with major trauma/surgery

✓ Q39 → D

Q40.

The woman is 7 weeks pregnant, and her partner has severe haemophilia A.

Answer: D. Offer fetal sexing by free fetal DNA analysis from 9 weeks

This is an important X-linked inheritance question.

Why does fetal sex matter?

Haemophilia A is X-linked recessive.

The father has haemophilia:

$X^H Y$

(where X^H represents the haemophilia-associated X chromosome)

The mother is assumed to be unaffected.

If the fetus is a boy

The boy receives:

- * Y from father
- * X from mother

Therefore, the father cannot transmit haemophilia to his son.

So a male fetus is not at risk of inheriting haemophilia from the affected father in this scenario.

If the fetus is a girl

The girl receives the affected X chromosome from her father:

Affected father → all daughters receive his affected X

Therefore, all daughters will inherit the haemophilia-associated X chromosome and will generally be carriers/heterozygous.

This is why determining fetal sex is useful before deciding whether invasive prenatal diagnosis is necessary.

Why use cell-free fetal DNA?

Cell-free fetal DNA (cffDNA) in maternal blood can be used for non-invasive fetal sex determination. RCOG recognises fetal sex determination by maternal plasma DNA as an established use of cffDNA testing in pregnancies at risk of sex-linked disorders.

The question specifies from 9 weeks, making option D the intended answer.

Why not CVS immediately?

C. CVS at 11–13+6 weeks — ✗ as the first step

CVS is an invasive diagnostic test and can determine the fetal genotype, but if the purpose is initially to establish whether the fetus is male or female, non-invasive fetal sexing can avoid an unnecessary invasive procedure in a male fetus.

RCOG states that CVS is usually performed at 11+0 to 13+6 weeks, while amniocentesis is usually performed from 15+0 weeks.

Why not amniocentesis?

B. Amniocentesis from 15 weeks — ✗

It is later and invasive. If non-invasive fetal sexing can establish that the fetus is male, invasive fetal testing may not be necessary solely to determine whether the fetus inherited the paternal haemophilia allele.

Important correction to remember

If the mother herself were a haemophilia carrier, then the situation would be different: a male fetus could be affected, and female fetuses could also inherit the pathogenic variant.

Here, however, the father is affected and the mother is unaffected.

★ Genetic shortcut

Affected father + unaffected mother:

- * All sons → unaffected
- * All daughters → inherit father's affected X → carriers

Therefore:

7 weeks → wait until fetal sex can be determined non-invasively → cffDNA fetal sexing from ~9 weeks.

The RCOG guideline on inherited bleeding disorders emphasises specialist multidisciplinary management of pregnancies at risk of haemophilia and other inherited bleeding disorders.

Final answers

Q41. The answer key in the image marks C: amniocentesis in the third trimester. However, this appears inconsistent with the genetics of the question.

The scenario is:

- * Father has severe haemophilia B
- * Fetus is confirmed to be male
- * Mother is not stated to be a carrier

Haemophilia B is X-linked recessive.

An affected father has:

X^HY

A son receives:

- * Y from his father
- * X from his mother

Therefore, an affected father cannot transmit haemophilia to his son.

So why would the question suggest amniocentesis?

If the mother is not known to be a carrier, an invasive prenatal diagnosis of a male fetus is generally unnecessary solely because the father has haemophilia.

The important inheritance rule is:

Affected father → all daughters inherit his affected X; sons receive his Y and do not inherit the father's haemophilia allele.

Therefore, E. Reassurance and support during pregnancy appears to be the logically appropriate answer if the mother is confirmed unaffected/non-carrier.

Q42. Answer: B. Before 24 weeks of gestation

Monochorionic monoamniotic (MCMA) twins have:

- * One placenta
- * One amniotic sac
- * No separating membrane

They have a higher risk of complications than monochorionic diamniotic twins, particularly:

- * Umbilical cord entanglement
- * Cord compression
- * TTTS
- * Fetal growth restriction
- * Fetal death

The risk of perinatal loss is particularly high early in gestation, and the question's answer key identifies before 24 weeks.

Why is MCMA more dangerous?

In MCDA twins, the babies have separate amniotic sacs, so their cords are separated.

In MCMA twins:

One sac → two cords in the same fluid-filled space → cords can become entangled/compressed.

★ Memory:

MCMA = one placenta + one sac → cord entanglement → highest-risk monochorionic pregnancy.

✅ Q42 → B. Before 24 weeks

Q43. Answer: C. Unilateral artery-vein (arteriovenous) anastomoses

This is a very important TTTS question.

In monochorionic twins, the placentas contain vascular connections between the two fetal circulations.

There are three important types:

1. Artery-to-artery (AA)

Blood can flow in both directions.

➡ Generally considered protective against TTTS because it allows compensation between the circulations.

2. Vein-to-vein (VV)

Also allows bidirectional flow and is generally not the main mechanism responsible for TTTS.

3. Artery-to-vein (AV)

This is the important one.

One twin's artery supplies a cotyledon, and blood then drains through a vein to the other twin.

This produces a net unidirectional flow.

Over time:

Donor twin → loses blood volume → oligohydramnios

Recipient twin → receives excess blood → polyhydramnios

This produces Twin-to-Twin Transfusion Syndrome (TTTS).

Therefore:

✅ Q43 → C. Unilateral artery-vein anastomoses

★ Easy memory

AV = Away from donor → recipient → TTTS

And:

AA = protective

Q44. Answer: B. 16 weeks

TTTS can develop in a monochorionic pregnancy, particularly in the second trimester.

This is why surveillance for TTTS in monochorionic diamniotic twins begins at 16 weeks, with ultrasound surveillance approximately every 2 weeks.

The RCOG guidance recommends regular ultrasound surveillance for monochorionic twins from 16 weeks because TTTS can develop rapidly. (rcog.org.uk/obj/)

Why 16 weeks is important

MCDA pregnancy

→ establish chorionicity early

→ start TTTS surveillance at 16 weeks

→ continue frequent scans

→ assess amniotic fluid, bladder filling, growth and Dopplers.

So:

14 weeks ❌

16 weeks ✅

18 weeks

20 weeks

22 weeks

The classic MRCOG answer is:

✅ Q44 → 16 weeks

Q45. Intrahepatic cholestasis of pregnancy (ICP)

Answer: D. Every 7 days

The woman has:

- * Generalised pruritus
- * Worse at night
- * Palms and soles involved
- * No jaundice
- * Raised bile acids → confirms intrahepatic cholestasis of pregnancy

The question asks how often the liver function tests (LFTs) should be monitored.

Once ICP is diagnosed, weekly monitoring of biochemical parameters is appropriate in the context of this question.

Why monitor?

ICP can fluctuate during pregnancy. Monitoring helps assess:

- * Bile acid levels
- * ALT/AST
- * Overall maternal biochemical status

The important fetal risk is stillbirth, particularly with significantly elevated bile acids, so management also involves obstetric surveillance and planning timing of birth according to bile-acid concentration and gestation.

★ Memory:

ICP diagnosed → repeat bile acids/LFTs regularly → commonly weekly in exam questions.

✅ Q45 → D. Every 7 days

Q46. Answer: B. Continuous support during labour

This question is based on evidence that continuous one-to-one support during labour reduces the likelihood of operative delivery.

Continuous support can include:

- * Emotional reassurance
- * Encouragement

- * Comfort measures
- * Helping the woman maintain effective coping strategies
- * Supporting mobility and appropriate positioning

Evidence from trials of continuous labour support shows reductions in interventions, including operative vaginal birth and caesarean birth, depending on the type and setting of support.

Why not the others?

A. Appropriate analgesia — ✗

Analgesia is important for maternal comfort but isn't the single intervention with the strongest evidence for reducing operative vaginal delivery in this question.

C. Effective uterine contractions — ✗

Adequate contractions are necessary for labour progress, but this isn't an intervention that has the same evidence base as continuous support.

D. Adequate hydration — ✗

Important for maternal wellbeing but not the key intervention being tested.

E. Regular pelvic examinations — ✗

These assess progress but do not themselves prevent operative delivery.

★ MRCOG pearl:

Continuous labour support → better labour experience + fewer interventions/operative births.

Q47. Answer: A. At least 1 cm above the spines

This is a very good MRCOG obstetric examination question because caput can make the fetal head appear lower than the actual bony head.

The question says:

- * Fully dilated for 3 hours
- * Head is 1/5 palpable abdominally
- * Caput is 2 cm below the ischial spines

The crucial point is:

Station should be assessed using the bony skull, not the caput.

Why does caput cause a problem?

Caput is oedema of the fetal scalp.

During prolonged labour, the scalp can become markedly swollen and can descend below the ischial spines even though the bony fetal skull has not descended to the same level.

Therefore:

Caput 2 cm below spines $\neq$ fetal BPD 2 cm below spines.

The examiner wants you to avoid incorrectly diagnosing a low fetal head simply because the caput is low.

The actual bony head is therefore higher than the caput, and in this case the BPD is estimated to be at least 1 cm above the ischial spines.

★ Very important rule

When assessing descent:

Ignore caput and moulding → assess the level of the bony skull.

This is especially important when deciding whether an operative vaginal delivery is appropriate.

Why not E?

E. 2 cm above the spine — ✗

The 2-cm measurement refers to the caput, not necessarily the bony fetal head.

Why not D?

D. 1 cm below the spine — ✗

Again, this would overestimate descent by using the caput rather than the bony skull.

✓ Q47 → A. At least 1 cm above the spines

Q48. Answer: C. 3 per 1000 injuries

The average risk of HIV transmission after a percutaneous exposure to HIV-infected blood is approximately 0.3%, which is equivalent to:

$0.3\% = 3/1000 =$ approximately 1 in 300 exposures.

So, if 1,000 healthcare workers sustain a comparable needlestick exposure from HIV-infected blood, approximately 3 might acquire HIV without considering PEP and other modifying factors.

Risk is higher when:

- * Deep injury
- * Hollow-bore needle
- * Visible blood on the needle
- * Needle previously used in a vein/artery

* High viral load in the source patient

★ Remember:

HIV needlestick risk $\approx 0.3\% = 3/1000 = 1/300$

✅ Q48 → C. 3 per 1000

Q49. Answer: A. Within 1 hour of exposure

PEP is most effective when started as soon as possible after exposure.

The principle is:

Don't wait for symptoms or test results if the exposure is significant—start PEP promptly.

Older occupational-exposure guidance emphasised starting PEP preferably within 1–2 hours. Current guidance similarly stresses that PEP should be started as soon as possible; CDC's current recommendations state ideally within 24 hours and no later than 72 hours for relevant exposures.

Therefore, among the options in this MCQ, within 1 hour is the best answer.

Why does early treatment work?

Immediately after exposure, HIV undergoes local replication before infection becomes systemically established. Antiretroviral drugs can interrupt this process if given early.

Important exam rule

PEP: ASAP → ideally within hours → do not start later than 72 hours.

And once indicated, the course is generally 28 days.

Options:

- * A. Within 1 hour → ✅ Best
- * B. Within 24 hours → acceptable clinically, but not as optimal as immediate treatment
- * C. 48–72 hours → still potentially indicated, but less effective than early treatment
- * D. 3–4 days → generally too late
- * E. 1 week → too late for recommended PEP initiation

✅ Q49 → A. Within 1 hour

Q50. Answer: E. Up to 120 hours

The question is referring to the very early phase following exposure, sometimes described as the eclipse period.

After HIV crosses the mucosal barrier, there is an initial period during which the virus is replicating locally and may not yet be detectable by routine blood testing.

The virus then disseminates and becomes detectable systemically. The MCQ is using the approximate figure of up to 120 hours (5 days).

This is why there is an important window in which PEP can potentially prevent establishment of infection.

Modern testing is more sensitive than older tests. For example, HIV nucleic-acid testing (NAT) generally detects infection earlier than antigen/antibody or antibody-only tests; CDC gives a typical NAT detection window of approximately 10–33 days after infection when considering clinical diagnostic testing.

So be careful to distinguish:

Q50's historical/exam concept:

Virus dissemination/detection in blood → approximately 5 days = 120 hours
from

Modern diagnostic test window:

NAT detects established infection earlier than antibody-based tests but is not synonymous with the first moment of viral dissemination.

★ Why this matters for PEP

Exposure → local replication → systemic dissemination → established infection

PEP aims to interrupt this process before infection becomes established.

Therefore:

Early PEP = much better chance of prevention.

PAPER 6 ANSWER

Q1

✓ Answer: A. It has no impact on prognosis

Explanation:

- * Breast cancer is the most common malignancy diagnosed during pregnancy.
- * Pregnancy itself does not worsen the prognosis of breast cancer when compared with non-pregnant women of a similar age and similar stage of disease.
- * The main issue is that diagnosis may sometimes be delayed because breast changes during pregnancy can mask a lump.
- * Therefore, prognosis depends mainly on tumour stage, nodal status, tumour biology and receptor status, rather than pregnancy itself.

Why other options are wrong:

- * B: HER2-positive/ER-positive status does not mean that pregnancy itself causes a poorer prognosis.
- * C: Pregnancy is not independently associated with worse prognosis.
- * D: Pregnancy does not improve prognosis based on HER2/ER status.
- * E: Prognosis is not determined simply by gestational age at diagnosis.

📌 Exam pearl:

Pregnancy does not independently worsen breast cancer prognosis; stage and tumour biology are the major determinants.

Q2

✓ Answer: D. Ultrasound-guided biopsy

Explanation:

- * In pregnancy, ultrasound is the preferred initial imaging modality for a suspicious breast lump because it is safe and does not involve ionising radiation.
- * If the ultrasound shows a suspicious lesion, tissue diagnosis is required.
- * An ultrasound-guided core biopsy is appropriate and can safely be performed during pregnancy.

- * It provides histology and allows assessment of tumour type and receptor status.

Why not the others?

- * A. Fine-needle aspiration: Can provide cells but is less useful than core biopsy because architectural information is required.
- * B. Fluid aspiration for cytology: Appropriate mainly for a cystic lesion, not a suspicious solid lump.
- * C. Mammography: Can be performed when indicated during pregnancy, but ultrasound is preferred initially in a young pregnant woman.
- * E. Ultrasound scan: This is the initial investigation, but because the question describes a suspicious lump, definitive tissue diagnosis with biopsy is required.



Exam pearl:

Pregnant woman + suspicious breast mass → ultrasound first → if suspicious, ultrasound-guided core biopsy.

Q3



Answer: C. Avoid pregnancy as life expectancy is limited and treatment of metastasis will be compromised

Explanation:

The important finding here is suspected metastatic breast cancer.

If metastatic disease is confirmed:

- * Treatment may require systemic anticancer therapy.
- * Some treatments are contraindicated during pregnancy, particularly in the first trimester.
- * Pregnancy may therefore interfere with optimal treatment of active metastatic disease.
- * More importantly, active metastatic breast cancer carries a significant risk to the mother's health and survival.

Therefore, pregnancy should be deferred while the suspected metastatic disease is investigated and treated.

Why other options are wrong:

- * A: Simply stopping tamoxifen for 3 months is not sufficient when metastatic disease is suspected.
- * B: Pregnancy is not universally contraindicated after breast cancer, but active metastatic disease changes the situation.
- * D: A fixed 12-month delay is not the key principle; management depends on the metastatic disease and treatment.

- * E: Chemotherapy cannot simply be continued throughout pregnancy without considering the specific drug and gestational age.

📌 Exam pearl:

Previous breast cancer + suspected active metastases → defer pregnancy and prioritise investigation and treatment of metastatic disease.

Q4.

Scenario: 24-year-old at 30 weeks with regular contractions and cervical changes. She receives corticosteroids and nifedipine as a tocolytic.

✅ Answer: E. Prolongs the pregnancy by 2–7 days

Why?

- * Nifedipine is a calcium-channel blocker used for tocolysis.
- * It relaxes the myometrium by reducing calcium entry into smooth-muscle cells.
- * Its main purpose is not to stop preterm labour permanently.
- * The important benefit is to gain approximately 48 hours to several days, allowing:
 - * corticosteroids to accelerate fetal lung maturation,
 - * maternal transfer to a tertiary centre if required,
 - * administration of magnesium sulfate when indicated for fetal neuroprotection.

NICE recommends nifedipine as a tocolytic option in appropriate women with suspected/established preterm labour.

Why not the other options?

- * A. Reduction in incidence of preterm birth: Tocolysis generally delays, rather than prevents, preterm birth.
- * B. Improved mortality: Nifedipine itself has not been shown to directly reduce maternal mortality.
- * C/D. Improved neonatal/perinatal morbidity: Any benefit is mainly indirect, because the delay permits corticosteroid administration and appropriate transfer.

📌 Remember:

Tocolysis = buys time, usually ~48 hours, primarily for steroids/transfer.

Q5.

The answer marked in the image is:

☒ C. Blood loss of more than 2000 mL

This question is using the traditional RCOG classification:

Blood loss

Classification

500–1000 mL

Minor PPH

>1000–2000 mL

Moderate major PPH

>2000 mL

Severe major PPH

RCOG's traditional classification defines major PPH as >1000 mL, with severe PPH as >2000 mL.

⚠ Important exam update: Modern definitions commonly define primary PPH as ≥ 500 mL, with major PPH generally >1000 mL. So when you see the specific term “severe PPH” in an older MRCOG-style question, >2000 mL is the expected answer.

📌 Exam pearl:

>1000 mL = major PPH; >2000 mL = severe major PPH in the traditional RCOG classification.

Q6.

☒ Answer: C. Disorders of tone

Tone = uterine atony, and this is the most common cause of primary PPH.

After delivery, the uterus should contract strongly. These contractions compress the spiral arteries at the placental bed — the “living ligatures” mechanism.

If the uterus fails to contract:

Placental bed vessels remain open → heavy bleeding → uterine atony → PPH

The classic “4 Ts” of PPH

1. Tone → uterine atony ★ most common
2. Trauma → genital tract tears, uterine rupture, inversion

3. Tissue → retained placenta/products
4. Thrombin → coagulation disorders

So:

PPH + boggy/soft uterus = think TONE first.

✚ Memory aid:

4 Ts = Tone, Trauma, Tissue, Thrombin

Q7.

Scenario: 35-year-old primigravida at 30 weeks develops sudden severe epigastric pain radiating to the back/right hypochondrium, followed by severe hypotension (80/50 mmHg).

✅ Answer: B. Hepatic rupture

This is a classic hepatic rupture associated with HELLP syndrome/preeclampsia presentation.

Why?

HELLP =

- * H = Haemolysis
- * EL = Elevated Liver enzymes
- * LP = Low Platelets

Severe preeclampsia/HELLP can cause hepatic sinusoidal injury → subcapsular hepatic haematoma → rupture → massive intra-abdominal bleeding.

The clinical clues are extremely important:

Sudden epigastric/RUQ pain

↓

Pain may radiate to back/shoulder

↓

Hepatic subcapsular haematoma

↓

Rupture

↓

Haemoperitoneum

↓

Hypotension/shock

Hepatic complications of HELLP can include subcapsular haematoma and hepatic rupture, and epigastric/RUQ pain with hypotension is a major warning pattern.

Why the other options are less likely:

- * A. Abruptio placentae: Usually presents with painful vaginal bleeding, uterine tenderness/rigidity and fetal compromise. It does not typically produce this characteristic epigastric/RUQ pain with sudden hypovolaemic shock from intra-abdominal bleeding.
- * C. Pre-eclampsia: Can explain the underlying disease but does not explain sudden shock as well as hepatic rupture.
- * D. Ruptured aortic aneurysm: Possible cause of sudden abdominal/back pain and shock, but extremely rare in this context; the obstetric clue strongly points toward hepatic rupture/HELLP.
- * E. Splenic rupture: Can cause intra-abdominal haemorrhage and shock, but the characteristic epigastric/RUQ pain in a pregnant woman with hypertensive disease points toward hepatic rupture.

 Very important MRCOG clue:

Pregnancy + severe epigastric/RUQ pain + sudden hypotension = think HELLP with hepatic subcapsular haematoma/rupture.

Q8.

 Answer: C. Manual removal of the placenta

Manual removal of the placenta involves intrauterine manipulation, which increases the opportunity for bacteria to enter the uterine cavity. It is therefore an important risk factor for postpartum infection/sepsis. RCOG also lists retained products, caesarean section and prolonged rupture of membranes among puerperal sepsis risk factors.

Why the others are less appropriate:

- * Asymptomatic bacteriuria: Can predispose to urinary infection but is not the strongest risk factor here.
- * Caesarean section: Definitely increases postpartum infection risk, but the question is targeting the particularly important invasive uterine procedure.
- * PPROM: Important risk factor because prolonged membrane rupture allows ascending infection.
- * Prolonged labour: Also increases infection risk, particularly with repeated vaginal examinations.

 Exam pearl:

Intrauterine manipulation → increased risk of puerperal infection.

Q9.

✓ Answer: B. Beta-thalassaemia

Among the options given, β -thalassaemia is the expected answer.

It is an autosomal recessive haemoglobin disorder caused by reduced or absent production of β -globin chains.

A useful distinction:

- * β -thalassaemia major: severe disease, usually requires regular transfusions.
- * β -thalassaemia minor/trait: usually asymptomatic or mild anaemia.

Why the other options are incorrect:

- * Alpha-thalassaemia: Autosomal recessive, but β -thalassaemia is the expected answer in this MCQ.
- * Cystic fibrosis: Autosomal recessive but less common globally.
- * Haemophilia: Usually X-linked recessive, not autosomal recessive.
- * Sickle cell disease: Autosomal recessive and common in several populations, but not the answer expected here.

📌 Exam pearl:

For genetics questions, always identify the mode of inheritance first.

Q10.

✓ Answer: A. Both parents have to carry the abnormal gene for their children to be affected

This is the key principle of autosomal recessive inheritance.

An affected individual generally has two pathogenic copies, one inherited from each parent.

If both parents are carriers:

Normal allele

Abnormal allele

Normal allele

25% unaffected

50% carrier

Abnormal allele

50% carrier

25% affected

Therefore, for every pregnancy:

- * 25% → affected
- * 50% → unaffected carrier
- * 25% → unaffected, non-carrier

This 25% risk applies to each pregnancy independently.

Why the other options are wrong:

- * B. Half affected: Incorrect. It is 25% when both parents are carriers.
- * C. Less severe: Recessive disorders can be very severe; inheritance pattern does not determine severity.
- * D. One abnormal copy sufficient: That's characteristic of autosomal dominant inheritance.
- * E. Risk 1:4 for offspring of an affected parent: Incorrect without knowing the other parent's genotype. If an affected person has children with a carrier, the risk is 50%; with a non-carrier, the children are carriers but generally not affected.



Remember:

AR = 2 abnormal alleles needed → carrier × carrier = 25% affected.

Q11. Magnesium sulfate in a woman with renal impairment

Scenario:

35-week pregnant woman with severe pre-eclampsia, visual symptoms and brisk reflexes. She has had a kidney transplant and is oliguric, having barely passed urine for 6 hours.



Answer in the question: D. 4 g loading dose followed by 0.5 g/hour

Why?

She has severe pre-eclampsia with neurological symptoms, so magnesium sulfate is indicated for seizure prophylaxis.

The usual regimen is:

- * 4 g IV loading dose
- * followed by 1 g/hour maintenance

However, magnesium is predominantly eliminated by the kidneys.

Therefore:

Renal impairment/oliguria → reduced magnesium excretion → accumulation → toxicity

So in this patient, the maintenance dose should be reduced to 0.5 g/hour, with close monitoring.

NICE specifically advises more frequent monitoring and consideration of reducing the magnesium dose when oliguria or renal failure develops.

What toxicity should you watch for?

Magnesium toxicity →

1. Loss of deep tendon reflexes
2. Respiratory depression
3. Reduced urine output
4. Cardiac toxicity in severe cases

Antidote:

→ 10 mL of 10% calcium gluconate IV (1 g).

Why not E?

E. Wait for renal function tests before starting MgSO_4 is inappropriate because she has severe pre-eclampsia with neurological symptoms and needs seizure prophylaxis. The renal impairment requires dose modification and close monitoring, not unnecessary delay.

📌 MRCOG pearl:

MgSO_4 + oliguria/renal impairment = reduce maintenance dose + monitor toxicity closely.

Q12.

The patient:

- * has a renal transplant,
- * is taking prednisolone 10 mg daily throughout pregnancy,
- * is going to be induced at 38 weeks.

✅ Answer: C. IV hydrocortisone 50–100 mg every 6–8 hours

Why?

Long-term corticosteroid therapy can suppress the hypothalamic–pituitary–adrenal (HPA) axis.

During labour, there is a significant physiological stress response. A woman whose adrenal response is suppressed may not produce enough endogenous cortisol.

Therefore she needs stress-dose steroid cover during labour.

The principle is:

Chronic steroid use → adrenal suppression → labour stress → need additional corticosteroid

Hydrocortisone is preferred because it provides glucocorticoid replacement with a short duration of action and can be given intravenously.

Why not the other options?

A. Single IV hydrocortisone 100 mg

✗ A single dose does not provide adequate ongoing cover throughout labour.

B. 50 mg every 2–3 hours

✗ Excessively frequent dosing.

D. Increase prednisolone to 20 mg three times daily

✗ Oral administration is not the preferred approach for acute stress coverage during labour.

E. Stop prednisolone

✗ Dangerous because abrupt withdrawal after prolonged steroid therapy can precipitate adrenal insufficiency.

📌 MRCOG pearl:

Chronic corticosteroid therapy + labour = stress-dose hydrocortisone.

Q13.

This question is particularly important because the answer shown in your document is A, but the wording reflects an older approach.

The question says:

Woman with renal transplant, stable graft function, significant proteinuria and hypertension controlled with an ACE inhibitor, planning pregnancy.

Answer given in the document:

✓ A. Continue ACE inhibitor until a positive pregnancy test, then reassess and switch if required

Why was A traditionally used?

ACE inhibitors provide important renal protection and reduction in proteinuria, particularly in transplant patients.

Older guidance sometimes advised women who were planning pregnancy to continue ACE inhibitors until pregnancy was confirmed, then stop promptly once pregnancy occurs and substitute a pregnancy-compatible antihypertensive.

This explains why A is marked as the answer in your MCQ.

⚠ But for current practice, be careful

Current NICE guidance is more cautious: women taking ACE inhibitors who are planning pregnancy should be advised about the pregnancy risks and discuss alternative treatment. Once pregnancy is recognised, ACE inhibitors should be stopped promptly and an alternative offered.

ACE inhibitors/ARBs are associated with fetal renal toxicity and other adverse fetal/neonatal effects, particularly with exposure later in pregnancy.

So for modern exam preparation, remember:

Planning pregnancy + ACE inhibitor → discuss switching to a pregnancy-compatible antihypertensive before conception.

Examples of commonly used pregnancy-compatible antihypertensives include labetalol, nifedipine and methyldopa, depending on the clinical situation.

Why the other options are wrong?

B. Continue ACE inhibitor until positive pregnancy test, switch, then restart at 12–14 weeks

✗ ACE inhibitors should not be restarted during pregnancy simply after the first trimester.

C. Stop ACE inhibitor

This is closer to the safety principle, but the question's historical answer key appears to favour A, because the woman has significant proteinuria and the older strategy was to continue until pregnancy was confirmed.

D. Stop ACE inhibitor and restart after 12 weeks

✗ Incorrect because fetal renal toxicity can occur later in pregnancy as well.

E. Switch to another non-teratogenic antihypertensive

This is actually the more appropriate modern preconception approach.

Q14.

✅ Answer: D. Pre-eclampsia

Why?

In pregnancy, pre-eclampsia is an important cause of acute kidney injury, particularly when it is severe.

Severe pre-eclampsia causes:

- * systemic endothelial dysfunction
- * renal vasoconstriction

- * reduced renal perfusion
- * glomerular endotheliosis
- * reduced GFR
- * rising creatinine and oliguria

In severe cases, this can progress to acute kidney injury.

NICE specifically recognises renal insufficiency and oliguria as manifestations of severe pre-eclampsia and recommends close renal-function and fluid-balance monitoring.

Other options

- * A. Antepartum haemorrhage, especially abruption: Can cause AKI through severe hypovolaemia/DIC, but is not the commonest overall cause in this context.
- * B. NSAIDs: Can cause renal injury, but are not a major obstetric cause.
- * C. Postpartum haemorrhage: Severe haemorrhage can certainly cause AKI due to hypovolaemic shock.
- * E. Sepsis: Can cause AKI through septic shock, but again is not the answer expected here.

 Exam pearl:

Pregnancy + hypertension/proteinuria + oliguria/rising creatinine → think severe pre-eclampsia with AKI.

Q15.

The woman has:

- * BP 160/115 mmHg
- * 3+ proteinuria
- * brisk reflexes
- * acute kidney injury
- * 34 weeks' gestation

The question asks for the regimen to prevent eclampsia.

 Answer: D. Loading dose of MgSO₄ 4 g followed by an infusion of 0.5 g/hour

Why?

She has severe pre-eclampsia, and magnesium sulfate is used for seizure prophylaxis.

The standard Collaborative Eclampsia Trial regimen is:

4 g IV loading dose → 1 g/hour maintenance

However, this woman has acute kidney injury.

Magnesium is primarily eliminated by the kidneys.

Therefore:

AKI → reduced magnesium clearance → accumulation → toxicity

So the maintenance dose should be reduced, making 0.5 g/hour the appropriate answer in this MCQ.

NICE recommends the standard 4-g loading dose and 1-g/hour infusion, while renal impairment/oliguria requires particular caution and monitoring because of the risk of magnesium accumulation.

What do you monitor?

Before and during MgSO₄:

- * Respiratory rate
- * Deep tendon reflexes
- * Urine output
- * Clinical signs of magnesium toxicity

If toxicity develops, calcium gluconate is the antidote.

Why not the other options?

A. 2 g loading + 0.5 g/h

✗ Loading dose is too low.

B. 2 g loading + 0.5 g/h

✗ Same problem.

C. 2 g loading + 1 g/h

✗ Both the loading dose and maintenance strategy are inappropriate for this severe case.

E. 4 g loading + 1 g/h

✗ This is the standard regimen, but because she has AKI, the maintenance dose needs reduction in the context of this question.

✦ Remember:

Normal renal function → 4 g + 1 g/h

Significant renal impairment/oliguria → reduce maintenance + monitor Mg toxicity

Q16.

Scenario:

30-year-old G3P0 with type 1 diabetes has been using an insulin pump for 4 months and is admitted for induction at 38 weeks. What should be done once labour is established?

☒ Answer: C. Continue with the insulin pump but monitor blood glucose when appropriate

Why?

If a woman with type 1 diabetes is successfully using an insulin pump and is able to manage it herself, the pump does not automatically need to be discontinued when labour starts.

The important principle is tight glucose monitoring during labour.

NICE recommends monitoring capillary plasma glucose every hour during labour, aiming for approximately 4–7 mmol/L.

If glucose cannot be maintained in the target range, an IV insulin/dextrose infusion should be used.

Why glucose control matters

Maternal hyperglycaemia during labour → fetal hyperinsulinaemia → after birth, maternal glucose supply suddenly stops → neonatal hypoglycaemia.

Therefore:

Good intrapartum maternal glucose control → reduces risk of neonatal hypoglycaemia.

Why the other options are wrong

A. Allow labour without monitoring

☒ Incorrect. The insulin pump does not eliminate the need for glucose monitoring.

B. Start an insulin sliding scale immediately

☒ Not necessarily required if the woman can safely continue her pump and glucose is controlled.

D. Discontinue the insulin pump

☒ Not routinely necessary.

E. Increase basal insulin dose

☒ Insulin requirements change dynamically during labour; routine empiric increase is inappropriate.

✚ MRCOG pearl:

Insulin pump + established labour → pump may be continued if woman can manage it, with hourly glucose monitoring; switch to IV insulin/dextrose if glucose is not controlled.

Q17.

A woman with ulcerative colitis has continued infliximab throughout pregnancy. What is the main implication for the mother and baby after delivery?

✓ Answer: C. No live vaccines should be administered to the baby for the first 6 months
Why?

Infliximab is an anti-TNF monoclonal antibody. It is an IgG1 antibody and therefore crosses the placenta, particularly during the second and third trimesters.

Consequently, the baby may have detectable infliximab levels for several months after birth.

The major concern is live vaccines, because the infant may have impaired ability to handle a live attenuated organism.

The classic MRCOG teaching is:

In-utero exposure to infliximab → avoid live vaccines in the infant for the first 6 months.

The important example is BCG, which is a live vaccine. This is particularly relevant in countries where BCG is routinely given early in life.

Current consensus guidance continues to emphasise careful consideration of live vaccines after in-utero biologic exposure, although recommendations can vary according to the biologic, timing of the last maternal dose, and measured infant drug levels.

Why the other answers are wrong?

- * A. Infliximab clears after 2 months ✗ — clearance can take longer.
- * B. Maternal immunity is depressed more than normal ✗ — the important issue is fetal/neonatal exposure, not excessive maternal immunosuppression.
- * D. Clears after 3 months ✗ — again, neonatal clearance may take longer.
- * E. Increased risk of neonatal infection — not the principal exam point; the key concern is live-vaccine safety.

✚ Memory:

Infliximab → crosses placenta → baby exposed → avoid live vaccines.

Q18.

A 30-year-old woman has active inflammatory bowel disease (IBD) and becomes pregnant. She is taking sulfasalazine.

What is the likely course of IBD during pregnancy?

 Answer: B. It is likely to remain active

Why?

The most important predictor of IBD activity during pregnancy is the disease activity at conception.

If IBD is active when pregnancy begins, it is more likely to remain active or worsen during pregnancy.

In ulcerative colitis specifically, approximately half of women with active disease at conception may have worsening disease during pregnancy.

Therefore:

Active IBD at conception → increased probability of active disease throughout pregnancy.

Conversely, if a woman conceives while her IBD is in remission, she is much more likely to remain in remission.

Important point about sulfasalazine

Sulfasalazine can generally be continued during pregnancy.

Do not stop effective IBD treatment simply because the patient is pregnant. Maintaining remission is important because active IBD itself is associated with adverse pregnancy outcomes.

Why not the other answers?

- * A. More active during pregnancy — not necessarily. The key factor is activity at conception.
- * C. Respond better to treatment  — no general pregnancy-related improvement in treatment response.
- * D. Fluctuating between remission and active disease  — possible, but not the characteristic principle being tested.
- * E. Higher chance of remission  — particularly incorrect when disease is already active at conception.

 Very important MRCOG rule:

IBD in remission at conception → likely to remain in remission.

IBD active at conception → likely to remain active/worsen.

Recent evidence also supports achieving remission before conception; at least 3 months of corticosteroid-free remission is recommended in expert consensus approaches.

Q19.

The question asks for the detection rate when the following are combined at 11–13 weeks:

- * Nuchal translucency
- * Absent nasal bone
- * Abnormal ductus venosus Doppler
- * Tricuspid regurgitation
- * Maternal serum biomarkers

☒ Answer: C. 95% detection rate with a 3% false-positive rate

Why?

This is first-trimester combined/multimarker screening.

The basic first-trimester screening components include:

Maternal age + NT + PAPP-A + free β -hCG

Adding additional ultrasound markers such as:

- * nasal bone,
- * ductus venosus flow,
- * tricuspid regurgitation,

can improve screening performance.

The classic Fetal Medicine Foundation data show that combined first-trimester screening can achieve approximately 90% detection with a 3% false-positive rate, while enhanced algorithms incorporating additional markers can achieve around 95% detection at a low false-positive rate.

Thus, for the specific combination described in this MCQ, the expected answer is:

95% detection + 3% false-positive rate.

Why are the additional markers useful?

Absent nasal bone:

More commonly associated with trisomy 21.

Ductus venosus abnormality:

Abnormal flow, particularly absent/reversed a-wave, increases the likelihood of chromosomal abnormality.

Tricuspid regurgitation:

Associated with increased risk of fetal aneuploidy and some cardiac abnormalities.

When these are combined with NT and maternal serum markers, the screening performance improves.

📌 Exam pearl:

More first-trimester markers → better detection of trisomy 21 without substantially increasing the false-positive rate.

Q20.

✅ Answer: C. The twins are monochorionic

The key issue is that twin pregnancies have a higher false-positive rate with first-trimester combined screening than singleton pregnancies, particularly when the biochemical markers are not appropriately adjusted for twin pregnancy and chorionicity.

In the question, the important clue is monochorionic twins.

Why does chorionicity matter?

First-trimester screening uses:

- * Nuchal translucency (NT)
- * PAPP-A
- * free β -hCG
- * maternal age

The biochemical marker concentrations and ultrasound measurements need appropriate interpretation in twin pregnancies. Chorionicity affects the expected distribution of these markers, so incorrect or less accurate adjustment can increase false-positive results. Studies have demonstrated that chorionicity-specific adjustment improves screening performance.

Why not the other options?

- * A. One twin is hydropic — not the usual reason for the higher false-positive rate in this question.
- * B. Twins are dichorionic — dichorionicity itself is not the key explanation.
- * D. Demise of one twin — can complicate screening, but isn't the intended answer.
- * E. Significant difference in CRL — dating/CRL differences can affect screening, but this isn't the main principle being tested.

✚ Remember:

Twin pregnancy → screening is more complicated → chorionicity matters.

Q21.

✓ Answer: D. 10–20 transfusions

Repeated blood transfusions cause progressive iron accumulation because each unit of packed red cells contains a substantial amount of iron.

The body has no effective physiological mechanism for removing this excess iron.

Therefore:

Repeated transfusions → iron accumulation → iron overload → organ damage

Iron overload can eventually affect:

- * Heart → cardiomyopathy/heart failure
- * Liver → fibrosis/cirrhosis
- * Endocrine organs → diabetes, hypogonadism, growth problems

This is why transfusion-dependent thalassaemia patients require iron chelation therapy after a significant number of transfusions.

Why 10–20?

The MCQ is using the traditional teaching that chelation should be considered after approximately 10–20 transfusions, particularly once there is evidence of significant iron loading.

✚ Exam memory:

Multiple transfusions → iron overload → chelation.

Q22.

✓ Answer: A. High circulating aldosterone

This is a pregnancy physiology question.

During pregnancy, activation of the renin–angiotensin–aldosterone system (RAAS) results in increased aldosterone.

Mechanism

Pregnancy → ↑ RAAS → ↑ aldosterone

Aldosterone promotes:

Na⁺ reabsorption → water follows Na⁺ → increased water absorption

In the gut, increased water absorption contributes to drier, harder stools.

Additionally, pregnancy-related progesterone reduces intestinal smooth-muscle motility, giving the colon more time to absorb water.

So the overall mechanism is:

↑ Aldosterone + ↓ intestinal motility → ↑ water absorption → harder stools → constipation

Why not the other options?

- * Oestrogen: Important for many pregnancy changes, but not the principal hormone responsible for this stool-water effect.
- * Motilin: Promotes gastrointestinal motility; it is not responsible for constipation.
- * Renin: Initiates RAAS but does not directly cause the increased sodium/water retention in the way aldosterone does.
- * Somatostatin: Inhibits several gastrointestinal functions but is not the main mechanism here.

📌 High-yield physiology:

Progesterone → ↓ bowel motility

Aldosterone → ↑ Na⁺ and water absorption

Together → constipation in pregnancy.

Q23.

The woman has chronic constipation and has been prescribed a hyperosmolar laxative.

✅ Answer: A. Abdominal bloating and flatulence

Examples of hyperosmolar/osmotic laxatives include:

- * Lactulose
- * Sorbitol
- * Macrogol/polyethylene glycol

They work by retaining/drawing water into the intestinal lumen, making stools softer and easier to pass.

Why do they cause bloating and flatulence?

For example, lactulose is poorly absorbed and reaches the colon, where bacteria metabolise it.

This produces:

- * gas
- * abdominal distension

- * bloating
- * flatulence

These are well-recognised adverse effects of osmotic laxatives, particularly lactulose.

Why not the other options?

B. Diarrhoea

Can occur with excessive dosing, but bloating and flatulence are the characteristic unwanted effects tested here.

C. Electrolyte imbalance

Possible particularly with prolonged/excessive use, but not the characteristic immediate side effect.

D. Miscarriage

✗ Not an expected adverse effect of osmotic laxatives.

E. Teratogenicity

✗ These agents have minimal systemic absorption and are not considered teratogenic.

📌 Memory:

Lactulose → bacteria ferment it → gas → bloating + flatulence.

Q24.

A 30-year-old woman has had three previous mid-trimester miscarriages and is being assessed for an abdominal cerclage. The question asks when abdominal cerclage is indicated.

✅ Answer: E. The cervix is grossly disrupted

Why?

An abdominal/transabdominal cerclage is considered when a vaginal cerclage is not technically possible or has failed, particularly when there is major cervical anatomical abnormality.

A grossly disrupted or severely damaged cervix may make placement of a conventional McDonald or Shirodkar cerclage difficult or impossible.

Other important indications include:

- * Previous failed transvaginal cerclage with subsequent very early preterm birth/mid-trimester loss
- * Very short or absent vaginal cervix

- * Previous trachelectomy
- * Significant cervical anatomical distortion

FIGO notes that abdominal cerclage can be offered after a failed cerclage, while the choice between vaginal techniques depends on the individual anatomy.

Why not the others?

A. Previous failed McDonald suture

Not automatically an indication for abdominal cerclage. A repeat vaginal procedure, particularly a higher Shirodkar, may be considered depending on the circumstances.

B. Previous failed Shirodkar

Again, this does not automatically mean abdominal cerclage; the clinical history and reason for failure matter.

C. Short vaginal cervix

A short cervix is usually managed with vaginal cerclage when appropriate, rather than automatically requiring an abdominal approach.

D. Previous cone biopsy

This increases the risk of cervical insufficiency, but by itself is not an indication for abdominal cerclage.

E. Grossly disrupted cervix ★

This is the strongest anatomical indication because a vaginal stitch may not be technically feasible.

📌 MRCOG pearl:

Abdominal cerclage = think “vaginal cerclage impossible or previously failed,” especially severe cervical anatomical distortion.

Q25.

The woman has:

- * Two previous mid-trimester miscarriages
- * A transabdominal cerclage
- * Now presents at 19 weeks
- * Brownish vaginal discharge
- * 3 days of pregnancy-associated symptoms
- * Ultrasound confirms intrauterine fetal death

The question asks how she should be managed.

✅ Answer: D. Remove the stitch by posterior colpotomy and induce delivery

Why?

A transabdominal cerclage cannot simply be removed vaginally in the same way as a McDonald cerclage.

If pregnancy ends and vaginal delivery is desired, the abdominal cerclage needs to be removed surgically.

The posterior colpotomy provides a vaginal route to access and remove the cerclage, allowing induction of labour and vaginal delivery.

Why not A?

A. Hysterotomy and leave stitch in situ ❌

Hysterotomy is essentially performing a surgical uterine evacuation/delivery. It is unnecessarily invasive when vaginal delivery can be achieved after removal of the cerclage.

Why not B?

B. Posterior colpotomy to remove stitch + suction evacuation ❌

At 19 weeks, management of intrauterine fetal death generally involves induction of labour, rather than routine first-trimester suction evacuation.

Why not C?

C. Remove stitch by laparotomy and induce delivery ❌

This is unnecessarily invasive. If feasible, the stitch can be removed through a posterior colpotomy.

Why not E?

E. Remove stitch laparoscopically and induce delivery ❌

Again, this is more invasive than necessary in this situation.

📌 Key concept:

Abdominal cerclage + fetal death + desire for vaginal delivery → remove cerclage, then induce labour.

Q26.

A 33-year-old woman is booking at 10 weeks and chooses an integrated test for aneuploidy.

What is its main advantage over the first-trimester screening test?

☒ Answer: A. It has a lower false-positive rate

What is an integrated test?

It combines information from:

First trimester:

- * NT
- * PAPP-A

Second trimester:

- * AFP
- * β -hCG
- * unconjugated estriol
- * $\pm$ inhibin A, depending on the specific protocol

The results are combined to produce a single risk estimate.

Why does it have a lower false-positive rate?

Because it uses information from both the first and second trimesters, the combined risk calculation can improve screening specificity compared with some first-trimester approaches.

However, there is an important trade-off:

Integrated testing gives a result later in pregnancy.

That is one of its disadvantages.

Modern cfDNA/NIPT has an even better screening performance for trisomy 21, with a much lower false-positive rate than traditional screening.

Why not the other options?

B. Higher detection rate for aneuploidy

Not the main advantage being tested. The principal advantage here is the improved balance of detection and false-positive rate.

C. More cost-effective

☒ Not the defining advantage.

D. Better patient acceptance

✗ It requires testing at two different stages, so this isn't its major advantage.

E. Less time-consuming

✗ Exactly the opposite: it requires information from two time periods.

Important modern point

If the question were asking:

What is currently the most accurate screening test for trisomy 21?

The answer would be cell-free DNA/NIPT, not integrated testing. Current guidance describes cfDNA as the most sensitive and specific screening test for common fetal aneuploidies.

Q27.

✓ Marked answer: A. 77%

Explanation

Nuchal translucency (NT) is the sonographic measurement of the fluid-filled space at the back of the fetal neck, usually assessed at 11–13+6 weeks.

In trisomy 21, NT is often increased because of factors such as altered lymphatic drainage and cardiovascular abnormalities.

The older screening figures used by this MCQ give an approximate detection rate of ~75–80%, hence 77% is the intended answer.

However, an important update: estimates vary substantially depending on the NT threshold, population and screening protocol. A recent meta-analysis found a lower pooled sensitivity for NT alone, around 68%.

Screening method

Approximate detection

NT alone

~70–80%

NT + maternal age + serum markers

~85–90%

Additional first-trimester markers

~90–95%

cfDNA/NIPT

>99% for trisomy 21

cancer survivor

Q 28. Answer: A. Anti-Müllerian hormone (AMH)

Why AMH?

AMH is produced by the granulosa cells of pre-antral and small antral follicles.

Therefore, its concentration broadly reflects the remaining pool of developing ovarian follicles and is useful for assessing ovarian reserve, especially after potentially gonadotoxic cancer treatment.

Childhood cancer treatment can damage ovarian reserve through:

- * alkylating chemotherapy,
- * pelvic/abdominal radiotherapy,
- * total-body irradiation.

Studies in childhood cancer survivors show that AMH can identify diminished ovarian reserve even when FSH remains normal.

Why is AMH better than FSH here?

AMH falls earlier as ovarian reserve declines.

FSH generally rises later, when ovarian reserve has already become substantially depleted.

Another advantage:

AMH can be measured at essentially any point in the menstrual cycle.

Why not the other options?

B. Follicular-phase FSH: Useful, but less sensitive for early diminished ovarian reserve.

C. Luteal progesterone: Primarily tells us whether ovulation has occurred, not ovarian reserve.

D. Menstrual regularity: A woman may have regular periods despite significantly reduced ovarian reserve.

E. Ovarian ultrasound: Antral follicle count is useful, but AMH is a convenient biochemical marker and is the intended answer in this question.

 Important distinction: AMH estimates ovarian reserve, but it does not directly predict whether an individual woman will conceive naturally.

✚ MRCOG pearl:

Cancer survivor + ovarian reserve → think AMH.

Q29.

✓ Answer: D. Her uterine function has been compromised by treatment

Why?

This question contains a very important clue:

Adequate cyclical estrogen/progestogen treatment → still NO withdrawal bleeding

Normally:

Estrogen → endometrial proliferation

↓

Progesterone → secretory transformation

↓

Progesterone withdrawal → endometrial shedding → withdrawal bleed

If adequate estrogen and progesterone have been given but no bleeding occurs, think of:

1. Endometrial/uterine damage, or
2. an outflow-tract problem.

In a childhood cancer survivor, pelvic irradiation can damage the uterus and endometrium.

Radiation may cause:

- * uterine fibrosis,
- * impaired uterine growth,
- * vascular damage,
- * endometrial injury,
- * reduced uterine function.

Cases have been reported in which childhood cancer survivors exposed to pelvic radiation had no withdrawal bleeding despite adequate estrogen and progesterone, consistent with irreversible uterine/endometrial damage.

Why not A/B/C?

A. Hypergonadotrophic hypogonadism

This indicates primary ovarian failure: ↓ estrogen + ↑ FSH/LH.

But giving adequate exogenous estrogen followed by progesterone should still produce withdrawal bleeding if the uterus/endometrium is functional.

B. Hypogonadotropic hypogonadism

This indicates hypothalamic/pituitary dysfunction: $\downarrow$ FSH/LH $\rightarrow$ $\downarrow$ estrogen. Again, exogenous hormone replacement should overcome this and produce bleeding if the uterus is intact.

C. Hypothalamic dysfunction

Same reasoning: hormone replacement bypasses the hypothalamic-pituitary defect.

D. Uterine function compromised ★

This explains why even adequate exogenous hormones fail to produce bleeding.

📌 Excellent exam clue:

No withdrawal bleeding despite adequate estrogen + progesterone $\rightarrow$ think uterine/endometrial or outflow-tract pathology, not simply ovarian failure.

NT $\rightarrow$ Down screening; AMH $\rightarrow$ ovarian reserve; hormones but no bleed $\rightarrow$ uterus/endometrium.

Q30.

✅ Answer: A. Better precision and microsurgical dissection

Why?

Robotic surgery provides several technical advantages over conventional laparoscopy:

- * 3-D high-definition visualization
- * Wristed instruments with greater range of movement
- * Improved dexterity
- * Tremor filtration
- * Better ergonomics
- * More precise tissue dissection and suturing

These features are particularly useful for fine, complex pelvic surgery, where precise dissection and suturing are required. ACOG specifically describes improved visualization, dexterity and elimination of tremor as advantages of robotic systems.

Why not the others?

- * B. Decreased hospital stay — may occur in some studies, but this is not the principal technical advantage over laparoscopy.
- * C. Improved cosmesis — both approaches are minimally invasive and generally have similar cosmetic benefits.
- * D. Less postoperative pain — not consistently demonstrated as superior to laparoscopy.

- * E. Quicker recovery — robotic surgery is generally comparable to laparoscopy, rather than clearly superior. Randomized trials have not established a clinically meaningful overall superiority.

 Remember:

Robot = 3-D vision + wristed instruments + tremor elimination → precision.

Q31.

A 46-year-old woman undergoes subtotal (supracervical) hysterectomy for heavy menstrual bleeding.

The question asks: approximately what percentage will have persistent cyclical bleeding?

 Answer: B. 5%

Why?

In a subtotal hysterectomy, the uterine body is removed but the cervix is left behind.

Because a small amount of endometrial tissue can remain in the cervical stump/lower uterine segment, some women may continue to experience:

Cyclical vaginal bleeding after subtotal hysterectomy.

The commonly quoted figure in older teaching is around 5%.

The important comparison is:

Total hysterectomy → cervix + uterus removed → no menstrual bleeding

Subtotal hysterectomy → cervix remains → small risk of cyclical bleeding

Evidence confirms that ongoing cyclical bleeding is significantly more common after subtotal than total hysterectomy.

Important exam point

The risk is not necessarily exactly 5% in every study. Reported rates vary depending on surgical technique and follow-up duration. But 5% is the figure expected by this MCQ.

 Memory:

Subtotal = cervix remains → ~5% may continue to bleed.

Q32.

A 37-year-old woman is offered hysterectomy for heavy menstrual bleeding.

What is the main advantage of subtotal hysterectomy over total hysterectomy?

 Answer: B. Lower morbidity

Why?

In a subtotal hysterectomy, the cervix is left in place. This can make the operation slightly shorter and associated with slightly less blood loss, and some perioperative complications such as postoperative fever and urinary retention have been reported less frequently.

Therefore, the traditional exam answer is:

Subtotal hysterectomy → slightly lower operative morbidity.

Why not A? Better sexual/orgasmic satisfaction

✗ This is a common misconception.

There is no good evidence that subtotal hysterectomy provides better sexual or orgasmic function than total hysterectomy. Cochrane found no meaningful difference in sexual, urinary or bowel function between the two approaches.

Why not C? Reduced impact on ovarian function

✗ Removing the cervix does not determine ovarian preservation. In both subtotal and total hysterectomy, the ovaries can be conserved.

Why not D? Reduced bladder dysfunction

✗ There may be some difference in urinary retention in the short term, but reduced bladder dysfunction is not the principal overall advantage.

Why not E? Less surgical expertise required

✗ Subtotal hysterectomy is not simply a procedure requiring substantially less surgical expertise.

Q33.

✓ Answer: A. Atopic vulvitis

In prepubertal girls, the vulval skin is particularly susceptible to irritation and inflammation because of low oestrogen levels. Common triggers include:

- * Poor hygiene
- * Soap/bubble baths
- * Moisture
- * Tight clothing
- * Urine/faecal irritation
- * Atopic skin disease

This can produce itching, redness and soreness. Prepubertal vulvovaginitis is very common and is often related to irritation in the hypo-oestrogenic vulva.

Why not the others?

- * Contact dermatitis: Can cause itching but is not the answer expected here.
- * Lichen sclerosus: Important differential, especially with intense itching and characteristic white atrophic skin, but less common.
- * Vulvovaginal candidiasis: Much less common before puberty because the vaginal environment is not favourable for Candida.
- * Seborrhoeic eczema: Not the usual cause.

 Exam pearl:

Prepubertal girl + vulval itching → think nonspecific/atopic vulvitis or vulvovaginitis first.

Q34.

 Answer: E. 60%

This is a classic epidemiological fact.

Approximately 60% of women with tubo-ovarian abscess (TOA) are nulliparous. A review in The Obstetrician & Gynaecologist states that nearly 60% of women with TOA are nulliparous.

Why is this important?

TOA is usually a complication of pelvic inflammatory disease (PID).

The pathway is:

Ascending genital tract infection

↓

Endometritis/salpingitis

↓

Pelvic inflammatory disease

↓

Tubal/ovarian inflammation

↓

Tubo-ovarian abscess

RCOG explains that PID can spread from the vagina/cervix to the uterus, tubes and ovaries and, when severe, can produce a pelvic abscess.

 Memory:

TOA → reproductive age → ~60% nulliparous.

Q35.

✓ Answer: A. Ascending pelvic inflammatory disease

This is the most important concept in this group of questions.

TOA is usually a complication of untreated or inadequately treated PID.

The infection generally starts in the lower genital tract and ascends:

Vagina/cervix

↓

Endometrium

↓

Fallopian tubes

↓

Ovary/adnexa

↓

TOA

RCOG describes PID as infection spreading from the vagina and cervix to the uterus, fallopian tubes, ovaries and pelvic area; severe PID can result in an abscess.

Why not the other options?

- * Appendicitis: Can cause a pelvic abscess and may mimic TOA, but is not the usual cause.
- * Diverticulitis: Can cause pelvic infection, particularly in older women, but not the commonest cause.
- * Pyelonephritis: Renal infection, not the usual mechanism of TOA.
- * Tuberculous salpingitis: Can cause adnexal disease but is a less common cause.



Very high-yield:

TOA = complication of ascending PID until proven otherwise.

Q36.

The woman has:

- * Lower abdominal pain
- * Fever
- * Diarrhoea
- * Purulent urethral discharge
- * Adnexal tenderness
- * Suspicious pelvic mass

The question asks which blood investigation is most sensitive for TOA.

✅ Answer: B. High C-reactive protein (CRP)

Why?

TOA is a significant inflammatory/infective process, so inflammatory markers rise.

Among the options, CRP is particularly useful.

Studies comparing inflammatory markers have found CRP to be a strong predictor of TOA. One study found CRP to have an ROC AUC of 0.92, higher than WBC (0.75) and ESR (0.73).

Another study found that both CRP and ESR were useful predictors, with elevated CRP associated with TOA and greater disease severity.

Why CRP is useful

CRP:

- * rises rapidly with acute inflammation,
- * correlates with severity,
- * can be followed serially,
- * may help predict failure of conservative antibiotic treatment.

However, CRP is not diagnostic by itself. The diagnosis is based on the clinical picture plus imaging, particularly ultrasound. RCOG notes that ultrasound can help identify an abscess involving the fallopian tube and/or ovary.

Why not the others?

A. High lactate

Useful for assessing severe sepsis/shock, but not specifically sensitive for TOA.

C. High ESR

Can be elevated, but is less useful than CRP for acute inflammation.

D. Raised interleukin-6

May have research value but is not a routine clinical test.

E. Raised WBC count

Common in infection but is less specific/sensitive than CRP for TOA in the studies used for this type of question.

📌 Exam pearl:

TOA → ↑ CRP is an important inflammatory marker; ultrasound confirms the adnexal abscess.

Q37.

A 33-year-old woman has stage IA2 cervical cancer and wants to preserve fertility. She is offered a fertility-sparing radical trachelectomy.

☒ Answer: D. Removal of the cervix, upper vagina and parametrium

What is a radical trachelectomy?

It removes the cervix and surrounding tissues while preserving the uterine body, allowing the possibility of future pregnancy.

Typically removed:

- * Cervix
- * Upper part of the vagina
- * Parametrial/paracervical tissue

The uterine body and usually the ovaries are preserved.

Because cervical cancer can spread to lymph nodes, pelvic lymph-node assessment is also performed as part of appropriate cancer staging/management, but the defining anatomical components of the trachelectomy in this MCQ are cervix + upper vagina + parametrium.

Why not the other options?

- * A. Cervix only ☒ → this is closer to a simple trachelectomy, not radical trachelectomy.
- * B. Cervix + parametrial tissue ☒ → omits the upper vagina.
- * C. Cervix + parametrium + parametrial nodes ☒ → lymph-node assessment is separate from the defining resection.
- * D. Cervix + upper vagina + parametrium ☒
- * E. Cervix + upper vagina + parametrium + lymph nodes → lymph-node assessment may accompany the procedure, but the question is asking what the trachelectomy itself entails.

 MRCOG memory:

Radical trachelectomy = cervix + upper vagina + parametrium, uterus remains.

Q38.

The question describes a woman with active inflammatory bowel disease (IBD) who becomes pregnant and is taking sulfasalazine.

☒ Answer: B. It is likely to remain active

Why?

The most important factor determining the course of IBD during pregnancy is the disease activity at conception.

If the disease is:

Active at conception → likely to remain active or worsen

Whereas:

In remission at conception → more likely to remain in remission

Therefore, pregnancy should ideally be planned when IBD is in stable remission.

Sulfasalazine

Sulfasalazine is generally compatible with pregnancy and should not be stopped simply because the woman becomes pregnant. Maintaining disease control is important because active IBD itself can adversely affect pregnancy outcomes.

Why not the other options?

- * A. More active during pregnancy ✗ — not universally; activity at conception is the major predictor.
- * C. Better response to treatment ✗ — pregnancy does not generally improve treatment response.
- * D. Fluctuating between remission and active disease ✗ — not the characteristic principle being tested.
- * E. Higher chance of remission ✗ — particularly incorrect when disease is already active at conception.

Q39. First-trimester screening for trisomy 21

Answer: d) 97% for a false-positive rate of 3%

The question refers to an enhanced first-trimester screening combining:

- * Nuchal translucency (NT)
- * Nasal bone
- * Ductus venosus flow
- * Tricuspid regurgitation
- * Maternal serum markers (free β -hCG and PAPP-A)

The basic combined test (maternal age + NT + PAPP-A + free β -hCG) detects around 90% of trisomy-21 pregnancies at about a 5% false-positive rate.

Adding the additional ultrasound markers improves detection while reducing the false-positive rate. Studies have reported detection around 94–96% at approximately 2.5–3% FPR, and some prospective protocols have reported even higher detection.

Exam point:

NT + serum markers $\approx$ 90% detection at 5% FPR

NT + NB + DV + TR + serum markers $\rightarrow$ $\sim$ 95–97% detection at $\sim$ 3% FPR

Q40. Why is false-positive rate higher in twins?

Answer: b) The twins are dichorionic

In dichorionic twin pregnancy, each fetus contributes separately to the biochemical screening result. This makes the screening calculation more complicated and increases the probability of a screen-positive result.

Typical figures are approximately:

- * Singleton: $\sim$ 2.5–5% FPR
- * Dichorionic twins: $\sim$ 5%
- * Monochorionic twins: FPR can be considerably higher, particularly because a pregnancy-specific rather than fetus-specific risk calculation is used.

Therefore, when the question specifically says “twice as high as singleton pregnancies”, it is referring to dichorionic twins.

Remember:

DCDA $\rightarrow$ $\sim$ 5% FPR $\approx$ twice singleton FPR

Q41. After how many transfusions should chelation be considered?

Answer: d) 10–20 transfusions

Repeated transfusions cause progressive iron accumulation because the body has no physiological mechanism for eliminating the large amount of transfusional iron.

Iron chelation is generally started after approximately 10–20 transfusions, or when serum ferritin reaches around 1000 ng/mL, depending on the guideline and individual circumstances. Current Indian guidance similarly recommends chelation after 10–20 transfusions or ferritin >1000 ng/mL.

Exam pearl:

10–20 transfusions $\rightarrow$ think IRON CHELATION

Chelators include:

- * Deferasirox

* Deferiprone

* Desferrioxamine

For a woman planning pregnancy, iron burden should ideally be optimised before conception. Chelation generally requires special management during pregnancy.

Q42. Hormone responsible for reducing water content of stools in pregnancy

Answer: a) High circulating aldosterone

This is a very good physiology question.

Pregnancy activates the renin–angiotensin–aldosterone system (RAAS):

↑ Oestrogen/progesterone → ↑ renin → ↑ angiotensin II → ↑ aldosterone

Aldosterone causes increased sodium and water absorption, including increased water absorption from the gut/colon.

Therefore:

↑ Aldosterone → ↑ colonic water absorption → ↓ water in stool → harder stool → constipation.

This is different from the mechanism of reduced gut motility, which is mainly related to progesterone.

Mechanism

Main hormone

↓ GI smooth-muscle motility

Progesterone

↓ stool water / harder stools

Aldosterone

↓ intestinal motility via reduced motilin

Progesterone → ↓ motilin

↑ sodium & water reabsorption

Aldosterone

Q43.

The woman at 8 weeks' gestation has chronic constipation and is prescribed a hyperosmolar (osmotic) laxative.

 Answer: A. Abdominal bloating and flatulence

Why?

Hyperosmolar laxatives such as lactulose and sorbitol are poorly absorbed. They retain water in the bowel, increasing stool water content and making stools easier to pass.

With lactulose, intestinal bacteria ferment the undigested carbohydrate and produce gas, leading to:

- * Flatulence
- * Abdominal bloating
- * Sometimes abdominal discomfort/nausea

This is a characteristic adverse effect of hyperosmolar laxatives.

Why not the other options?

- * B. Diarrhoea: Can occur if the dose is excessive, but is not the characteristic adverse effect being tested.
- * C. Electrolyte imbalance: Possible with prolonged/excessive use, but less characteristic than bloating and flatulence.
- * D. Miscarriage: There is no established association with miscarriage.
- * E. Teratogenicity: Lactulose has minimal systemic absorption and is considered compatible with pregnancy.

 Memory:

Lactulose → bacterial fermentation → gas → bloating + flatulence.

Q44.

A 30-year-old woman has had three previous mid-trimester miscarriages and is being assessed for abdominal cerclage.

 Answer: E. The cervix is grossly disrupted

Why?

An abdominal/transabdominal cerclage is considered when a vaginal cerclage is not technically feasible, for example because of severe cervical anatomical distortion or major cervical damage.

A grossly disrupted cervix may not provide enough tissue for a reliable vaginal McDonald or Shirodkar cerclage.

Other situations in which transabdominal cerclage may be considered include:

- * Previous failed vaginal cerclage associated with a subsequent loss/preterm birth
- * Anatomical abnormalities making vaginal placement difficult
- * Previous cervical surgery or trachelectomy in selected cases

RCOG recognises transabdominal cerclage as an option in selected women at high risk where conventional vaginal cerclage is unsuitable.

Why not the other options?

A. Previous failed McDonald suture

✗ A previous failed McDonald does not automatically mean abdominal cerclage. The circumstances of failure and cervical anatomy need consideration.

B. Previous failed Shirodkar

✗ Similarly, failure alone is not the sole criterion.

C. Short vaginal cervix

✗ Usually managed with appropriate vaginal cerclage when indicated; short cervix alone does not require abdominal cerclage.

D. Previous cone biopsy

✗ This increases the risk of cervical insufficiency, but does not by itself mandate abdominal cerclage.

E. Grossly disrupted cervix ☒

The anatomy may make a vaginal stitch impossible or unreliable.

✦ Exam memory:

Abdominal cerclage = think “vaginal cerclage cannot be placed adequately.”

Q45.

The woman has a transabdominal cerclage and an intrauterine fetal death at 18 weeks.

The question asks how she should be managed.

☒ Answer: D. Remove the stitch by posterior colpotomy and induce delivery

Why?

A transabdominal cerclage is positioned high around the cervix and cannot simply be removed in the usual way through a speculum.

At around 18 weeks, if vaginal delivery is desired, the cerclage can be cut/removed through a posterior colpotomy, after which labour can be induced.

The RCOG cerclage guidance specifically describes evacuation through the stitch by suction/D&E up to 18 weeks, or alternatively cutting the suture, usually through a posterior colpotomy. If these approaches are unsuccessful, hysterotomy or caesarean delivery may be required.

A posterior colpotomy provides vaginal access to the abdominal cerclage while avoiding a laparotomy in suitable cases. Case reports describe successful removal in the second trimester to allow vaginal delivery.

Why not the other options?

A. Hysterotomy and leave stitch in situ

✗ Much more invasive and unnecessary when the stitch can be accessed and removed.

B. Posterior colpotomy + suction evacuation

✗ At 18 weeks, the question is directing you toward removal of the cerclage followed by induction of labour rather than routine suction evacuation.

C. Remove by laparotomy and induce delivery

✗ Laparotomy is more invasive than posterior colpotomy when vaginal removal is feasible.

D. Remove by posterior colpotomy and induce delivery 

This permits vaginal delivery while avoiding major abdominal surgery.

E. Laparoscopic removal + induction

✗ More invasive than the vaginal approach described in the question.

📌 Very important MRCOG point:

Abdominal cerclage + second-trimester fetal death → remove the stitch, usually via posterior colpotomy when appropriate, then allow/induce vaginal delivery.

Q46.

A 29-year-old woman has:

- * Two previous mid-trimester miscarriages
- * A previous failed McDonald cerclage
- * A previous failed Shirodkar cerclage
- * Very little cervix remaining
- * She is currently 6 weeks pregnant

The question asks the best approach to reduce the risk of another mid-trimester miscarriage.

 Answer: B. Offer a transabdominal cerclage at 10–11 weeks

Why?

This woman has a strong history of failed transvaginal cerclage plus very little cervical tissue remaining.

A transabdominal cerclage (TAC) is particularly appropriate when:

A previous vaginal cerclage has failed, especially when the cervix is very short/scarred or a vaginal stitch cannot be placed adequately.

The TAC is placed higher at the cervico-isthmic junction, providing mechanical support where a conventional vaginal cerclage may not be possible.

RCOG states that an abdominal stitch may be recommended when a vaginal stitch has not worked previously or cannot be inserted, and it is ideally performed before pregnancy or in early pregnancy.

ACOG similarly notes transabdominal cerclage as an option after a previous transvaginal cerclage failed to prevent pregnancy loss.

Why at 10–11 weeks?

She is only 6 weeks pregnant, so there is time to plan the procedure in the first trimester.

The key is not the exact number 10–11 weeks itself; the important exam principle is:

Failed vaginal cerclage $\times$ 2 + very little cervix $\rightarrow$ transabdominal cerclage in early pregnancy.

Why not the other options?

A. Abdominal cerclage at 6 weeks

 Usually too early; there is time to perform the planned procedure later in the first trimester.

C. Repeat McDonald at 14 weeks

✗ Already failed previously.

D. Repeat Shirodkar at 14 weeks

✗ Also failed previously and there is very little cervical tissue.

E. Serial ultrasound + Shirodkar if cervix <15 mm

✗ Not appropriate because she has already demonstrated failure of vaginal cerclage and has very little cervix.

📌 MRCOG memory:

Failed vaginal cerclage + very short/absent cervix → Transabdominal cerclage.

Q47.

The woman is 12 weeks pregnant and undergoing nuchal translucency measurement alone.

✅ Answer: A. 77%

Why?

NT is an important first-trimester marker for chromosomal abnormalities.

Increased NT is associated with:

- * Trisomy 21
- * Trisomy 18
- * Trisomy 13
- * Turner syndrome
- * Some structural/cardiac abnormalities

The older screening figures commonly used in MRCOG-style questions quote approximately 75–80% detection for trisomy 21 using NT alone, hence 77% is the expected answer in this question.

But remember an important distinction

NT alone is not the same as the combined first-trimester test.

NT alone → ~77%

Whereas adding:

- * maternal age
- * PAPP-A
- * free β -hCG
- * additional ultrasound markers

substantially improves screening performance.

And cfDNA/NIPT has much higher sensitivity for trisomy 21 than conventional ultrasound/serum screening.

📌 Exam memory:

NT alone $\approx 77\%$

Combined first-trimester screening $\approx 90\text{--}95\%$

NIPT/cfDNA $\rightarrow >99\%$ for T21

Q48.

A 33-year-old woman at 10 weeks chooses the integrated test for aneuploidy screening.

What is its main advantage over the first-trimester screening test?

✅ Answer: A. It has a lower false-positive rate

What is an integrated test?

The integrated test combines information from two stages of pregnancy.

First trimester

- * NT
- * PAPP-A

Second trimester

- * AFP
- * β -hCG
- * unconjugated estriol
- * sometimes inhibin A, depending on the protocol

The results are combined into a single risk estimate.

Because information from both trimesters is incorporated, the test can achieve a lower false-positive rate than some first-trimester screening strategies.

The disadvantage

The major disadvantage is that the woman has to wait until the second trimester for the complete result.

Therefore:

Integrated test = lower false-positive rate, but later result.

Why not B?

B. Higher detection rate for aneuploidy

✗ This is not the principal advantage being tested.

Why not C?

C. More cost-effective

✗ Not the defining advantage.

Why not D?

D. Better acceptance by patients

✗ It actually requires testing over two different periods, which can make it less convenient.

Why not E?

E. Less time-consuming

✗ The opposite—the complete assessment takes longer because second-trimester information is required.

Q49.

The question asks:

What is the minimum percentage of sufficient cell-free fetal DNA required in maternal circulation for NIPT to be feasible?

Options: 2%, 3%, 4%, 5%, 6%.

✓ Answer: C. 4%

Why?

NIPT analyses cell-free DNA (cfDNA) circulating in maternal plasma. Most of this DNA is maternal, while a small proportion originates from the placenta and represents the fetal fraction.

Fetal fraction = proportion of total cell-free DNA that is placental/fetal in origin.

For conventional NIPT, a fetal fraction of approximately 4% has traditionally been regarded as the minimum level needed for a reliable result.

What happens if fetal fraction is too low?

If fetal fraction is insufficient:

Low fetal fraction → insufficient signal → test may give a “no-call”/failed result.

Low fetal fraction is more likely with:

- * Early gestation
- * Higher maternal BMI
- * Some placental/fetal conditions
- * Certain maternal medications/conditions

📌 Exam memory:

NIPT → minimum fetal fraction $\approx 4\%$.

Important: Modern laboratory platforms have different thresholds and some can generate results below 4%, so 4% is the classic MRCOG exam figure, not an absolute biological cutoff.

Q50.

A 27-year-old woman has a singleton viable pregnancy and an adnexal mass. Which ultrasound feature helps distinguish a benign from an invasive malignant adnexal mass?

✅ Answer: E. Presence of the “ovarian crescent sign”

What is the ovarian crescent sign?

It means that a rim/crescent of normal ovarian tissue can be seen adjacent to the adnexal mass.

Think of it as:

Mass → surrounding/adjacent normal ovarian tissue → “crescent”

This suggests that the mass is arising separately from the remaining normal ovary, and its presence is associated with a lower likelihood of invasive malignancy.

Studies have found normal ovarian tissue adjacent to the mass much more frequently in benign lesions than invasive malignant lesions.

Why is it useful?

In an ultrasound examination:

Normal ovarian tissue visible → ovarian crescent sign present → malignancy less likely

Conversely:

No normal ovarian tissue visible → malignancy becomes more concerning.

In a large multicentre study, the presence of the crescent sign was much more common in benign masses, while its absence was associated with invasive malignancy.

Important nuance

The ovarian crescent sign does not prove that a mass is benign. It is a supportive ultrasound feature. Modern ultrasound assessment uses the overall morphology, including:

- * Solid components
- * Papillary projections
- * Ascites
- * Doppler vascularity
- * Irregularity
- * Bilaterality
- * Other IOTA features

The large multicentre validation study concluded that the presence of the sign lowers the likelihood of invasive malignancy but is not sufficiently accurate as a single feature to distinguish benign from malignant masses.

Why not the other options?

A. Absence of significant vascularity ❌

Benign lesions may have little vascularity, but vascularity alone is not sufficiently reliable.

B. Complex appearance ❌

“Complex” masses can be benign or malignant.

C. Partly solid and partly cystic ❌

This can occur in both benign and malignant tumours.

D. Oedema of the cystic mass ❌

Not the characteristic sign being tested.

E. Ovarian crescent sign ✅

Normal ovarian tissue seen adjacent to the mass → favours benign pathology.

PAPER 7 ANSWER

Q1.

A 24-year-old woman at 18 weeks was inadvertently treated with doxycycline in the first trimester.

 Answer: E. It is not associated with an increased risk when used in the first trimester

Explanation

Doxycycline is a tetracycline antibiotic. The traditional concern with tetracyclines is:

- * Discolouration of deciduous teeth
- * Possible effects on bone growth

However, these effects are primarily associated with exposure later in pregnancy, when fetal teeth and bones are developing more actively.

Importantly, available human data do not demonstrate a significant increase in major congenital malformations from first-trimester tetracycline exposure.

Therefore, inadvertent early-pregnancy exposure is not an indication for termination.

Why the other options are wrong

- * A. Increased facial clefting  — not an established effect of doxycycline.
- * B. Increased neural tube defects  — not characteristic of doxycycline.
- * C. Increased tooth and bone discoloration  — the classic tetracycline concern is mainly with later exposure.
- * D. Congenital malformations/abnormal tooth formation  — not an established first-trimester teratogenic effect.
- * E. No increased risk with first-trimester use 

 MRCOG pearl:

Tetracyclines → teeth/bone concern, especially later pregnancy; first-trimester exposure is not considered a major teratogenic exposure.

Q2.

The question asks for the most common adnexal cystic lesion diagnosed after 16 weeks of pregnancy.

✅ Answer: E. Mature cystic teratoma

Why?

A mature cystic teratoma (dermoid cyst) is a common persistent ovarian/adnexal mass encountered during pregnancy.

The corpus luteum is very common in early pregnancy, but it normally regresses as placental progesterone production becomes established.

After approximately 16 weeks, a persistent adnexal mass is therefore more likely to represent a genuine ovarian lesion rather than a physiological corpus luteum.

Why not corpus luteum?

Corpus luteum cyst is the common physiological ovarian cyst in early pregnancy.

It generally regresses as pregnancy progresses.

So the exam distinction is:

Early pregnancy → corpus luteum

Persistent mass after 16 weeks → think dermoid/mature cystic teratoma

Other options

- * Follicular cyst → usually functional and tends to resolve.
- * Haemorrhagic cyst → can occur but isn't the commonest persistent lesion.
- * Luteoma of pregnancy → rare, usually solid and associated with androgen production.
- * Mature cystic teratoma → common benign persistent ovarian tumour and the intended answer.

📌 Memory:

Pregnancy + persistent adnexal mass → dermoid is a common benign diagnosis.

Q3.

A 25-year-old woman taking high-dose sodium valproate discovers she is 8 weeks pregnant.

The options include stopping valproate and switching to lamotrigine/levetiracetam, or continuing it while obtaining urgent specialist advice.

✅ Answer marked in the question: E. Commence high-dose folic acid (5 mg daily) and recommend continuation of sodium valproate but refer urgently for neurological review

Why is this a tricky question?

Valproate is highly teratogenic.

Exposure during pregnancy is associated with:

- * Neural tube defects, particularly spina bifida
- * Craniofacial abnormalities
- * Cardiac and limb abnormalities
- * Neurodevelopmental disorders

Current UK safety information estimates that around 11% of babies exposed to valproate in pregnancy have a birth defect, and approximately 30–40% may have neurodevelopmental problems.

Therefore, valproate should be avoided in pregnancy whenever an effective alternative is available.

But there is a crucial management principle:

❗ Do NOT abruptly stop an antiepileptic drug.

Stopping valproate suddenly can precipitate seizures, which themselves can seriously harm the mother and fetus.

Current MHRA guidance says women who become pregnant while taking an antiepileptic should seek urgent specialist advice and should not stop their medication without discussing it with a specialist.

Levetiracetam and lamotrigine are among the antiseizure medicines considered safer in pregnancy.

Therefore, the exam logic is:

8 weeks pregnant + valproate

↓

Start folic acid 5 mg/day

↓

Urgent neurology/epilepsy specialist review

↓

Specialist decides whether/how to switch to a safer effective drug

The question's E is therefore testing the principle that you must not abruptly withdraw valproate before specialist review.

Why not B/C?

B/C: Stop valproate and immediately start levetiracetam ✗

Although levetiracetam is safer in pregnancy, an immediate unsupervised switch is inappropriate because seizure control must be maintained and drug changes require specialist management.

Why not simply stop valproate?

✗ Because loss of seizure control can be dangerous. Current guidance explicitly says not to stop valproate without specialist advice.

Folic acid

High-dose folic acid 5 mg daily should be given to women taking antiepileptic medication who are pregnant or planning pregnancy. It is important for neural tube defect prevention, although folate does not eliminate the teratogenic risk of valproate.

Q4.

✓ Answer: A. Pregnancy >20 weeks + CPR unsuccessful with no ROSC after 4 minutes

Explanation

In maternal cardiac arrest, the priority is high-quality CPR and maternal resuscitation. However, an advanced pregnancy causes aortocaval compression, reducing venous return and therefore reducing the effectiveness of maternal CPR.

Once the pregnancy is sufficiently advanced—traditionally >20 weeks—delivery can improve maternal resuscitation by:

- * Relieving aortocaval compression
- * Increasing venous return
- * Improving cardiac output
- * Improving the effectiveness of CPR

The classic RCOG teaching is:

If pregnancy is >20 weeks and ROSC has not occurred, prepare for perimortem caesarean and aim to deliver by 5 minutes.

Current Resuscitation Council UK guidance emphasises that resuscitative hysterotomy is time-critical and should be performed as soon as possible, with preparation beginning early.

Why the 4-minute figure?

The 4-minute point is the trigger to proceed, allowing delivery to occur by approximately 5 minutes.

So:

Cardiac arrest → CPR immediately

↓

No ROSC by ~4 min in pregnancy >20 weeks

↓

Resuscitative hysterotomy/caesarean

↓

Aim for delivery by 5 min



MRCOG memory:

20 weeks + arrest + no ROSC at 4 min → deliver by 5 min.

Q5.



Answer: C. 5 minutes after cardiac arrest

This is one of the most important numbers to remember.

Why?

The purpose of a perimortem caesarean in maternal cardiac arrest is primarily maternal resuscitation, not simply fetal rescue.

The gravid uterus can significantly compress the:

- * Inferior vena cava

- * Aorta

This reduces venous return and cardiac output.

Delivery → uterus becomes empty → aortocaval compression relieved → venous return improves → CPR becomes more effective.

RCOG guidance states that when resuscitation is unsuccessful in a pregnancy beyond 20 weeks, perimortem caesarean should be performed by 5 minutes.

Easy timeline

0 min: Cardiac arrest → start CPR

Immediately: Call for help + prepare for resuscitative hysterotomy

~4 min: If no ROSC → proceed

≤5 min: Aim to deliver



Exam pearl:

“4 minutes to decide/prepare; 5 minutes to deliver.”

Q6.

The question asks for the recommended oxygen flow rate when giving oxygen by face mask.

☒ Answer: E. 10–15 L/min

Why?

During cardiac arrest, the patient requires high-concentration oxygen.

In the question, oxygen is being administered by a face mask, so the appropriate flow rate is approximately:

10–15 L/min

During active CPR, current resuscitation guidance uses 100% oxygen with bag-valve-mask ventilation when available.

The purpose is to maximise oxygen delivery because circulation is severely compromised.

Why not lower flows?

- * 1–2 L/min ☒ → nasal-cannula-type flow, inadequate for cardiac arrest.
- * 2–4 L/min ☒ → insufficient.
- * 4–6 L/min ☒ → insufficient for cardiac arrest.
- * 6–10 L/min ☒ → may provide oxygen but is below the classic high-flow range tested here.
- * 10–15 L/min ☒ → high-flow oxygen.

Q7.

☒ Answer: B. Leave all IV access ports, lines, intubation and other equipment, including the CS, in place and notify the coroner and relatives.

Why?

This is a sudden/unexpected maternal death, so the possibility of a medicolegal/coroner investigation and post-mortem examination must be considered.

The priority after death is to preserve evidence.

Therefore, you should not remove:

- * IV lines
- * Arterial lines
- * Endotracheal tube
- * Other invasive equipment

- * Equipment related to the resuscitation
- * Relevant surgical materials

RCOG guidance specifically states that when a post-mortem is anticipated, airways, tracheal tubes, lines and catheters should not be removed, and materials connected with the woman's care should be preserved.

Why not A?

A. Complete the perimortem CS and then inform the coroner ✗

The procedure should not simply be completed after death without considering the medicolegal implications. Once death has occurred unexpectedly, the coroner should be contacted promptly and evidence preserved.

Why not C?

C. Remove the placenta and send it for examination but don't complete the procedure ✗

Removing tissue/organs can compromise evidence. The coroner needs to determine what should be retained and examined.

Why not D?

D. Inform relatives and seek permission to inform the coroner ✗

The coroner's involvement is not dependent on permission from the relatives.

Why not E?

E. Inform the coroner and seek permission to complete the procedure ✗

The key immediate principle is preservation of evidence and equipment, rather than simply seeking permission to continue the operation.

📌 Exam pearl:

Unexpected maternal death → preserve lines, tubes and equipment → notify coroner → preserve evidence.

RCOG's current Good Practice Paper on maternal death emphasizes factual documentation, communication with the family and preservation of clinical materials when post-mortem examination is anticipated.

Q8.

The question asks for the cost-effective management.



Answer marked: A. Commence tocolysis and a course of corticosteroids

Why?

At 24+6 weeks, suspected preterm labour is clinically important because delivery at this gestation carries substantial neonatal morbidity and mortality.

The two important immediate interventions when preterm birth appears likely are:

1. Antenatal corticosteroids

These accelerate fetal lung maturation and reduce neonatal complications such as:

- * Respiratory distress syndrome
- * Intraventricular haemorrhage
- * Necrotising enterocolitis
- * Neonatal mortality

RCOG recommends antenatal corticosteroids for women at risk of preterm birth within the relevant gestational window.

2. Tocolysis

A short course of tocolysis, commonly nifedipine, may be used to delay delivery long enough to:

- * Complete corticosteroid administration
- * Arrange transfer to an appropriate neonatal unit
- * Allow administration of magnesium sulfate when indicated at very early gestations

But there is an important exam nuance

This question is specifically asking for the cost-effective strategy, and the options include cervical-length and fetal-fibronectin strategies.

Modern evidence shows that risk stratification using cervical length and/or fetal fibronectin can reduce unnecessary treatment in women with threatened preterm labour. Cost-effectiveness studies have found that combining cervical length with fFN can be cost-saving compared with treating everyone.

However, the answer key in this particular MCQ marks A, so for the examination set, the intended reasoning is:

24+6 weeks + contractions + closed cervix

→ significant risk of very preterm birth

→ steroids + short-term tocolysis.

Why not the other options?

B. Oncofetal fibronectin + corticosteroids

✗ fFN may be useful for risk stratification, but the question's intended cost-effective management is immediate treatment at this very early gestation.

C. Transabdominal cervical-length measurement + corticosteroids

✗ Cervical length should be assessed transvaginally, not transabdominally, when cervical assessment is required.

D. Translabial cervical-length measurement + corticosteroids

✗ Not the standard method.

E. Transvaginal cervical-length measurement + corticosteroids

This is a clinically reasonable assessment strategy in some threatened-preterm-labour pathways, but it is not the keyed answer in this question.

★ Very important distinction for MRCOG

Don't confuse screening/risk stratification with management once preterm birth is considered likely.

Threatened preterm labour

Assess likelihood of delivery → cervical assessment ± fFN → decide treatment

Whereas if there is a strong likelihood of delivery at 24+6 weeks:

Corticosteroids ☒

Consider tocolysis ☒

Consider magnesium sulfate for fetal neuroprotection according to gestation/local guidance



Arrange appropriate neonatal care/transfer ☒

Cost-effectiveness studies support selective use of cervical length and fFN rather than automatically treating every woman with threatened preterm labour.

Q9.

✓ Answer: D. Corticosteroids and nifedipine

Why?

At 26+3 weeks, the two important interventions are:

1. Antenatal corticosteroids

→ accelerate fetal lung maturation and reduce neonatal respiratory morbidity, IVH, NEC and mortality.

2. Nifedipine for tocolysis

→ temporarily delays delivery, allowing time for corticosteroids to work and, if necessary, transfer to a centre with appropriate neonatal care.

NICE recommends nifedipine for women from 26+0 to 33+6 weeks with suspected/diagnosed preterm labour and intact membranes. Corticosteroids are offered from 24+0 to 33+6 weeks. ↻

Why not the others?

- * A. Corticosteroids + atosiban ✗ — atosiban is an alternative when nifedipine is contraindicated.
- * B. Corticosteroids + cervical cerclage ✗ — a cerclage is not inserted during established preterm labour.
- * C. Corticosteroids + GTN patches ✗ — GTN is not the recommended first-line tocolytic.
- * E. Corticosteroids + progesterone ✗ — progesterone is used mainly for prevention of spontaneous preterm birth in selected women, not acute tocolysis.

📌 Memory:

24–33+6 weeks + intact membranes + preterm labour → nifedipine + steroids.

Q10.

✓ Answer: C. Incise the cervix laterally

Why?

This is after-coming head entrapment, a particular problem in preterm breech delivery.

The premature baby's head is relatively large compared with the body, and the cervix may not be fully dilated. The small body can therefore pass through an incompletely dilated cervix while the larger head becomes trapped.

The immediate objective is to release the trapped head.

One method is to make lateral cervical incisions (classically at approximately 2, 6 and 10 o'clock) to enlarge the cervical opening.

RCOG guidance specifically states that with head entrapment during preterm breech vaginal birth, cervical incisions may be used, with or without tocolysis.

Why not nifedipine?

✗ Nifedipine relaxes the uterus/cervix but does not mechanically enlarge a trapped cervix sufficiently or quickly enough in this emergency.

Why not terbutaline?

✗ A beta-mimetic may produce uterine relaxation but is not the recommended treatment; NICE specifically advises against betamimetics for tocolysis.

Why not episiotomy?

✗ An episiotomy enlarges the perineal outlet, not the cervical opening. The obstruction here is at the cervix.

Why not caesarean?

✗ The fetus is already partly delivered vaginally. Immediate management is to release the trapped head rather than perform a caesarean.

✦ Very important MRCOG pearl:

Preterm breech + body delivered + head trapped → lateral cervical incisions.

Q11.

✓ Answer: C. 3%

Why?

Approximately 3% of births are twin births in many commonly used epidemiological figures.

The exact rate varies by population, maternal age, fertility treatment and geography, but 3% is the standard figure expected in this MCQ.

Compare this with singleton pregnancy:

Twins $\approx$ 3% of births

At term, breech presentation occurs in approximately 3–4% of singleton pregnancies, whereas breech is much more common in preterm pregnancies.

A useful twin fact

Twin pregnancy is associated with increased risks of:

- * Preterm birth
- * Fetal growth restriction
- * Pre-eclampsia
- * Caesarean delivery
- * Twin-to-twin transfusion syndrome in monochorionic twins
- * Perinatal morbidity and mortality

 Memory:

Twin births $\approx$ 3%.

Q12.

 Answer: E. 50% (1:2)

Explanation

Twin pregnancy has a substantially higher risk of spontaneous and medically indicated preterm birth than singleton pregnancy. Roughly half of twin pregnancies deliver before 37 weeks.

The mechanism includes:

- * Greater uterine distension
- * Increased myometrial activity
- * Higher incidence of PPRM
- * Cervical shortening
- * Placental and fetal complications leading to indicated preterm delivery

 Exam pearl:

Twin pregnancy $\rightarrow$ about 50% deliver before 37 weeks.

Q13.

 Answer: D. None

Why?

The key is that this is a low-risk woman with a short cervix detected incidentally.

A cervical length of 22 mm is short (<25 mm), but the question asks about the intervention with demonstrated benefit in this particular setting. Historically, routine cerclage or pessary

is not recommended for an unselected woman with a short cervix without additional risk factors.

- * Cerclage → generally reserved for selected women, particularly those with a relevant history or cervical dilation.
- * Arabin pessary → not routinely recommended for prevention of spontaneous preterm birth.
- * Nifedipine → a tocolytic, used when there is established/suspected preterm labour, not simply because the cervix is short.
- * Vaginal progesterone → this is an important nuance. Current NICE guidance recommends vaginal progesterone for women with a cervical length ≤ 25 mm between 16+0 and 24+0 weeks in the appropriate clinical context.

Therefore, the answer key in this MCQ appears to reflect the older evidence/guideline position in which no intervention was considered to have proven benefit for this particular low-risk scenario.

✚ MRCOG exam caution: Always check the guideline era of the question. Current recommendations may differ from older question-bank answers.

Q14.

✓ Answer: A. Congenital cytomegalovirus (CMV) infection

Why?

Congenital CMV is the classic and most important non-genetic/infectious cause of childhood sensorineural hearing loss.

It can cause:

- * Sensorineural hearing loss
- * Microcephaly
- * Intracranial calcifications
- * Periventricular abnormalities
- * Seizures
- * Developmental impairment

Importantly, hearing loss can be delayed/progressive, and a baby may appear well at birth. CDC sources identify congenital CMV as the most common non-genetic cause of newborn hearing loss.

Why not rubella?

Congenital rubella classically causes:

- * Sensorineural deafness
- * Cataracts
- * Patent ductus arteriosus

But widespread vaccination has made congenital rubella much less common. CMV is therefore the preferred answer for this question.

Q15.

 Answer: D — Up to 50%

Explanation

The important word is primary infection.

When a woman acquires CMV for the first time during pregnancy, the risk of transplacental transmission is much higher than with recurrent/non-primary infection.

- * Primary maternal CMV infection → approximately 30–40% transmission, with estimates reaching ~50%.
- * The risk of fetal transmission increases as gestation advances, although infection earlier in pregnancy is generally associated with more severe fetal consequences.

CDC sources report transmission rates of about 30–40%, with some sources describing rates up to 50%.

Therefore, among the options, 50% is the best answer.

Exam pearl

Primary CMV → high transmission (~30–50%)

Previous CMV infection → much lower transmission (<2% in classic figures).

Q16.

 Answer: B — 1–2%

Why?

This is non-primary CMV infection — either:

- * reactivation of latent CMV, or
- * reinfection with another CMV strain.

Because maternal immunity already exists, the risk of fetal transmission is much lower than with a primary infection.

Maternal infection

Approximate fetal transmission

Primary infection

~30–40%

Recurrent/non-primary infection

~1% or <2%

CDC data describe approximately 33% transmission after primary infection versus approximately 1% after recurrent infection.

 Easy way to remember

First CMV infection = ~1 in 3

Previous CMV infection = ~1 in 100

So B (1–2%) is the best answer.

Q17.

 Answer: C — >1000 mL with ongoing bleeding or clinical shock

Explanation

Primary postpartum haemorrhage is traditionally defined as blood loss of ≥ 500 mL within 24 hours of birth.

However, >1000 mL represents major PPH in the traditional RCOG classification.

RCOG describes:

- * 500–1000 mL → minor PPH
- * >1000 mL → major PPH
- * 1000–2000 mL → moderate major PPH
- * >2000 mL → severe major PPH

Once bleeding exceeds 1000 mL and is continuing, or the woman develops clinical shock, senior multidisciplinary involvement is required.

RCOG patient guidance similarly states that when heavy bleeding continues and blood loss is >1000 mL, a team of senior hospital staff should become involved.

Why not wait until 1500 or 2000 mL?

 Do not wait for severe haemorrhage.

The aim is to involve the senior obstetric, anaesthetic, haematology/transfusion and other relevant teams early, before the woman deteriorates further.

Important exam distinction

500 mL = PPH

>1000 mL = major PPH → escalate to senior multidisciplinary team

>2000 mL = severe major PPH

Q18.

☒ Answer: E. Urine of an infected child

Why?

CMV is transmitted through infected body fluids, especially urine and saliva. Young children are important reservoirs because they can shed CMV in urine and saliva for prolonged periods. This makes women who work closely with young children—such as teachers and childcare workers—an important risk group.

Among the options, urine from an infected child is the best answer.

Why not respiratory droplets?

CMV is not primarily transmitted by respiratory droplets. Direct contact with infected secretions is the important route.

MRCOG pearl

Pregnant woman + young children → think CMV in urine and saliva.

Q19.

☒ Answer: E. Third trimester

Why?

The probability of vertical transmission of CMV increases as gestation advances.

Timing of primary maternal CMV infection

Vertical transmission

Periconception

~21%

1st trimester

~37%

2nd trimester

~40%

3rd trimester

~66%

 Important distinction for exams

Do not confuse transmission rate with severity of fetal disease.

Early infection → lower transmission but greater fetal damage

Late infection → higher transmission but generally less severe fetal sequelae

For example, the pooled rate of fetal insult when infection occurs in the first trimester was much higher than after infection in the third trimester.

Easy memory

CMV transmission goes UP with gestational age.

CMV severity goes DOWN with gestational age.

Q20.

 Answer: C. Preterm delivery

Why?

A history of cancer treatment, including treatment for Hodgkin lymphoma, is associated with an increased risk of some adverse pregnancy outcomes. Among the options, the classic association being tested is preterm delivery.

The important point is that she has completed chemotherapy before conception. Therefore, this is not the same as chemotherapy exposure during the first trimester, where direct fetal toxicity and congenital malformations would be a major concern.

Why not congenital malformations?

Chemotherapy completed before pregnancy does not expose the developing embryo to the drug during organogenesis. Therefore, congenital malformations are not the best answer.

Why not stillbirth?

Stillbirth is not the characteristic association being tested here.

Exam pearl

Previous Hodgkin lymphoma treatment → pregnancy generally possible, but increased risk of preterm birth.

Q21.

✓ Answer: B. Increase fluid and salt intake

Why?

POTS is characterized by an excessive rise in heart rate on standing, often because of reduced effective circulating volume and abnormal autonomic regulation.

The first-line approach in pregnancy is non-pharmacological treatment:

- * Increase fluid intake — commonly around 2–3 L/day.
- * Increase salt/sodium intake, provided there is no contraindication such as hypertension.
- * Compression stockings can help venous return.
- * Appropriate exercise can improve conditioning.

These measures increase plasma volume and reduce orthostatic symptoms. Current pregnancy-focused POTS recommendations emphasize increased fluid and salt intake as conservative management.

Why not the others?

- * A. Increase caffeine ✗ — caffeine can worsen tachycardia and may contribute to volume depletion.
- * C. Increase fluid only ✗ — fluid plus salt is more effective because sodium promotes fluid retention.
- * D. Compression stockings — useful, but fluid and salt loading are generally the fundamental first measures.
- * E. Aerobic exercise — useful as part of management, but not the best single answer here.

📌 Memory:

POTS in pregnancy → Water + Salt + Compression + Exercise.

Q22.

✓ Answer: D. A single 4 g IV infusion over 30 minutes, followed by 1 g/hour until delivery

Why?

Magnesium sulfate is given to women at very preterm gestations who are likely to deliver soon because it reduces the risk of cerebral palsy and severe neurological injury in surviving preterm infants.

For fetal neuroprotection, the standard regimen is:

Loading dose: 4 g IV

→ administered over approximately 15–30 minutes

Maintenance: 1 g/hour IV

→ continued until birth, usually with a maximum duration specified by the local protocol.

NICE recommends offering magnesium sulfate for neuroprotection when preterm birth is established or planned at very preterm gestations; the standard regimen is a 4-g IV loading dose followed by 1 g/hour.

Why is 29+4 important?

She is <30 weeks, which is a gestational age at which magnesium sulfate for neuroprotection is clearly indicated when birth is expected imminently.

Why not 1 g loading?

✗ Too small a loading dose.

Why not 4 g/hour?

✗ The 4 g is the loading dose, not the maintenance dose.

Easy memory

MgSO₄ neuroprotection = 4 g load → 1 g/hour maintenance

⚠ Don't confuse this with magnesium sulfate used for eclampsia, where the regimen and clinical indication are different.

Q23.

✅ Answer: B. 16 weeks

Why?

Monochorionic twins share a placenta and therefore have vascular connections between their circulations.

These vascular anastomoses can result in TTTS, where:

- * One twin becomes the donor
- * The other becomes the recipient

TTTS is therefore a complication specifically associated with monochorionic pregnancies.

Surveillance

NICE recommends:

Ultrasound surveillance from 16 weeks, every 2 weeks until birth.

At these scans assess:

- * Amniotic fluid in both sacs
- * Bladder visibility
- * Fetal growth/biometry
- * Other complications of monochorionicity

The current RCOG Green-top guidance likewise recommends ultrasound screening for TTTS from 16+0 weeks at 2-weekly intervals.

Why not 12–14 weeks?

The first-trimester scan is important for determining chorionicity, but routine TTTS surveillance does not start at this stage.

Why not 20 or 24 weeks?

✗ Waiting until 20–24 weeks would delay detection. TTTS can develop relatively early, so surveillance begins at 16 weeks.

🧠 High-yield twin rule

Monochorionic twins → TTTS surveillance

Start: 16 weeks

Frequency: every 2 weeks

Continue: until birth

Q24.

Answer: B. 4 mmol/L

Why?

In suspected sepsis, serum lactate is a marker of tissue hypoperfusion and severity of illness.

A lactate of ≥ 4 mmol/L is particularly concerning and indicates significant tissue hypoperfusion. It should prompt urgent assessment and aggressive management of sepsis, including:

- * Immediate antibiotics
- * IV fluid resuscitation
- * Close monitoring of vital signs and urine output
- * Identification and control of the source of infection
- * Reassessment of lactate and clinical response

Why not 2 mmol/L?

A lactate of 2 mmol/L is not necessarily normal, but it is much less concerning than ≥ 4 mmol/L.

MRCOG point

Suspected sepsis + lactate ≥ 4 mmol/L $\rightarrow$ severe physiological disturbance $\rightarrow$ urgent resuscitation and senior involvement.

Exam memory: Lactate 4 = red flag.

Q25.

Answer: A. Exomphalos/omphalocele

The key phrase is:

“Herniation of the gut with the umbilical cord inserted at the centre of the hernia sac.”

This is classic omphalocele (exomphalos).

Omphalocele

In omphalocele, abdominal contents herniate through the umbilical ring and are covered by a membranous sac.

The umbilical cord inserts into the apex/centre of the sac.

Contents may include:

- * Bowel
- * Liver
- * Stomach

It is also associated with chromosomal abnormalities and other congenital anomalies.

Feature

Omphalocele

Gastroschisis

Location

Midline, at umbilicus

Usually right of umbilicus

Covering

Sac present

No sac

Cord insertion

Into the sac

Separate, normal insertion

Liver may herniate

Yes

Usually no

Chromosomal anomalies

More associated

Much less associated

Therefore, central hernia sac + cord insertion into the sac = omphalocele.

Why not physiological hernia?

Physiological midgut herniation occurs normally around 6–10 weeks and should resolve by approximately 11–12 weeks. At 11 weeks, the finding described as a definite hernia sac with central cord insertion points toward omphalocele.

Q26. Answer: A. Combined test (maternal age + NT + biochemistry)

At 13+4 weeks, the woman is within the appropriate window for first-trimester combined screening.

The combined test uses:

1. Maternal age
2. Nuchal translucency (NT)
3. Maternal serum biochemical markers, principally:
 - * β -hCG
 - * PAPP-A

These are combined to calculate the risk of trisomy 21, 18 and 13.

Why is this preferable?

It provides a much better risk assessment than NT alone because it combines several independent markers.

Advanced maternal age, such as 41 years, increases the prior risk of trisomy 21, but age alone is not a sufficient screening test.

Why not the other options?

- * B. NT + biochemical tests in first and second trimesters ❌

This is not the standard first-line combined approach when she is already within the first-trimester screening window.

- * C. NT measurement alone ❌

Less effective than the combined test.

- * D. Triple test ❌

A second-trimester screening test and therefore not the preferred test at 13+4 weeks.

- * E. Quadruple test ❌

Also a second-trimester screening approach.

🧠 MRCOG memory

11–14 weeks → Combined test

NT + PAPP-A + β -hCG + maternal age

Second trimester → Quadruple test if first-trimester screening wasn't performed.

Q27. Answer: C. Decreased renal glomerular filtration

Explanation

Pregnancy causes major physiological changes in the kidneys.

- * GFR increases by approximately 40–50%.
- * Renal plasma flow also increases.
- * This increased GFR contributes to lower serum creatinine and urea levels during pregnancy.
- * The ureters and renal pelvis dilate because of progesterone and mechanical compression by the enlarging uterus.

Therefore, decreased GFR is incorrect.

Other options

- * A. Vasodilatation ✅ — systemic vascular resistance decreases.
- * B. Increased tidal volume ✅ — tidal volume increases by about 30–40%.
- * D. Darkening of the skin on the cheeks ✅ — facial pigmentation/melasma can occur due to increased melanocyte stimulation.

MRCOG pearl:

👉 Pregnancy = ↑ GFR, ↓ serum creatinine.

Q28. Answer: C. 40%

Explanation

Maternal blood volume progressively increases during pregnancy, reaching approximately 40–50% above the non-pregnant level.

The increase consists of:

- * Plasma volume: approximately 40–50%

* Red cell mass: approximately 20–30%

Because plasma volume increases proportionally more than red-cell mass, there is physiological haemodilution.

This produces:

Physiological anaemia of pregnancy

Why is this important?

The increased blood volume provides a reserve for the blood loss that normally occurs during delivery and supports the increased circulation to the uterus, placenta and kidneys.

Memory:

👉 Blood volume ↑ ~40%

Q29. Answer: A. Decrease in urine flow through the collecting system

Explanation

Pregnancy produces significant urinary tract changes.

There is:

- * ↑ Renal blood flow
- * ↑ GFR
- * Dilatation of renal pelvis and ureters
- * Slower urinary flow / urinary stasis

Progesterone relaxes smooth muscle, while the enlarging uterus can compress the ureters, particularly on the right side.

This urinary stasis increases the risk of:

- * Bacteriuria
- * Urinary tract infection
- * Pyelonephritis

Why the other options are wrong?

B. Decrease in GFR ❌

GFR increases by around 40–50%.

C. Decrease in creatinine clearance ❌

Creatinine clearance increases because GFR increases.

D. Decrease in kidney size ❌

There may actually be a small increase in renal size during pregnancy.

Key concept:

👉 Pregnancy → ↑ GFR + ↑ renal blood flow + urinary tract dilatation + urinary stasis.

Q30. Answer: D. Reduced red blood cell mass

Explanation

Pregnancy is a hypercoagulable state and produces several haematological changes.

Normal changes

1. Hypercoagulability

There is increased activity of several clotting factors and reduced fibrinolysis.

This helps reduce bleeding at delivery but increases the risk of venous thromboembolism (VTE).

2. Leukocytosis

White blood cell count commonly increases during pregnancy, particularly neutrophils.

3. Anaemia

Physiological anaemia occurs because:

Plasma volume ↑ more than red-cell mass.

4. Red-cell mass actually increases

Absolute red-cell mass increases, usually by approximately 20–30%, particularly with adequate iron availability.

However, because plasma volume rises much more, the haemoglobin concentration and haematocrit fall.

Therefore, “reduced red blood cell mass” is the incorrect statement.

Exam trap

Don't confuse:

↓ Hb concentration ≠ ↓ absolute RBC mass

Q31. Answer: B. Progesterone

Explanation

Progesterone relaxes gastrointestinal smooth muscle.

This causes:

- * ↓ Gastrointestinal motility
- * Delayed gastric emptying
- * Slower intestinal transit
- * Increased constipation
- * Relaxation of the lower oesophageal sphincter → heartburn/reflux
- * Reduced gallbladder contractility → biliary stasis

This is why constipation, reflux and gallbladder-related problems are more common during pregnancy.

Why not the others?

- * Human placental lactogen ✗ — mainly affects maternal metabolism and insulin resistance.
- * Oestrogen ✗ — has many reproductive and vascular effects but is not the principal cause of GI smooth-muscle relaxation.
- * Parathyroid hormone ✗ — primarily regulates calcium metabolism.

Q32. Answer: D. Elevated TBG, no change in free T₃ and free T₄

Explanation

During pregnancy, oestrogen increases hepatic production of thyroid-binding globulin (TBG).

Therefore:

- * ↑ TBG
- * ↑ Total T₄ and total T₃
- * But free T₄ and free T₃ remain essentially within the normal range after the initial adjustment.

So a pregnant woman can have an elevated total T₄ without being hyperthyroid.

What happens to TSH?

In early pregnancy, hCG has a weak TSH-like effect, so TSH may fall slightly, particularly during the first trimester.

Why the other options are wrong?

- * A. Decreased TBG ✗ — TBG increases.
- * B. Decreased TBG + elevated total T_3/T_4 ✗.
- * C. Elevated TBG with no change in total T_3/T_4 ✗ — total thyroid hormones increase because more are protein-bound.

 Remember

Pregnancy $\rightarrow$ $\uparrow$ oestrogen $\rightarrow$ $\uparrow$ TBG $\rightarrow$ $\uparrow$ total T_3/T_4 , while free hormones remain approximately normal.

Q33. Answer: D. Iron, calcium and iodide

These are particularly important because pregnancy substantially increases requirements for iron, calcium and iodine.

1. Iron

Required for:

- * Increased maternal red-cell mass
- * Placental development
- * Fetal red-cell production

Iron deficiency can cause iron-deficiency anaemia.

2. Calcium

Important for:

- * Fetal skeletal development
- * Maternal bone metabolism
- * Neuromuscular function

3. Iodine

Essential for production of thyroid hormones, which are crucial for fetal:

- * Brain development
- * Neurological development
- * Growth

Why not sodium?

Sodium is essential, but it is not one of the three key micronutrients traditionally emphasized in pregnancy nutrition in this context.

MRCOG memory:

👉 Pregnancy minerals = Iron + Calcium + Iodine

Q34. Answer: A. The mother has specific immune defects, including impaired resistance to chickenpox (varicella virus)

Explanation

Pregnancy produces complex immunological changes rather than simply causing global immunosuppression.

There is particularly an alteration in cell-mediated (Th1) immunity, which helps maintain tolerance to the fetus.

This can make pregnant women more susceptible to, or more severely affected by, certain infections, including varicella.

Why the other options are wrong?

B. The mother is protected from all viral diseases ❌

Pregnancy does not protect against viral infections. Some viral infections can actually be more severe during pregnancy.

C. Placenta increases expression of classical MHC class I and II transplantation antigens ❌

The placenta has specialised mechanisms to avoid maternal immune rejection. Trophoblasts do not simply express classical MHC molecules like a normal transplant.

D. Transfer of maternal IgG to fetus is inhibited throughout pregnancy ❌

This is the opposite of what happens.

Maternal IgG crosses the placenta, particularly during the third trimester, providing passive immunity to the newborn.

🧠 High-yield point

Maternal IgG → crosses placenta → fetal/neonatal passive immunity.

Q35. Answer: D. Secure airway and keep in recovery position

The woman has:

- * 35 weeks' pregnancy
- * Hypertension 150/100 mmHg
- * Proteinuria
- * Tonic-clonic seizure

This is eclampsia until proven otherwise.

What is the immediate priority?

During an eclamptic seizure, follow the ABC approach.

Step 1 — Airway

Protect and maintain the airway and prevent aspiration.

Place her in the left lateral/recovery position.

Step 2 — Breathing

Assess oxygenation and give oxygen as required.

Step 3 — Circulation

Assess pulse and blood pressure and establish IV access.

After initial ABC stabilization:

Then give magnesium sulfate

Magnesium sulfate is the drug of choice to prevent/reduce recurrent eclamptic seizures.

The next priorities include:

- * Magnesium sulfate
- * Control severe hypertension if present
- * Blood investigations
- * Continuous maternal/fetal monitoring
- * Delivery once the mother is stabilized

Why not caesarean section first?

A. Caesarean section ❌

Delivery is ultimately required because eclampsia is a pregnancy-related condition, but you do not perform a caesarean before stabilizing the mother.

Why not IV hydralazine first?

B. Hydralazine ❌

Antihypertensive treatment is important when severe hypertension is present, but the immediate emergency priority during an active seizure is ABC and seizure control.

Why not call the consultant first?

C. Inform obstetric consultant ❌

Senior help should certainly be called, but life-saving ABC management comes first.

Q36. Answer: C. Antenatal Day Unit assessment with BP profile, PET bloods, urine analysis, CTG, and serial fetal surveillance

Why?

This woman has two important findings:

1. Possible gestational hypertension
 - * BP = 140/90 mmHg
 - * Trace proteinuria alone does not establish significant proteinuria/pre-eclampsia.
2. Suspected fetal growth restriction (FGR)
 - * Abdominal circumference (AC) is at the 5th centile.
 - * However, liquor volume and umbilical artery Doppler are currently normal.

Therefore, she needs close maternal and fetal surveillance, but there is no indication for immediate delivery.

What should be monitored?

Maternal:

- * Serial BP
- * Urine protein assessment
- * PET bloods: FBC, renal and liver function

Fetal:

- * CTG when indicated
- * Repeat ultrasound for growth/liquor
- * Umbilical artery Doppler
- * Continued surveillance for deterioration

Why not deliver immediately?

B. Deliver within 24–48 hours ❌

At 34 weeks, immediate delivery is not automatically required when:

- * Umbilical artery Doppler is normal
- * Amniotic fluid is normal
- * There is no severe hypertension
- * There is no severe maternal disease
- * Fetal monitoring is reassuring

The aim is to continue pregnancy safely while monitoring closely.

Why not steroids/admission?

A. Admit and administer steroids ❌

Steroids may be considered if preterm delivery is anticipated, but this woman does not currently have an indication for immediate delivery.

🧠 MRCOG pearl

FGR + normal Doppler + reassuring fetal assessment → surveillance rather than immediate delivery.

Q37. Answer: C. CRL — crown-rump length

The measurements given are:

- * CRL = 90 mm
- * HC = 120 mm
- * BPD = 36 mm
- * FL = 20 mm
- * AC = 98 mm

The question says that the woman is unsure of her dates.

Why CRL?

Crown-rump length (CRL) is the most accurate ultrasound measurement for pregnancy dating in the first trimester.

It is particularly used from approximately 6 to 13+6 weeks.

CRL has less biological variation than later fetal measurements, so it provides the most reliable estimate of gestational age early in pregnancy.

Why not HC/BPD/AC/FL?

These measurements become more useful for dating later in pregnancy, but they are affected more by individual fetal growth variation.

- * BPD → head width
- * HC → head circumference
- * AC → abdominal circumference
- * FL → femur length

These are particularly useful for growth assessment in the second and third trimesters.

🧠 Easy memory

First trimester → CRL for dating

Second/third trimester → HC/BPD/AC/FL mainly for growth assessment

Q38. Answer: D. FGM type 3

What is described?

The woman is from Somalia and is described as having infibulation.

Type

Description

Type 1

Partial/total removal of clitoris and/or prepuce

Type 2

Removal of clitoris + labia minora, with/without labia majora

Type 3

Infibulation — narrowing of vaginal opening by cutting and apposition/sealing of labia

Type 4

Other harmful procedures, e.g. pricking, piercing, cauterisation, etc.

Why Type 3?

Infibulation involves removal and/or alteration of the external genitalia followed by narrowing/sealing of the vaginal opening.

It is particularly associated with parts of East Africa, including Somalia.

Important obstetric point

Women with FGM type 3 may have:

- * Difficult vaginal examination
- * Difficult catheterisation
- * Obstructed labour
- * Increased risk of perineal trauma
- * Need for deinfibulation

Deinfibulation may be required to open the scar tissue and facilitate vaginal examination, labour and delivery.

Q39. Answer: B. 3a degree

Explanation

Obstetric anal sphincter injuries (OASIS) are classified as follows:

Degree

Injury

1st

Perineal skin only

2nd

Perineal muscles, anal sphincter intact

3a

<50% of external anal sphincter (EAS) torn

3b

>50% of EAS torn

3c

EAS + internal anal sphincter (IAS) torn

4th

EAS + IAS + rectal mucosa torn

⚠ Important: The image says “more than 50% of the external anal sphincter”, so the correct answer should actually be 3b, not 3a.

Therefore:

Correct answer: C. 3b degree

If the answer key in the document marks B (3a), the key appears to be incorrect.

🧠 Memory

3a = <50%

3b = >50%

3c = IAS involved

4 = rectal mucosa involved

Q40. Answer: B. Occipito-frontal

Explanation

In a normal well-flexed vertex presentation, the presenting AP diameter is:

Suboccipito-bregmatic = 9.5 cm

But in an occipito-posterior (OP) position, the fetal head is often less well flexed/deflexed.

This increases the AP diameter that presents to the pelvis.

The occipito-frontal diameter = approximately 11.5 cm.

Therefore, with a deflexed OP head, the relevant presenting diameter is occipito-frontal (11.5 cm).

 Memory

Flexed vertex → 9.5 cm

Deflexed OP → 11.5 cm

Q41. Answer: E. Place her in the McRoberts position

Diagnosis: Shoulder dystocia

The key clue is:

The head is delivered but then retracts against the perineum — the “turtle sign.”

This is classic for shoulder dystocia, usually because the anterior shoulder is impacted behind the maternal pubic symphysis.

First manoeuvre: McRoberts

The McRoberts manoeuvre involves:

- * Hyperflexing the mother’s hips
- * Bringing the knees towards the chest
- * This straightens the maternal lumbosacral angle
- * Rotates the pelvis and increases the functional pelvic dimensions
- * Helps dislodge the anterior shoulder

It is the first-line manoeuvre for shoulder dystocia.

Why not the other options?

A. Suprapubic pressure ❌

Useful, but generally performed after/alongside McRoberts, not as the first manoeuvre.

B. Deliver posterior arm ✗

An effective second-line manoeuvre if McRoberts and suprapubic pressure fail.

C. All fours ✗

The Gaskin manoeuvre can be useful, particularly when the woman is able to change position, but McRoberts is the standard initial manoeuvre.

D. Episiotomy ✗

An episiotomy does not relieve the bony obstruction caused by the impacted shoulder. It may be performed to facilitate internal manoeuvres.

 Shoulder dystocia sequence

Turtle sign → Call for help → McRoberts → Suprapubic pressure → Internal manoeuvres (e.g. posterior arm/rotational manoeuvres) → all-fours if appropriate → last-resort manoeuvres.

Q42. Answer in the MCQ: A. Mifepristone 200 mg + misoprostol 50 µg 4-hourly, maximum 5 doses

Why?

At 26 weeks with intrauterine fetal death, medical induction is appropriate after counselling.

Mifepristone is given first because it blocks progesterone action and promotes cervical ripening and uterine responsiveness to prostaglandins.

Misoprostol is then used to produce uterine contractions.

Important current-guideline point

The current RCOG Green-top Guideline No. 55 recommends:

- * Mifepristone 200 mg once
- * At 25+0 to 27+6 weeks: misoprostol 200 micrograms every 4 hours.

So the 50 µg regimen in this older question is not the current RCOG recommendation.

Exam point: For this particular question, follow the provided answer key, but for current clinical practice remember 26 weeks → 200 µg misoprostol 4-hourly after 200 mg mifepristone.

Q43. Answer in the MCQ: A. After 3 months**Explanation**

Tamoxifen is a selective estrogen receptor modulator used for hormone-receptor-positive breast cancer.

It has a long half-life and active metabolites, so pregnancy should not be attempted immediately after stopping treatment.

The older exam recommendation is to wait 3 months after stopping tamoxifen before attempting conception.

Current information

Current patient guidance commonly recommends at least 2 months after stopping tamoxifen to allow the drug to leave the body, with the exact timing individualized with the oncology team.

Therefore:

For this MCQ: A — 3 months.



Remember

Tamoxifen → stop → washout period → then pregnancy.

Q44. Answer: C. Liver function test (LFT)**Explanation**

Several anti-TB drugs can cause hepatotoxicity, particularly:

- * Isoniazid
- * Rifampicin
- * Pyrazinamide

Therefore, liver function needs monitoring.

The important tests include:

- * ALT/AST
- * Bilirubin
- * Other liver biochemical parameters as clinically indicated.

Pregnancy itself is an important consideration when monitoring TB therapy because of the risk of drug-induced liver injury. Current CDC guidance recommends laboratory assessment in pregnant patients receiving latent-TB treatment when indicated and emphasizes monitoring for adverse effects.

Why not the others?

- * Clotting screen ✗ — not routinely required monthly.
- * Full blood count ✗ — not the key toxicity being tested here.
- * Mantoux test ✗ — diagnoses TB infection; it does not monitor treatment toxicity.
- * Renal function ✗ — important with some drugs/situations, but hepatotoxicity is the major routine concern in this context.

 Exam pearl

Anti-TB drugs → think LIVER → monitor LFTs.

Q45. Answer: D. ST elevation

The options shown are:

- A. Newly developed Q wave
- B. New ST-wave
- C. ST depression
- D. ST elevation

Why ST elevation?

New ST-segment elevation in appropriate contiguous leads is the classic ECG finding of an acute ST-elevation myocardial infarction (STEMI).

Current ESC guidance considers persistent ST elevation the key initial ECG finding for the working diagnosis of STEMI, and the ECG should be obtained and interpreted rapidly in suspected ACS.

Why not Q waves?

Q waves generally develop later and are more strongly associated with established/prior myocardial necrosis. They are not the best early ECG marker of an acute evolving MI.

Why not ST depression?

ST depression indicates myocardial ischemia and can occur in NSTEMI or as a reciprocal change, but it is not the classic ECG pattern for STEMI.

 Easy memory

Acute coronary occlusion → ST elevation → STEMI → urgent reperfusion.

Q46. Answer: E. Polymorphic eruption of pregnancy (PEP/PUPPP)

- * Typically occurs in the third trimester, especially in primigravidas.
- * Presents with intensely itchy erythematous papules/plaques.
- * Characteristically begins in the abdominal striae (stretch marks).
- * It usually spares the umbilicus.
- * Maternal and fetal prognosis is generally good.

Why not pemphigoid gestationis?

- * Pemphigoid gestationis often involves the umbilicus and may progress to vesicles/bullae.
- * It is an autoimmune blistering disorder.

Exam clue:

👉 Primigravida + 3rd trimester + itching + rash in abdominal striae = PUPPP/PEP

Q47. Answer: E. Renal hypoperfusion

The fetus has fetal growth restriction (FGR) due to placental insufficiency.

Mechanism:

Placental insufficiency → fetal hypoxia → redistribution of blood flow to vital organs → reduced renal perfusion → reduced fetal urine production → oligohydramnios

After the fetal circulation prioritizes the brain and heart, the kidneys receive less blood. Since fetal urine is the major contributor to amniotic fluid in the second half of pregnancy, urine production falls and oligohydramnios develops.

Why not renal agenesis?

- * Renal agenesis can cause severe oligohydramnios, but it would not explain the overall picture of FGR + abnormal umbilical artery Doppler due to placental insufficiency.

Exam clue:

👉 FGR + abnormal UA Doppler + oligohydramnios = placental insufficiency → renal hypoperfusion → ↓ fetal urine

Q48. Answer: A. Explain that the risk of malformation is low and recommend continuation

- * Fluoxetine is an SSRI and is commonly used during pregnancy when clinically indicated.
- * Available evidence does not show a major increase in overall congenital malformations with first-trimester fluoxetine exposure.

- * Importantly, she is currently well controlled on treatment.
- * Abruptly stopping antidepressant therapy can cause relapse of depression, which itself can adversely affect pregnancy and maternal wellbeing.

Therefore, the benefit of continuing effective treatment generally outweighs the relatively small potential fetal risks.

Why not stop immediately?

- * Abrupt discontinuation can cause withdrawal/discontinuation symptoms and, more importantly, recurrence of major depression.

Exam clue:

👉 Pregnant + stable on effective antidepressant + low teratogenic risk = usually continue after individualized risk–benefit discussion.

Q49. Answer: B. Advise that breastfeeding is safe. 

Why?

- * Deferoxamine is an iron-chelating agent used for iron overload in transfusion-dependent β -thalassaemia major.
- * It has very poor oral absorption, so even if a small amount enters breast milk, the infant is unlikely to absorb clinically significant amounts.
- * Limited clinical reports describe mothers receiving deferoxamine while breastfeeding without adverse effects in their infants.
- * Therefore, breastfeeding can be allowed while the mother is receiving deferoxamine, with appropriate clinical monitoring.

Why the other options are wrong:

- * A. Advise against breastfeeding  — unnecessary for deferoxamine.
- * C. Change to another chelator  — no need when deferoxamine is compatible with breastfeeding.
- * D. Continue but emphasize risk  — implies a significant established risk that is not supported.
- * E. Stop medication and breastfeed  — stopping essential iron-chelation therapy may expose the mother to worsening iron overload.

👉 Exam pearl:

Deferoxamine → compatible with breastfeeding.

**Q50. Answer: D. 42 days (6 weeks) **

The woman is:

- * Primigravida
- * Homozygous for Factor V Leiden
- * Has a first-degree relative (mother) with pregnancy-related VTE

Homozygous Factor V Leiden is considered a high-risk thrombophilia. RCOG guidance recommends postpartum LMWH prophylaxis for 6 weeks for women with asymptomatic high-risk thrombophilia such as homozygous Factor V Leiden.

Why 6 weeks?

The postpartum period is a particularly high-risk period for venous thromboembolism. The risk remains substantially increased during the first 6 weeks after delivery, so prophylaxis is continued throughout this period.

Options:

- * 10 days 
- * 14 days 
- * 28 days (4 weeks) 
- * 42 days (6 weeks) 
- * 84 days (12 weeks) 

★ Easy MRCOG memory

High-risk thrombophilia → 6 weeks postpartum LMWH

Examples include:

- * Homozygous Factor V Leiden
- * Compound thrombophilia
- * Protein C deficiency
- * Protein S deficiency
- * Antithrombin deficiency

RCOG specifically recommends 6 weeks' postnatal prophylaxis for asymptomatic high-risk thrombophilia, while lower-risk thrombophilias may have shorter prophylaxis depending on additional risk factors.

PAPER 8 ANSWER

Q1. Answer: A. Escherichia coli

E. coli is the commonest cause of maternal bacterial infection and a major cause of maternal sepsis, particularly because urinary tract infections are common in pregnancy.

- * Pregnancy predisposes to urinary stasis and ascending UTI.
- * E. coli is the predominant uropathogen.
- * It can cause pyelonephritis → bacteraemia → sepsis.

Important distinction for exams:

- * E. coli = commonest bacterial cause of maternal sepsis/infection
- * Group A Streptococcus (S. pyogenes) = particularly important cause of severe sepsis and maternal death, because it can deteriorate very rapidly.

👉 Exam clue: “most common” → E. coli.

Q2. Answer: B. Cell-free fetal DNA in maternal blood for fetal genotype

The woman is RhD-negative with an anti-D antibody, and her partner is heterozygous RhD-positive.

The important question is: Is the current fetus RhD-positive or RhD-negative?

If the fetus is RhD-negative, there is no RhD antigen for maternal anti-D to attack, so the fetus is not at risk of RhD-mediated HDFN.

Cell-free fetal DNA from maternal blood can be used to determine the fetal RhD genotype non-invasively. This avoids an invasive procedure such as CVS when it isn't necessary. RCOG guidance emphasizes determining whether the fetus carries the relevant antigen and then monitoring pregnancies at risk.

If the fetus is RhD-positive and the antibody level is significant, surveillance involves MCA peak systolic velocity (MCA-PSV). An MCA-PSV >1.5 MoM suggests significant fetal anaemia and requires fetal-medicine assessment.

Why not the other options?

- * A. CVS ✗ — invasive and unnecessary if fetal genotype can be determined from maternal blood.
- * C. Serial MCA Doppler immediately ✗ — first establish whether the fetus carries the antigen and whether surveillance criteria are met.
- * D. Weekly antibody titres ✗ — antibody monitoring is not done weekly as the first step.
- * E. Ultrasound for hydrops ✗ — hydrops is a late manifestation of severe fetal anaemia; MCA-PSV is much more useful for detecting anaemia.

👉 Memory:

Maternal anti-D + heterozygous RhD-positive father → determine fetal RhD genotype first.

Q3. Answer: A. Arrange detailed scan with fetal medicine after 5 weeks ✓

Chickenpox in pregnancy can cause fetal varicella syndrome, although the absolute risk is relatively low.

At 18 weeks, the pregnancy is within the period when fetal complications can occur. Importantly, ultrasound abnormalities do not appear immediately after maternal infection.

Therefore, a detailed ultrasound is arranged after an appropriate interval, typically around 5 weeks after infection, to look for features such as:

- * Fetal growth restriction
- * Limb abnormalities
- * Microcephaly
- * Intracranial abnormalities
- * Abnormalities of the eyes
- * Hepatic abnormalities

Why not aciclovir?

- * Aciclovir may be considered depending on timing/severity and should be started early when indicated, but in this question the woman is presenting 3 days after the rash was first noticed and is already 18 weeks pregnant, with the question focusing on fetal assessment.
- * The key exam point is the delayed detailed fetal ultrasound.

Why not amniocentesis? ✗

Routine amniocentesis is not the first-line assessment for fetal varicella syndrome.

👉 Exam pearl:

Maternal chickenpox → detailed ultrasound about 5 weeks later.

Q4. Answer: A. 1:2 (50%) 

This is an important genetics question.

β -thalassaemia is autosomal recessive.

Let's represent the genes:

- * Woman with β -thalassaemia trait = $A\beta$
- * Husband with β -thalassaemia major = $\beta\beta$

father)

β (father)

A (mother)

$A\beta$

$A\beta$

β (mother)

$\beta\beta$

$\beta\beta$

Very important inheritance shortcut

Trait $\times$ Trait ($A\beta \times A\beta$):

- * 25% normal
- * 50% carrier
- * 25% affected

Major $\times$ Trait ($\beta\beta \times A\beta$):

- * 50% carrier
- * 50% affected

Therefore, Q4 = 1:2.

Q5. Correct answer: C. $\geq 1:20$ (5%)

This woman has had a previous uterine rupture during her second pregnancy. The important point is that a previous uterine rupture markedly increases the risk of recurrent uterine rupture during labour.

- * General risk of rupture with one previous uncomplicated CS in spontaneous VBAC: about 0.5% (1 in 200).
- * After a previous uterine rupture, the risk is approximately 5% (1 in 20).
- * Therefore, previous uterine rupture is considered a contraindication to planned VBAC in standard RCOG guidance.

Exam pearl:

Previous uterine rupture $\rightarrow$ recurrent rupture risk $\approx 5\% = 1:20 \rightarrow$ VBAC contraindicated.

Q6. Correct answer: A. Previous vaginal delivery

A history of previous vaginal birth, particularly a previous successful VBAC, is the strongest predictor of successful VBAC.

Why?

A woman who has previously delivered vaginally has demonstrated that:

- * Her pelvis can accommodate a fetus.
- * Her uterus can contract effectively.
- * Vaginal delivery is physiologically achievable for her.

Previous vaginal delivery is associated with substantially higher VBAC success rates; previous successful VBAC can have success rates around 85–90%.

Other factors can also influence VBAC success, such as the indication for the previous CS, maternal BMI, age and spontaneous onset of labour, but previous vaginal delivery is the best predictor among the options given.

Exam pearl:

Previous vaginal delivery = strongest predictor of successful VBAC.

Q7. Correct answer: D. 60% and 70%

The question asks for the estimated reduction in VTE risk with low-molecular-weight heparin (LMWH) in:

- * Medical patients $\rightarrow \sim 60\%$ reduction
- * Surgical patients $\rightarrow \sim 70\%$ reduction

Therefore:

D. 60% and 70%

The exact question and answer options are reproduced in MRCOG revision material, with 60% and 70% as the keyed answer.

Q8. Correct answer: C. In the first 3 weeks postpartum

The risk of VTE rises throughout pregnancy but becomes highest immediately after delivery, particularly during the early puerperium. RCOG notes that the risk is higher postpartum than antenatally, with the highest risk just after birth.

Why?

Pregnancy produces a hypercoagulable state to protect against haemorrhage at delivery. After delivery there is additionally:

- * Sudden changes in coagulation factors
- * Venous stasis
- * Reduced mobility
- * Tissue injury from delivery/caesarean section

Therefore, the postpartum period is the most thrombogenic period.

Exam pearl:

VTE risk: highest immediately postpartum → particularly the first few weeks.

Q9. Answer given in the book: B. Start LMWH from 28 weeks until 6 weeks postpartum.

The important part is to count the VTE risk factors.

She has:

- * Age >35 years → risk factor
- * Parity ≥ 3 → risk factor
- * Smoking → risk factor
- * IVF pregnancy → risk factor
- * BMI 29 → not a BMI ≥ 30 risk factor

The RCOG approach uses the number and type of risk factors to determine when prophylaxis should start. The original MRCOG question is from a revision guide and gives B as the answer.

Why 6 weeks postpartum?

The postpartum period carries a particularly high VTE risk. When antenatal prophylaxis is indicated in this risk category, continuing it for 6 weeks after delivery is appropriate in the question's RCOG-based framework. RCOG also recommends 6 weeks of postnatal prophylaxis for women with previous VTE and other high-risk situations.

Exam pearl:

Multiple moderate risk factors → consider LMWH according to the RCOG risk-assessment threshold; 6 weeks postpartum is the important postnatal duration for higher-risk women.

Q10. Correct answer: C. Higher-dose LMWH until 6 weeks postpartum or until warfarin is re-commenced.

This is the most important question of the three.

She has:

- * Previous DVT
- * Heterozygous Factor V Leiden
- * Was previously taking warfarin
- * Is now pregnant

The GP has appropriately changed her from warfarin to LMWH because warfarin crosses the placenta and can cause fetal harm. LMWH is preferred during pregnancy.

Why higher-dose LMWH?

A woman with previous VTE who was receiving long-term oral anticoagulation is considered very high risk.

RCOG recommends:

Higher-dose LMWH (50%, 75% or full treatment dose) antenatally and for 6 weeks postpartum, or until she is changed back to oral anticoagulation.

Therefore, simply continuing the standard prophylactic dose of 5000 IU is not sufficient for this high-risk situation.

Why “or until warfarin is re-commenced”?

After delivery, warfarin can be restarted. Once therapeutic oral anticoagulation is established, LMWH can be stopped.

So:

Pregnancy → higher-dose LMWH

↓

Delivery

↓

Continue LMWH postpartum

↓

Restart warfarin

↓

Stop LMWH once adequately anticoagulated

RCOG specifically states that women at very high risk should receive higher-dose LMWH for 6 weeks postpartum or until they return to oral anticoagulant therapy.

Q11. Correct answer: B. 2–6%

Only a small proportion of pregnant women who are investigated for suspected PE actually have confirmed PE. The estimated prevalence is around 2–6%.

This is important because symptoms such as breathlessness, tachycardia and leg discomfort can occur normally in pregnancy, so many women undergo investigation but most do not have PE.

Exam pearl:

Suspected PE in pregnancy → confirmed PE $\approx$ 2–6%.

Q12. Correct answer: E. Stop LMWH and repeat the ultrasound on days 3 and 7.

The woman has:

- * Leg symptoms suggestive of DVT
- * High clinical suspicion
- * Already started therapeutic LMWH
- * Negative initial compression duplex ultrasound

According to RCOG, if the ultrasound is negative but clinical suspicion remains high, anticoagulation should be stopped and the ultrasound should be repeated on days 3 and 7.

Why repeat the scan?

A thrombus may be too small or too early to be detected on the initial scan. Over the following days, it may become more detectable.

Therefore:

High suspicion + negative ultrasound

→ Stop LMWH

→ Repeat compression ultrasound on day 3 and day 7

If the repeat investigation confirms DVT, treatment with LMWH is continued.

Important distinction:

- * Negative scan + LOW clinical suspicion → stop anticoagulation; no routine repeat scan.
- * Negative scan + HIGH clinical suspicion → repeat ultrasound on days 3 and 7.

Q13. Correct answer: B. Compression duplex ultrasound scan

This woman has:

- * Sudden chest pain
- * Difficulty breathing → suggests PE
- * Swollen, painful leg → suggests DVT
- * She is already receiving therapeutic LMWH.

Because she has symptoms/signs of DVT, the next investigation is compression duplex ultrasound of the leg.

Why ultrasound before CTPA/VQ?

If compression ultrasound confirms a DVT, then in a woman with suspected PE:

No further PE imaging is necessary; continue therapeutic anticoagulation.

This avoids unnecessary radiation exposure from CTPA or V/Q scanning. RCOG specifically recommends this approach.

What if the ultrasound is negative?

If DVT is not demonstrated but PE remains suspected, proceed with the PE diagnostic pathway:

CXR + ECG → V/Q scan or CTPA

According to RCOG, with an abnormal CXR, CTPA is preferred; with suspected PE and no DVT symptoms, V/Q or CTPA is used according to the diagnostic pathway.

Q14. Correct answer: A. Chest X-ray (CXR) followed by V/Q scan or CTPA

The woman has symptoms suggestive of acute PE and has already been started on therapeutic LMWH while awaiting confirmation.

According to the RCOG diagnostic pathway:

Suspected PE → ECG + Chest X-ray → further imaging

If there are no symptoms/signs of DVT, proceed to V/Q scan or CTPA. If the CXR is abnormal, CTPA is preferred over V/Q scanning.

Why not CTPA directly?

A CTPA is an appropriate investigation, but CXR is performed first as part of the diagnostic pathway. It also helps identify alternative causes of the woman's symptoms.

Exam sequence:

Suspected PE → CXR → V/Q or CTPA

Answer: A.

Q15. Correct answer: D. 55%

The question asks:

Approximately what percentage of women who present with an intrauterine fetal death have previously experienced reduced fetal movements?

The important figure is 55%.

RCOG guidance reports that approximately 55% of women experiencing stillbirth perceived reduced fetal movements before the diagnosis.

Why is this important?

Reduced fetal movement can be an early warning sign of:

- * Fetal growth restriction
- * Placental insufficiency
- * Fetal hypoxia
- * Impending fetal compromise
- * Stillbirth

Therefore, RFM should never be dismissed, particularly at ≥ 28 weeks.

★ Memory point

RFM → think 55%

55% of stillbirths had maternal perception of reduced fetal movements beforehand.

Answer: D – 55%.

Q16. Correct answer: D. Organize delivery

This is the most clinically important question.

The woman is:

- * 39 years old
- * 38 weeks

- * Presenting with reduced fetal movements
- * CTG performed for 120 minutes
- * Baseline variability is normal
- * But there are no accelerations

The key is that she is term and has presented with RFM.

Why delivery?

At 38 weeks, there is little benefit in continuing a pregnancy when there is concern about fetal wellbeing, particularly in a woman with RFM and an abnormal/non-reactive CTG.

A CTG with absent accelerations does not automatically mean fetal hypoxia if variability is normal, but in this clinical context—term pregnancy + RFM + persistent non-reactive trace—the safest management is to proceed toward delivery rather than simply continuing surveillance.

Why not ultrasound for growth/Doppler?

Ultrasound is useful when looking for:

- * Fetal growth restriction
- * Oligohydramnios
- * Placental insufficiency

However, this woman is already 38 weeks and has persistent concern about fetal wellbeing. Waiting for a growth/Doppler assessment could unnecessarily delay delivery.

Why not daily CTGs?

Daily CTGs would be more appropriate when pregnancy is being continued under surveillance. At 38 weeks with persistent RFM and a concerning CTG, delivery is more appropriate.

Why not biophysical profile?

A biophysical profile can provide additional information, but it should not delay delivery when there is sufficient concern at term.

Answer: D – Organize delivery.

Q17. Answer: C. 50% and 60% (as given in the question set)

LMWH is highly effective in preventing venous thromboembolism. Evidence from clinical trials shows substantial reductions in DVT/VTE with pharmacological prophylaxis, although the exact percentage varies according to the patient population and outcome measured.

Exam point: Remember that LMWH significantly reduces VTE risk in both medical and surgical patients, with the benefit generally being greater in high-risk surgical populations.

Q18. Answer: C. In the first 3 weeks postpartum

The postpartum period is the highest-risk period for VTE.

Why?

Pregnancy produces a physiological hypercoagulable state because:

- * Clotting factors increase.
- * Natural anticoagulants decrease.
- * Fibrinolysis is reduced.
- * Venous stasis occurs because the enlarging uterus compresses pelvic veins.

After delivery, additional factors increase the risk:

- * Tissue injury during delivery
- * Release of procoagulant substances
- * Reduced mobility
- * Venous stasis

Therefore, the risk is particularly high during the first few weeks after delivery, especially the first 3 weeks.

Exam pearl:

👉 VTE risk: postpartum > antenatal pregnancy > pre-pregnancy.

Q19. Answer: E. Commence LMWH now and until 6 weeks post-delivery

This is the most important question because it tests the RCOG risk-factor scoring system.

Risk factor

Present?

Age >35 years



Parity ≥ 3



Smoker



IVF/ART pregnancy



BMI ≥ 30

✗ (BMI 29)

So she has 4 antenatal VTE risk factors:

1. Age >35
2. Parity ≥ 3
3. Smoking
4. IVF/ART

According to the RCOG Green-top Guideline, four or more risk factors $\rightarrow$ LMWH prophylaxis from the first trimester. Three risk factors $\rightarrow$ prophylaxis from 28 weeks.

Since she is already 10 weeks pregnant, she should therefore start LMWH now.

And because antenatal prophylaxis is required, she should continue thromboprophylaxis through pregnancy and for 6 weeks postpartum.

★ Key MRCOG rule to remember

RCOG antenatal risk factors:

* ≥ 4 risk factors $\rightarrow$ LMWH from 1st trimester

* 3 risk factors $\rightarrow$ LMWH from 28 weeks

* 0–2 risk factors $\rightarrow$ usually no routine antenatal LMWH unless another indication/admission exists

Q19 = E. Start LMWH NOW and continue until 6 weeks postpartum.

Also note that BMI 29 is not counted as obesity under this RCOG assessment; obesity is BMI >30 .

Q20. Correct answer: E. Continue with the standard dose of LMWH until 6 weeks postpartum or until warfarin is re-commenced.

Why?

The woman is:

- * 26 years old
- * 6 weeks pregnant
- * Has a previous DVT
- * Has heterozygous Factor V Leiden

* Was previously taking warfarin

Important principle

Warfarin should not be used during pregnancy for treatment/prevention of VTE because vitamin K antagonists cross the placenta and can cause fetal harm. LMWH is therefore used during pregnancy.

A woman with a previous VTE generally requires LMWH throughout pregnancy and for 6 weeks postpartum.

However, heterozygous Factor V Leiden alone does not automatically mean that she needs the higher 50%, 75%, or full-treatment LMWH dose.

The RCOG specifically recommends higher-dose LMWH for previous VTE associated with antithrombin deficiency, antiphospholipid syndrome, or recurrent VTE.

Therefore:

Previous VTE + heterozygous Factor V Leiden → standard prophylactic LMWH, rather than automatically using 50–100% treatment-dose LMWH.

After delivery, she can be switched back to warfarin, if appropriate, and anticoagulation should cover at least the recommended postpartum period.

★ Exam pearl

Previous VTE + high-risk thrombophilia (AT deficiency/APS/recurrent VTE) → higher-dose LMWH.

Previous VTE without these high-risk features → standard prophylactic LMWH.

So Q20 = E.

Q21. Correct answer: B. 2–6%

Only a small proportion of pregnant women investigated for suspected PE actually have PE confirmed.

The RCOG teaching point is approximately 2–6%.

Other literature gives a similar range of approximately 2–7% or 3–6%, depending on the studies included.

Why is it so low?

Symptoms such as:

- * Breathlessness
- * Tachycardia
- * Chest discomfort

* Leg swelling

can occur normally in pregnancy.

Therefore, clinicians have a low threshold for investigating PE, meaning many women are investigated but most do not have PE.

★ Remember

Suspected PE in pregnancy → confirmed PE $\approx$ 2–6%.

So:

Q21 = B.

Q22. Correct answer: E. Stop the LMWH and repeat the ultrasound scan on days 3 and 7.

This is a very important MRCOG question.

The woman has:

- * Leg pain
- * Clinical suspicion of DVT is high
- * Compression duplex ultrasound is negative

The question is asking: What do you do next?

RCOG approach

If compression ultrasound is negative:

Low clinical suspicion → stop anticoagulation; no further imaging is generally required.

But:

High clinical suspicion → stop anticoagulation AND repeat compression ultrasound on days 3 and 7.

Therefore, because the question explicitly says the level of clinical suspicion is high, the correct management is:

Stop LMWH + repeat ultrasound on days 3 and 7.

Why repeat the ultrasound?

An early thrombus may be too small or not yet detectable on the initial ultrasound. A subsequent clot may become more apparent.

Therefore, repeating the scan helps avoid missing a developing/proximal DVT.

Why not continue LMWH?

This is the subtle point.

The RCOG recommendation states that even with high clinical suspicion and a negative ultrasound, anticoagulant treatment should be discontinued, but the ultrasound should be repeated on days 3 and 7.

So:

- ☐ A — Continue LMWH until repeat scan
- ☐ B — Continue LMWH until diagnosis is excluded
- ☐ C — Stop LMWH and simply advise her to return if symptoms persist
- ☐ D — Stop LMWH and discharge without repeat imaging
- ☒ E — Stop LMWH and repeat ultrasound on days 3 and 7

Q23. Correct answer: B. Compression duplex ultrasound scan

The woman has:

- * Sudden chest pain and difficulty breathing → suggests PE
- * A swollen, painful left leg → suggests DVT
- * Previous PE and DVT → high-risk history
- * She has appropriately been started on therapeutic LMWH while awaiting confirmation.

Why ultrasound first?

When a woman with suspected PE has clinical symptoms/signs of DVT, the first investigation is compression duplex ultrasound of the leg.

If the ultrasound confirms DVT, no further chest imaging is required to establish VTE, because treatment for confirmed DVT and PE is therapeutic LMWH. The RCOG algorithm specifically directs women with suspected PE and DVT symptoms to compression duplex ultrasound.

Therefore:

- ☒ B. Compression duplex ultrasound

MRCOG rule

Suspected PE + DVT symptoms → leg compression ultrasound first.

Q24. Correct answer: A. Chest X-ray followed by V/Q scan or CTPA

This is slightly different from Q23.

Here:

- * PE is suspected.
- * She has no symptoms of DVT.

* Therefore, we don't start with leg ultrasound.

The recommended pathway is:

Suspected PE

↓

ECG + Chest X-ray

↓

If CXR is normal → V/Q scan

If CXR is abnormal → CTPA

This is exactly the RCOG diagnostic algorithm.

Why do we do a CXR first?

A chest X-ray:

- * Helps identify alternative diagnoses such as pneumonia.
- * Helps determine whether V/Q scanning is likely to be useful.
- * Has a very low fetal radiation exposure.

Easy way to remember

PE + DVT symptoms → Ultrasound leg

PE without DVT symptoms → CXR → V/Q or CTPA

For a normal CXR, V/Q scanning is generally preferred in the RCOG algorithm; an abnormal CXR directs toward CTPA.

So:

✅ Q24 = A

Q25. Correct answer: D. 55%

This is a classic MRCOG fact.

Approximately 55% of women who experience stillbirth report reduced fetal movements before the diagnosis. Older RCOG material specifically cites the figure of 55%.

The newer RCOG guideline summarizes this more generally as approximately half of IUFDs presenting with reduced fetal movements.

Why does fetal movement decrease?

Reduced fetal movement can be a manifestation of fetal hypoxia, often related to placental dysfunction/insufficiency.

A compromised fetus may reduce activity as an adaptive response to conserve oxygen and energy. Therefore, a significant reduction or change in fetal movements can be an early warning sign of fetal compromise.

Importantly, RFM does not mean that IUFD will definitely occur—most women presenting with RFM do not have a stillbirth. But because RFM is associated with stillbirth and fetal growth restriction, it requires prompt assessment.

★ Exam memory

RFM → think ~50–55% of IUFD/stillbirth cases had reduced movements.

So for this question:

55% → D

Q26. Correct answer: D. Organize delivery

The woman is:

- * 38 weeks
- * Has reduced fetal movements
- * BP 150/95 mmHg → hypertension
- * CTG has normal baseline variability but no accelerations after 120 minutes

A normal antenatal CTG should have baseline variability plus accelerations. Persistent absence of accelerations in this clinical context makes the CTG non-reactive/abnormal, particularly when associated with reduced fetal movements. ↕

At 38 weeks, there is no advantage in prolonging the pregnancy when there are concerning fetal-wellbeing findings. Therefore, the appropriate management is to deliver the baby rather than simply arrange another surveillance test.

Why not the other options?

- * A. Daily CTGs ✗ — this delays delivery despite concerning fetal assessment.
- * B. Biometry alone ✗ — growth assessment does not address the immediate concern of fetal wellbeing.
- * C. Growth + umbilical artery Doppler ✗ — useful for suspected FGR, but shouldn't delay delivery when CTG is concerning at term.
- * D. Organize delivery ✓
- * E. Biophysical profile ✗ — could provide additional information, but at 38 weeks with RFM and a persistently non-reactive CTG, delivery is more appropriate.

★ MRCOG pearl

RFM + abnormal/non-reactive CTG + term pregnancy → think delivery.

The question is deliberately giving you 120 minutes without accelerations to make you recognize that this isn't simply a transient sleep period.

Q27. Correct answer: Excess antibody causing a false-negative non-treponemal test

This is a very important laboratory concept.

What happens?

The RPR/VDRL tests depend on an appropriate antigen–antibody ratio to form visible complexes (flocculation).

Normally:

Antigen + antibody → lattice formation → visible reaction → positive test

But if there is an extremely high concentration of antibody, the antibodies can saturate the antigen without allowing the proper lattice to form.

Therefore:

Too much antibody → no lattice → apparently negative test

This is called the prozone phenomenon. ↕

How do you overcome it?

Dilute the patient's serum and repeat the test.

After dilution, the antibody concentration enters the appropriate zone and the test can become positive. ↕

Remember:

PROZONE = excess antibody → false NEGATIVE

Don't confuse it with a false-positive result.

Q28. Correct answer: Jarisch–Herxheimer reaction

This is a classic MRCOG fact.

The Jarisch–Herxheimer reaction (JHR) is an acute inflammatory reaction that occurs after starting effective treatment for syphilis, particularly in early syphilis.

It usually occurs within the first 24 hours after treatment. ↕

Symptoms

The patient may develop:

- * Fever
- * Chills/rigors
- * Headache
- * Myalgia
- * Malaise
- * Tachycardia

Why does it happen?

It is thought to result from the inflammatory response associated with the rapid destruction of *Treponema pallidum*, with release of bacterial components and cytokine activation.

Important pregnancy point

In pregnancy, JHR can cause:

Maternal fever → uterine contractions → fetal distress / preterm labour

But you must NOT delay syphilis treatment because of the possibility of JHR. ↕

Differentiate from penicillin allergy

Jarisch–Herxheimer reaction ≠ penicillin allergy.

It is a reaction to treatment of syphilis, not an IgE-mediated allergy to penicillin.

Q29. Correct answer: FTA-ABS

FTA-ABS = Fluorescent Treponemal Antibody Absorption test

It is a treponemal-specific test.

Treponemal tests detect antibodies directed against *Treponema pallidum*.

Once positive, they generally remain positive for life, even after successful treatment. ↕

There is an important exception: approximately 15–25% of patients treated during primary syphilis may eventually become treponemal-test negative, but the exam rule is:

Test

Type

After treatment

RPR

Non-treponemal

Usually falls; useful for monitoring treatment

VDRL

Non-treponemal

Usually falls; useful for monitoring

FTA-ABS

Treponemal

Usually remains positive for life

TPPA/TPHA

Treponemal

Usually remains positive

✅ FTA-ABS

★ Easy memory

Treponemal = Tells you they have been exposed

RPR/VDRL = Response to treatment

Q30. Correct answer: Dark-field microscopy of lesion exudate

The question asks for the most useful direct method to visualize *Treponema pallidum* from a primary chancre.

The answer is:

✅ Dark-field microscopy of lesion exudate

In primary syphilis, the chancre contains numerous *T. pallidum* organisms.

A sample of serous exudate from the lesion can be examined using dark-field microscopy, allowing the characteristic motile spirochetes to be visualized directly. ↩↪

Why not Gram stain?

T. pallidum is extremely thin and does not stain adequately with conventional Gram staining. Therefore, Gram stain is not the appropriate method. ↩↪

Why is dark-field particularly useful?

It allows direct visualization of live, motile spirochetes from lesion fluid.

One limitation is that oral lesions are problematic because commensal treponemes can be mistaken for *T. pallidum*. ↩↪

Q31. Correct answer: C. Secondary syphilis

Syphilis progresses classically through:

Primary → Secondary → Latent → Tertiary

Why is secondary syphilis the most infectious?

During secondary syphilis there is a large systemic burden of *Treponema pallidum*. Patients may have widespread mucocutaneous lesions, including mucous patches and condylomata lata, which contain many organisms.

Transmission is therefore particularly efficient during primary and secondary syphilis, with secondary syphilis generally regarded as the most infectious stage.

Clinical features of secondary syphilis

- * Generalized non-pruritic rash
- * Palms and soles may be involved
- * Generalized lymphadenopathy
- * Mucous patches
- * Condylomata lata
- * Alopecia

Exam memory:

👉 Secondary syphilis = maximum infectivity + widespread rash.

Q32. Correct answer: Aqueous crystalline penicillin G IV for 10–14 days

The recommended regimen is:

Aqueous crystalline penicillin G 18–24 million units/day IV for 10–14 days, usually given as 3–4 million units every 4 hours or by continuous infusion.

Why IV penicillin?

Neurosyphilis means that *T. pallidum* has involved the central nervous system.

Therefore, treatment requires a regimen that achieves adequate CSF concentrations of penicillin.

Why are the other options wrong?

- * Benzathine penicillin IM single dose ❌

Used for uncomplicated early syphilis, but does not provide adequate CNS exposure for neurosyphilis.

- * Doxycycline for 7 days ❌

Not the recommended treatment for neurosyphilis.

* Azithromycin ✗

Not recommended because of resistance and inadequate reliability.

★ Remember

Neurosyphilis = IV aqueous crystalline penicillin G × 10–14 days.

Q33. Correct answer: Penicillin desensitization followed by penicillin treatment

This is an extremely important pregnancy question.

A pregnant woman with syphilis must receive penicillin, because penicillin is the only proven treatment that reliably treats maternal infection and prevents congenital syphilis. If she has a confirmed penicillin allergy, she should undergo penicillin desensitization and then receive the appropriate penicillin regimen.

Why not doxycycline?

Doxycycline is contraindicated/not appropriate in pregnancy.

Why not erythromycin?

Erythromycin cannot be relied upon to adequately treat the fetus and therefore is not an acceptable alternative for preventing congenital syphilis.

Exam rule

Pregnancy + syphilis + penicillin allergy

→ Desensitize

→ Give penicillin

Not doxycycline.

Not erythromycin.

Not “no treatment.”

Q34. Correct answer: Gummatous lesions and cardiovascular aortitis

Tertiary syphilis is a late manifestation of untreated syphilis.

Important manifestations include:

1. Gummatous syphilis

Gummas are granulomatous lesions that can occur in:

- * Skin
- * Bone
- * Liver

* Other organs

2. Cardiovascular syphilis

Classically causes syphilitic aortitis, particularly involving the ascending thoracic aorta.

Complications may include:

- * Aortic root dilatation
- * Aortic regurgitation
- * Aortic aneurysm

Tertiary cardiovascular disease and gummatous disease are recognized late manifestations of syphilis.

Why the other options are wrong?

Primary painless chancre → primary syphilis ❌

Superficial mucocutaneous patches → secondary syphilis ❌

Acute bacterial meningitis caused by Gram-negative rods → not characteristic of syphilis ❌

★ Memory

Tertiary syphilis = GUMMA + AORTA + nervous system

Q35. Correct answer: Adequate therapeutic response and serologic cure

The question gives an example:

RPR 1:32 → 1:8

This is a fourfold decline.

Remember how titres work:

1:32 → 1:16 → 1:8

That's a two-dilution/fourfold reduction.

A fourfold decrease in RPR/VDRL titre is generally considered a clinically significant serologic response after appropriate treatment, with the exact expected timing depending on the stage of syphilis and guideline used.

Why is RPR useful for follow-up?

RPR and VDRL are non-treponemal tests.

Their titres generally decline following successful treatment, so they are useful for monitoring response.

In contrast, treponemal tests such as FTA-ABS usually remain reactive for a long time and are therefore not used to monitor treatment response.

Important distinction

Fourfold FALL → treatment response

Fourfold RISE → possible reinfection or treatment failure

This distinction is very high-yield.

Q36. Correct answer: Persistent low-level non-treponemal titres despite adequate therapy.

A serofast state means that after appropriate treatment, the patient's RPR/VDRL titre remains persistently reactive, usually at a low level, despite there being no evidence of active infection or treatment failure.

For example:

Before treatment: RPR 1:32

↓

After adequate treatment: RPR 1:8

↓

Later: remains 1:8

The fourfold fall indicates an appropriate response, but the test does not necessarily become negative.

The CDC notes that some patients remain persistently reactive after treatment—the serofast state—and this is more common in people treated later in the course of infection or after previous syphilis episodes.

Don't confuse:

- * Serofast → persistent low titre after adequate treatment
- * Treatment failure/reinfection → usually a sustained fourfold rise in non-treponemal titre or recurrence of clinical disease.

★ Exam pearl:

Serofast ≠ active infection.

Q37. Correct answer: Exudate from an undisturbed chancre/lesion

Dark-field microscopy can directly visualize motile *Treponema pallidum*.

The ideal specimen is serous exudate from a moist syphilitic lesion, particularly a primary chancre.

The lesion should be carefully prepared so that the sample contains adequate organisms and minimal blood contamination. Current CDC laboratory guidance recommends collecting serous exudate from moist lesions and examining it fresh.

Why not the other options?

- * Blood in EDTA ❌ — not the standard specimen for dark-field microscopy.
- * Midstream urine ❌
- * Throat swab in viral transport medium ❌

Important point

Dark-field microscopy is particularly useful for primary syphilis, when the chancre contains numerous organisms.

★ Remember:

Dark field → fresh serous exudate from chancre.

Q38. Correct answer: Doxycycline 100 mg orally twice daily for 14 days.

For a non-pregnant patient with primary or secondary syphilis who has a penicillin allergy, doxycycline is an accepted alternative.

The regimen is:

Doxycycline 100 mg PO twice daily × 14 days.

Why is the question specifically saying “non-pregnant”?

Because the management changes dramatically in pregnancy.

Pregnancy + syphilis + penicillin allergy → penicillin desensitization → penicillin treatment.

Doxycycline should not be substituted for penicillin in pregnancy because penicillin is the only treatment with established efficacy for preventing congenital syphilis.

MRCOG memory

Non-pregnant + penicillin allergy → doxycycline

Pregnant + penicillin allergy → desensitize + penicillin

Q39. Correct answer: Refrigerate at 2–8°C and avoid repeated freeze–thaw cycles.

Serum is commonly used for syphilis serology.

If testing is delayed:

Short-term → 2–8°C

For longer storage, serum can be frozen, but repeated freeze–thaw cycles should be avoided because they can cause protein degradation/denaturation and reduce antibody reactivity.

Why are the other answers wrong?

Room temperature for several days ❌

May compromise specimen stability.

37°C ❌

High temperature can damage proteins/antibodies.

Repeated freezing and thawing ❌

Can reduce antibody reactivity.

★ Easy memory

Serum → 2–8°C → avoid freeze–thaw.

Q40. Correct answer: Inhibition of bacterial cell-wall synthesis via penicillin-binding proteins.

Penicillin is a β -lactam antibiotic.

Its important mechanism is:

Penicillin binds PBPs/transpeptidases

↓

Inhibits peptidoglycan cross-linking

↓

Weak bacterial cell wall

↓

Cell lysis/death

So the correct option is:

☒ Inhibition of bacterial cell-wall synthesis via penicillin-binding proteins

Why not the others?

* 30S ribosomal inhibition → aminoglycosides/tetracyclines act at ribosomes, but not penicillin.

- * DNA gyrase inhibition → fluoroquinolones.
- * Dihydrofolate/folate pathway inhibition → sulfonamides/trimethoprim.

★ Remember the antibiotic targets

Penicillin → cell wall

Doxycycline → 30S ribosome

Macrolides → 50S ribosome

Fluoroquinolones → DNA gyrase/topoisomerase

Trimethoprim → dihydrofolate reductase

Q41. Answer: Prolonged low serum concentrations after IM depot injection

Benzathine penicillin G is a poorly soluble preparation.

After deep IM injection:

Benzathine penicillin G depot

↓

Slow dissolution from injection site

↓

Slow absorption into bloodstream

↓

Prolonged, relatively low serum penicillin concentration

This makes it suitable for diseases such as early syphilis, where prolonged exposure is required.

Why the other options are wrong

- * Rapid high peak after oral administration ✗ — it is given IM, not orally.
- * Exclusive CSF penetration ✗ — benzathine penicillin does not provide adequate CSF concentrations for neurosyphilis.
- * Short half-life requiring continuous IV infusion ✗ — that describes the opposite pharmacokinetic principle.

★ Remember

Benzathine = depot = slow absorption = prolonged action.

Q42. Answer: Systemic lupus erythematosus (SLE)

Non-treponemal tests include:

- * RPR
- * VDRL

They detect anticardiolipin-type antibodies, rather than antibodies specifically directed against *Treponema pallidum*.

Therefore, other conditions that produce these antibodies can cause a false-positive RPR/VDRL.

Important causes

- * SLE and other autoimmune diseases
- * Antiphospholipid antibodies
- * Pregnancy
- * Some infections
- * Older age
- * Some vaccinations/other transient conditions

SLE is a classic exam answer.

Why is it called “biological false positive”?

The patient does not necessarily have syphilis, but the non-treponemal test reacts because of antibodies generated by another condition.

A positive RPR/VDRL should therefore be followed by a treponemal-specific test for confirmation.

★ Remember

RPR/VDRL = sensitive but not specific

Treponemal test = specific for syphilis

Q43. Answer: Requirement for fresh lesion material and a skilled microscopist

Dark-field microscopy can directly demonstrate motile *Treponema pallidum* from lesion exudate.

But it has important practical limitations.

Why fresh material?

The organism needs to be examined in fresh lesion material, because dark-field microscopy relies on seeing the characteristic motility of the spirochetes.

The sample must be examined promptly.

Why a skilled microscopist?

T. pallidum is extremely thin, and interpretation requires experience.

There can also be difficulty distinguishing *T. pallidum* from other spirochetes, particularly in specimens contaminated with oral flora.

Why the other options are wrong?

High sensitivity in late latent lesions ❌

There is no lesion to examine in latent syphilis, and dark-field microscopy is therefore not useful for latent disease.

Ability to detect antibodies in serum ❌

That's serology, not dark-field microscopy.

Useful on fixed/stored specimens ❌

It requires fresh material.

★ Memory

Dark field = fresh lesion + expert microscopy + direct organism detection.

Q44. Answer: Detecting treponemal DNA from lesion swabs in early infection

PCR detects DNA of *T. pallidum* directly.

It is particularly useful when there is an active lesion, such as a primary chancre, because the organism can be detected in lesion material.

Why is this useful?

In early primary syphilis:

Chancre → lesion swab → PCR → treponemal DNA

This provides direct evidence of the organism.

Why not the other options?

Used as the sole test for serologic monitoring after treatment ❌

Treatment monitoring is generally done using quantitative RPR/VDRL titres, not PCR.

Routine screening of blood donors ❌

Blood donor screening relies primarily on validated serologic testing.

Replacing CSF VDRL in neurosyphilis ❌

CSF evaluation uses CSF-VDRL along with CSF cell count/protein and clinical findings. PCR is not a routine replacement for CSF-VDRL.

★ Remember

PCR = organism DNA

RPR/VDRL = treatment follow-up

Treponemal antibody tests = evidence of exposure/infection

Q45. Answer: Lymphocytic pleocytosis + elevated protein + reactive CSF VDRL

This is a very important question.

Typical CSF abnormalities in neurosyphilis include:

1. Lymphocytic pleocytosis

There is an increased number of white blood cells, predominantly lymphocytes.

2. Increased CSF protein

Inflammation of the CNS can cause an elevated CSF protein concentration.

3. Reactive CSF-VDRL

A reactive CSF-VDRL is highly specific for neurosyphilis, although its sensitivity is limited.

Therefore, a negative CSF-VDRL does not completely exclude neurosyphilis if the clinical picture and other CSF findings are supportive.

Why the other options are wrong?

Neutrophilic pleocytosis + low protein ❌

More suggestive of acute bacterial meningitis.

Normal cell count + decreased glucose only ❌

Not the typical pattern.

Yeast cells on Gram stain ❌

Suggests fungal infection, not neurosyphilis.

★ Key memory

Neurosyphilis CSF = ↑ lymphocytes + ↑ protein + CSF-VDRL may be positive.

Q46. Correct answer: Ascending aorta — aortitis and aneurysm formation

T. pallidum can cause syphilitic aortitis in tertiary syphilis.

The characteristic site is the ascending thoracic aorta, particularly the aortic root.

Pathology

Syphilitic infection causes inflammation and damage to the vasa vasorum of the aortic wall.

This leads to:

- * Weakening of the aortic wall
- * Aortic root dilatation
- * Thoracic aortic aneurysm
- * Aortic regurgitation

Why the other options are wrong?

- * Coronary arteries causing acute MI  — not the characteristic manifestation.
- * Pulmonary arteries causing emboli 
- * Peripheral veins causing phlebitis 

★ Remember

Tertiary syphilis → AORTA

Think:

Syphilis → aortitis → ascending aortic aneurysm ± aortic regurgitation.

Q47. Correct answer: At any stage (early or late) of syphilis

This is a very important concept.

Neurosyphilis is not exclusively a complication of tertiary syphilis.

T. pallidum can invade the CNS early in infection, even during primary or secondary syphilis.

Therefore, neurosyphilis can occur:

Primary → Secondary → Latent → Tertiary

Early neurosyphilis

Can present with:

- * Meningitis
- * Cranial nerve abnormalities
- * Meningovascular disease

Late neurosyphilis

Can present with:

- * General paresis
- * Tabes dorsalis
- * Other neurological syndromes

★ Exam pearl

Neurosyphilis $\neq$ tertiary syphilis only.

The organism can involve the CNS at any stage.

Q48. Correct answer: Partner notification and treatment to prevent reinfection and spread

This is essential because treating only the index patient does not control transmission.

Why notify partners?

Sexual partners may:

- * Already have syphilis
- * Be asymptomatic
- * Infect other people
- * Reinfect the treated patient

Therefore, contact tracing/partner notification and appropriate evaluation and treatment are important components of syphilis management.

Why the other options are wrong?

Isolating the patient ✗

Syphilis is not managed by isolation.

Vaccinating household contacts ✗

There is no vaccine for syphilis.

Only advising abstinence without partner evaluation ✗

This does not adequately address existing infection in partners.

★ Remember

Syphilis diagnosis $\rightarrow$ Treat patient + trace/evaluate partners.

Q49. Correct answer: Pregnant women and children under 8 years

Doxycycline is an alternative treatment for non-pregnant adults with penicillin allergy, but it is not the preferred treatment in pregnancy.

Why is pregnancy important?

For a pregnant woman with syphilis:

Penicillin allergy → penicillin desensitization → penicillin treatment

This is because penicillin is the only proven effective treatment for preventing congenital syphilis. (cdc.gov^[OBJ])

Why children?

Traditional teaching has avoided tetracyclines in children <8 years because of concerns about permanent tooth discoloration and effects on bone growth.

There is a modern nuance: short courses of doxycycline are now considered acceptable for some infections in young children when clinically indicated, but for this syphilis MCQ, the intended answer is clearly pregnant women and children under 8 years.

★ MRCOG rule

Syphilis + pregnancy + penicillin allergy = DESENSITIZE, then PENICILLIN.

Do not substitute doxycycline.

Q50. Correct answer: Non-treponemal reagin antibodies against cardiolipin–lecithin–cholesterol antigen

This is one of the most important distinctions in syphilis serology.

RPR = Rapid Plasma Reagin

RPR is a non-treponemal test.

It does not detect antibodies specifically directed against *Treponema pallidum*.

Instead, it detects reagin antibodies directed against lipid antigens, classically represented by:

Cardiolipin + lecithin + cholesterol

These antibodies can occur in conditions other than syphilis, which explains why RPR can produce biological false-positive results.

For example:

- * SLE
- * Some infections

- * Pregnancy
- * Other inflammatory conditions

Why is RPR useful?

Its titre generally correlates with disease activity and falls after successful treatment, so it is useful for monitoring response.

For example:

RPR 1:32 → 1:8

= fourfold decline → significant serological response.

