EFOG Part 1 & MRCOG Part 2: EMQs and SBAs

SECOND EDITION

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Contents

Section 4

Maternal medicine

Questions: SBAs

For each question, select the single best answer from the five options listed.

1. An 18-year-old pregnant woman in her first pregnancy presents at 36 weeks to obstetric triage with headache, blurring vision and swelling of her feet. Her blood pressure is 180/110 mmHg with +++ protein in her urine. Her blood investigations show haemoglobin: 99 g/L, platelets: 80×10^9/L, alanine aminotransferase (ALT): 265 IU/L, urea: 6.7 mmol/L, creatinine: 46 μmol/L and uric acid: 580 μmol/L.

Of the following, which is the most likely diagnosis in this case?

A Acute fatty liver of pregnancy
B Thrombotic thrombocytopenic purpura
C HELLP (haemolytic anaemia, elevated liver enzymes and low platelet count) syndrome
D Disseminated intravascular coagulation
E Haemolytic uraemic syndrome

2. A 23-year-old nulliparous who was diagnosed with type 1 diabetes mellitus (T1DM) at the age of 17 years following recurrent urinary tract infection and admission with keto-acidosis is now keen to start her family. She struggles with regular monitoring of blood glucose but is not keen on continuous glucose monitoring gadgets. Her latest glycosylated haemoglobin (HbA1c) is 110 mmol/mol and her urine is positive for 2+ proteins.

Of the following, which is the most appropriate recommendation for her?

A Recommend tablet folic acid 5 mg daily
B Ensure effective contraception
C Organise ultrasound scan of the kidneys
D Send for retinal assessment
E Check blood pressure

Obesity (antenatal/intrapartum care)

3. A 37-year-old para 0 with a body mass index (BMI) of 40 kg/m^2 attends the metabolic antenatal clinic at 16 weeks' gestation. She describes having bariatric surgery privately 8 months ago.

What is the minimum recommended time between bariatric surgery and attempting pregnancy?

A 1–2 months
B 6–12 months
C 12–18 months
D 18–24 months
E Over 24 months

4. A 39-year-old para 0 with a BMI of 45 kg/m^2 attends the metabolic antenatal clinic at 16 weeks' gestation.

Which of the following is not considered to be a risk of obesity in pregnancy?

A Gestational diabetes
B Pre-eclampsia
C Fetal macrosomia
D Fetal structural anomalies
E Preterm labour

5. A 37-year-old para 0 with a BMI of 40 kg/m^2 attends at 36 weeks' gestation. She wishes to discuss her management in labour and her risks associated with this.

During childbirth, which of the following if not considered to be an increased risk of obesity in pregnancy?

A Emergency caesarean section
B Postpartum haemorrhage
C Shoulder dystocia
D Admission to neonatal unit
E Third/fourth-degree tears

6. A 34-year-old woman with previous caesarean section and prolonged wound infection following delivery comes for prepregnancy counselling. Her BMI is 48 kg/m^2. Among her queries are the types of interventions that could be considered for reduction of surgical site infection.

From the list below what is the likely intervention that could reduce her risk of wound infection potentially?

A Use of negative pressure dressing
B Use of subcutaneous drain
C Closure of subcutaneous tissue if fat >2 cm
D Suprapanniculus skin incision
E Use of staples for skin

7. A 26-year-old woman with a BMI of 48 kg/m^2 attends for prepregnancy counselling. She wants to know the potential risks of fetal anomalies.

Of the following, which of the systems is least likely at increased risk of abnormality related to maternal obesity?

A Neural tube
B Lung malformation
C Limb abnormalities

D Cardiovascular abnormalities
E Cleft lip and palate

8. A 30-year-old woman with T1DM attends preconception care seminar which is being delivered by specialists for those women who are planning to have a baby.

Of the following statements, which is the most appropriate advice for women with T1DM who are planning a pregnancy?

A A good blood glucose control before conception and throughout their pregnancy, this will reduce the risk of miscarriage, congenital malformation, stillbirth and neonatal death
B A good blood glucose control before conception and throughout their pregnancy will not completely eliminate the risk of miscarriage, congenital malformation, stillbirth and neonatal death but will significantly reduce it
C A good blood glucose control before conception and throughout their pregnancy, do not significantly alter the risks of miscarriage, congenital malformation, stillbirth and neonatal death
D A good blood glucose control before conception and throughout their pregnancy will reduce the maternal risk of hospital admission and diabetic nephropathy
E A good blood glucose control before conception and throughout their pregnancy, reduce the risk of preterm delivery to normal population

9. A 24-year-old type 2 diabetes mellitus (T2DM) attends preconception clinic after two spontaneous miscarriages to discuss issues around blood glucose control and target HbA1c in preconceptual period.

Of the following, which is the most appropriate target HbA1c in T2DM planning to conceive?

A HbA1c of 46 mmol/mol (6.3%)
B HbA1c of 86 mmol/mol (10%)
C HbA1c of 48 mmol/mol (6.5%)
D HbA1c <4 mmol/mol
E HbA1c of >4 mmol/mol

10. A 33-year-old woman with BMI of 24 kg/m^2 in her first pregnancy presents at 15 weeks' gestation . She mentions to her doctor she has pre-existing diabetes and worries whether this poses a risk to her baby.

Which of the following is closely associated with her pre-existing diabetes?

A Fetal infection
B Fetal growth restriction
C Oligohydramnios
D Fetal cardiac anomalies
E Placenta accreta

11. A 27-year-old woman with a BMI of 32 kg/m^2 in her second pregnancy presents at 28 weeks' gestation . She is known with pre-existing diabetes.

Which of the following is closely associated with her pre-existing diabetes?

A Fetal skeletal anomaly
B Fetal growth restriction

C Fetal macrosomia
D Fetal breech position
E Premature rupture of membranes

12. A 29-year-old woman with BMI of 35 kg/m^2 in her first pregnancy presents at 32 weeks' gestation . She has been diagnosed with gestational diabetes. On physical examination, the fetus appears to be small for gestational age.

As a next step, her doctor decides to carry out:

A Measurement of maternal glucose level
B Fetal cardiotocography
C Fetal biometry by ultrasound
D Fetal middle cerebral artery Doppler scan
E Fetal cardiac scan

13. A 34-year-old woman with a BMI of 38 kg/m^2 in her first pregnancy presents at 36 weeks' gestation . An ultrasound scan reveals marked fetal macrosomia.

Her doctor informs her about the risks for her baby and herself in case of a vaginal delivery.

The maternal risk most associated with marked fetal macrosomia following a vaginal delivery is:

A Bowel dysfunction
B Placental abruption
C Pudendal neuropathy
D Pelvic floor injury
E Urinary bladder dysfunction

14. A 36-year-old para 1, BMI of 35 kg/m^2, attends her booking appointment at 10 weeks' gestation with her midwife.

Which of the following is not a risk factor of gestational diabetes that would require referral for oral glucose tolerance test?

A BMI above 30 kg/m^2
B Previous macrosomic baby weighing 4.0 kg or more
C Previous gestational diabetes
D Family history of first-degree relative with diabetes
E An ethnicity with a high prevalence of diabetes

15. A 34-year-old woman para 1 with poorly controlled T1DM attends for consultant review at 16 weeks; she had known diabetic retinopathy in her first pregnancy. She has had some routine urea and electrolytes checked.

Which of the following would not warrant referral to nephrology?

A Their serum creatinine is 120 µmol/L or more as or >120 µmol/L
B The urinary albumin:creatinine ratio is >30 mg/mmol
C Total protein excretion exceeds 0.5 g/day
D No renal assessment in last 3 months
E Estimated glomerular filtration rate (eGFR) 40

16. A 36-year-old primigravida with a BMI of 35 kg/m^2 at 30 weeks of pregnancy has recently moved to Europe from South Africa. She gives a significant family history of hypertrophic obstructive cardiomyopathy (HOCM). Her paternal aunt died of sudden cardiac failure. Her father has no such history but her step mother is found to have HOCM but asymptomatic. While being investigated, she fell pregnant. She has been asymptomatic. She would like to know her chances of having the disease and the effect on her pregnancy.

A She has 50% chances of inheritance and a very small risk of cardiac complications
B She has 25% chances of inheritance and a very small risk of cardiac complications
C She has 50% chances of inheritance and a significant risk of sudden cardiac complications and death
D She has 25% chances of inheritance and a significant risk of sudden cardiac complications and death
E She has 100% chances of inheritance and a significant risk of sudden cardiac complications and death

17. You are a year 7 specialist trainee and have been asked to deliver a lecture to final year medical students to describe the effect of pregnancy on patients with existing cardiac disease.

Of the following, which statement is correct as regard the effect of pregnancy on cardiac disease?

A Pregnancy decreases the incidence of cardiac arrhythmia due to hormonal changes
B Pregnancy in women who have had mechanical valve replacement is associated with a 10% incidence of thrombotic episodes
C Antibiotic prophylaxis should be given during labour and delivery for all women with valvular lesions
D There is a 70% mortality rate with the New York Heart Association class III or IV
E The overall risk of inheriting polygenic cardiac disease is quoted at 3–5%

18. A 32-year-old woman with a BMI of 40 kg/m^2 presents with sudden onset of shortness of breath and pain in the chest especially on breathing. She is day 4 postemergency caesarean section which was carried out for fetal bradycardia in her first pregnancy. She smokes 10 cigarettes a day and had pre-eclampsia in her pregnancy. On general examination, she has a pulse rate of 120 bpm, respiratory rate of 22 breaths/min, BP of 130/80 mmHg, and SpO_2: 93 on air and temperature of 37°C. There is no calf tenderness although ankle swelling is present which she has developed during pregnancy. Her chest X-ray is normal.

Of the following, what is the most likely primary clinical diagnosis?

A Pulmonary oedema
B Pulmonary hypertension
C Chest infection
D Pulmonary embolism
E Cardiomyopathy

19. A 36-year-old woman para 1 with a BMI of 26 kg/m^2 who had a renal transplant 5 years ago now presents at the antenatal clinic for booking at 10 weeks' gestation.

Of the following, which immunosuppressant is deemed to be unsafe in pregnancy?

A Prednisolone
B Azathioprine
C Mycophenolate mofetil
D Cyclosporine
E Tacrolimus

20. A 38-year-old para 0 and BMI of 35 kg/m^2 with known chronic kidney disease attend for prepregnancy counselling. She wishes to know about possible complications during pregnancy.

Of the following, which is not a maternal complication of renal disease in pregnancy?

A Gestational diabetes
B Pre-eclampsia
C Anaemia
D Loss of renal function
E Postpartum deterioration

21. A 28-year-old woman with a BMI of 26 kg/m^2 who is a known case of systemic lupus erythematosus (SLE) and she is on multiple medication. She now attends prepregnancy clinic for prepregnancy planning.

Of the following medication, which one is associated with increased risk of congenital abnormality during pregnancy?

A Cyclosporine
B Tacrolimus
C Tumour necrosis factor (TNF) inhibitors
D Sulfasalazine
E Aspirin

22. A 35-year-old woman with a BMI of 22 kg/m^2 who is a known case of thyroid disease attends antenatal clinic with history of amenorrhoea with an unplanned pregnancy. Her ultrasound scan confirms it to be an intrauterine pregnancy at 8 weeks' gestation . She wishes to discuss the effect of her current medication on pregnancy and monitoring of her disease during pregnancy.

Of the following, which statement is correct about her care during pregnancy?

A Clinical disease activity follows the titre of thyroid-stimulating hormone (TSH) receptor stimulating antibodies, which falls in the first trimester and puerperium and rise in the second and third trimester
B Propylthiouracil causes aplasia cutis congenita
C Most pregnant women will need to increase their dose in the puerperium to avoid a relapse of hyperthyroidism
D The risk of fetal Graves' disease after 20 weeks is inversely proportional to the mother's TSH receptor stimulating antibodies titre
E Untreated hypothyroidism during pregnancy disease can cause craniosynostosis and associated intellectual impairment

23. A 35-year-old primigravida pregnant with a BMI of 30 kg/m^2 has been admitted in labour ward at 39 weeks' gestation with symptomatic laboratory—confirmed coronavirus disease 2019 (COVID-19) infection.

Of the following, which is most likely associated with COVID-19 infection during pregnancy?

A Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in pregnancy is associated with impaired infant neurodevelopment at 6 months
B Pregnant patients with severe COVID-19 infection are at increased risk of gestational diabetes
C Infants born to mothers with severe COVID-19 are not at increased risk of neonatal mortality and admission to the neonatal intensive care unit (ICU)
D Pregnant patients with symptomatic COVID-19 infection have similar rates of caesarean section to non-infected patients
E Maternal infection with SARS-CoV-2 is a contraindication to performing a fetal blood sample or using fetal scalp electrodes

24. You are a specialist trainee and have just reviewed a 28-year-old woman at 15 weeks of pregnancy with clinical diagnosis of varicella zoster infection.

Of the following, which statement is appropriate about varicella zoster infection during pregnancy?

A A planned delivery should be avoided for at least 5 days after the onset of the maternal rash
B Intravenous acyclovir should be given to those pregnant women only who are immune compromised and have severe chickenpox
C The risk of spontaneous miscarriage is increased if chickenpox occurs in the first trimester
D There is a significant risk of varicella infection of the newborn, if maternal infection occurs in the last 4 weeks of a woman's pregnancy
E There is a small risk of fetal varicella syndrome (FVS), if the pregnant woman shows serological conversion in the second 28 weeks of pregnancy

25. A 30-year-old woman with a BMI of 25 kg/m^2 farm worker in her first pregnancy is seen at 34 weeks' gestation . She volunteers a history of flu-like illness with rash. She has noted abdominal distension with reduced fetal movements. Investigations suggest infection with parvovirus.

Of the following, which of the following is correct as regard parvovirus infection during pregnancy?

A 80% of women of child-bearing age are immune
B Women with a presumed parvovirus rash should stay away from antenatal clinics and other pregnant women
C It can cause a maternal aplastic crisis
D One in four fetuses will become hydropic
E Hydropic fetuses receiving steroid injections have normal outcomes if they survive to term

26. A 30-year-old woman with a BMI of 28 kg/m^2 farm worker in her first pregnancy is seen at 18 weeks' gestation. She volunteers a history of flu-like illness with rash with a suspected diagnosis of cytomegalovirus (CMV) infection.

Of the following, which statement is correct in the management of this patient?

A Amniocentesis is a reliable tool for investigating vertical transmission
B Amniocentesis should be delayed for 6 weeks following the maternal infection
C One in four fetuses will be damaged following a proven fetal CMV infection
D 10% of infected fetuses will show clinical sequelae at birth
E 90% of babies born with evidence of CMV will have long-term neurological damage

27. A 30-year-old woman with a BMI of 24 kg/m^2 whose most recent test at the sexual health clinic has shown human immunodeficiency virus (HIV) infection positive test. She attends prepregnancy clinic to discuss implications of this finding on her future fertility potential.

Of the following, which statement is correct as regard HIV transmission during pregnancy?

A All infants born to HIV-positive mothers do not have measurable serum HIV antibodies
B Serum HIV antibodies in infants are indicative of placental transmission
C A positive HIV DNA polymerase chain reaction (PCR) before 7 days indicates intrapartum transmission
D HIV antibodies persist up to 18 months of age in infant serum
E Duration of ruptured membranes has been associated with intrapartum transmission in women on effective highly active antiretroviral therapy (HAART) with undetectable viral loads

28. A 32-year-old woman is seen in the blood-borne infection antenatal clinic at 8 weeks. She is HIV positive with a viral load of >100,000 HIV-RNA copies/mL and a CD4 cell count which is <200 cells/mm^3.

Of the following, when is the optimum gestational period to start her anti-retroviral therapy?

A Within the first trimester
B 14 weeks
C 18 weeks
D 20 weeks
E 28 weeks

29. A 34-year-old woman who is known to be HIV positive with a low viral load at booking presents in labour. She has not attended many appointments in the antenatal clinic and refuses a caesarean section.

Of the following, what is the recommended drug regimen to be followed in labour?

A IV zidovudine
B Oral nevirapine and dolutegravir

C Oral nevirapine, zidovudine, raltegravir and lamivudine, IV zidovudine
D Oral nevirapine, tenofovir, dolutegravir, and IV zidovudine
E Oral rilpivirine, raltegravir or darunavir

30. A 35-year-old woman with a BMI of 28 kg/m^2 at 36 weeks of pregnancy is admitted to the labour ward. Her pregnancy so far has been uneventful with a normal blood pressure and normal fetal growth parameters. On admission, she is febrile with a temperature of 39°C, pulse rate of 120 bpm and blood pressure of 100/60 mmHg. Her abdomen is tender on palpation and she gives history of feeling wet down below.

Of the following, which statement is correct as regard bacterial sepsis in pregnancy?

A Severe sepsis with acute organ dysfunction is associated with 5–10% mortality rate
B Urinary tract infection and recurrent vulvovaginitis are the most common infections associated with septic shock
C Severe infection is associated with preterm labour in 10% cases
D Signs and symptoms of sepsis are more distinctive in pregnancy
E Progression of sepsis may be more rapid

31. You are a year 5 specialist trainee and have been asked to deliver a tutorial to third year medical students as regard bacterial sepsis during pregnancy.

Of the following, which statement is correct as regard bacterial sepsis during pregnancy?

A Contact with birthing animals is associated with *Chlamydia psittaci* infection
B Contact with aborting sheep is associated with Q fever (*Coxiella burnetti*) infection
C Ingestion of milk products is associated with *Listeria* infection
D Healthcare workers who have been exposed to women with group B streptococcal infection should be considered for antibiotic prophylaxis
E High-dose intravenous immunoglobulin (IVIG) is effective against endotoxic shock

32. A 36-year-old para 2 with a BMI of 35 kg/m^2 presents at 32 weeks' gestation. She is complaining of feeling generally unwell and her initial observations show a temperature of 38.2°C, heart rate of 110 bpm and BP 105/80 mmHg.

Which of the following is not a risk factor of maternal sepsis in pregnancy identified by the confidential enquiries into maternal deaths?

A Obesity
B Impaired glucose tolerance/diabetes
C Anaemia
D Multiparity
E Black or other minority ethnic group origin

33. A 34-year-old woman para 1 presents 3 days following forceps delivery after being induced for prolonged rupture of membranes. She is brought in by ambulance having collapsed at home. She is febrile, tachycardic and hypotensive despite fluid resuscitation.

The use of vasopressors is indicated for septic shock where hypotension is not responding to fluid resuscitation.

Of the following, which management action is incorrect?

A Achieve a mean arterial pressure (MAP) >65 mmHg
B Achieve a central venous pressure (CVP) of ≥8 mmHg
C Achieve a central venous oxygen saturation ≥70%
D Achieve a central venous oxygen saturation ≥65%
E Achieve a heart rate of 70–80 bpm

34. A 20-year-old woman with a BMI of 27 kg/m^2 first-time mother had a normal vaginal birth 1 day ago. She suddenly started getting loud and started hallucinating. She was known to have bipolar disease and was stable on her medication for the past 2 years.

Of the following, what are her chances of developing postpartum psychosis?

A 1 in 4
B 1 in 8
C 1 in 12
D 1 in 16
E 1 in 32

Regarding pregnancy after a renal transplant

35. A 37-year-old nulliparous woman with a BMI of 22 kg/m^2 had a renal transplant 5 years ago. Her renal functions are stable. She now wishes to start a family. She attends renal-obstetric clinic and wishes to know the effects of her current health status on her pregnancy.

Of the following statements, which one correctly describes the effect of pregnancy?

A Renal transplant improves the fertility rate to >50%
B Globular filtration rates do not increase during pregnancy
C There is increased risk of developing hypertension
D Cyclosporins should be stopped once pregnancy test is positive
E Fetal growth is usually optimal in women with stable renal transplant

36. A 38-year-old woman received a kidney transplant 4 years previously for chronic renal failure caused by SLE. Her glomerular filtration rate (GFR) is currently 70 mL/min, she has microproteinuria and a BP of 110/80 mmHg without medication. She is currently managed with a low-dose regimen of immunosuppressants. She seeks advice as she now wishes to embark on a pregnancy.

Of the following, which one of the management options is the most appropriate?

A Advise her to avoid pregnancy since she is particularly at risk of serious maternal and fetal complications
B Advise her that her current clinical condition is one that does not markedly increase the risks to herself or her fetus
C Advise her that there is an increased risk of graft rejection throughout pregnancy
D Advise her that she will definitely need an increase in the immunosuppressive treatment she is receiving
E Advise her that the fetus will have a higher risk of congenital malformations

37. A 38-year-old woman in her third pregnancy with a BMI of 38 kg/m^2 is seen at 32 weeks' gestation complaining of repeated moderately heavy bleeding from the gums especially when brushing her teeth associated with a continuous bad taste in the mouth. On examination, the gums are noted to be swollen with a dusky red colour. There was also the presence of a thickened mucosal exophytic lesion of 1 cm diameter at the base between the upper incisors.

Of the following, which one of the management options is the most appropriate?

A Advise to increase frequency of oral hygiene with teeth brushing and use of mouth wash
B Refer for cryoablation of the lesion
C Refer for excisional biopsy of the lesion
D Prescribe a course of antibiotics supplemented by dental hygiene promotion
E Prescribe oral vitamin C supplements in a dose of 1,000 mg daily in divided doses for 7 days

Questions: EMQs

Option list for Questions 38–40

A Epidural
B Reassurance
C Fetal scalp electrode
D Fetal blood sampling
E IV oxytocin
F Delivery in midwifery led unit
G Delivery in consultant led unit
H Home birth
I Induction of labour
J Forceps delivery
K Caesarean section
L Water birth

For each clinical scenario described below, choose the single most appropriate diagnosis from the list of options above. Each option may be used once, more than once or not at all.

38. A 25-year-old parous woman with a body mass index (BMI) of 62 kg/m^2 presents in labour at term. She is keen for a vaginal delivery and has a history of previous vaginal deliveries. From the options above, name the single most important intervention that would be required in her labour.

39. A 33-year-old para 1 with a normal previous vaginal delivery presents in labour at the emergency department. Her BMI is 40 kg/m^2. Where would be an appropriate place of delivery for her?

40. A 39-year-old woman is seen in the antenatal clinic at 37 weeks. Her BMI is 44 kg/m^2 and the fetus is macrosomic with an estimated weight being at the 97% centile on growth scan. What is the most appropriate intervention for her?

Option list for Questions 41–43

Each option can be used once, twice, or more than once or none at all.

A Follow lifestyle advice
B Follow lifestyle advice and need an annual test to check blood glucose levels
C Discharge her from further testing
D Follow her annually but will not require any tests
E Refer to diabetic clinic
F Start her on metformin and refer her to diabetic nurses
G Admit at the acute medical assessment unit
H Do nothing
I Just start diabetic diet
J Recommend insulin treatment

For each clinical scenario described below, choose the single most appropriate diagnosis from the list of options above. Each option may be used once, more than once or not at all.

41. A 28-year-old para 3, with BMI 33 kg/m^2, who had gestational diabetes has gone to see her general practitioner (GP) for her postnatal check. Her glycosylated haemoglobin (HbA1c) is 39 mmol/mol (5.7%) at 6 weeks postpartum.

EFOG Part 1 & MRCOG Part 2: EMQs and SBAs

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EFOG Part 1 & MRCOG Part 2: EMQs and SBAs offers a wealth of practice questions for candidates preparing for the **Part 1** of European Board Examination and **Part 2** of the Membership examination of the Royal College of Obstetricians and Gynaecologists.

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- Provides in-depth answers where necessary refers to The EBCOG Postgraduate Textbook of Obstetrics and Gynaecology for further explanation

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