

# PTS 3a Mock SBA Series 2020

## Paper 2- [Questions]- Version 1



### Examination instructions

- Time allocated for examination: **2 hours 30 minutes**.
- You are **not permitted** to leave the examination hall in the first **90 minutes**.
- Please write your **student number** at the top of the answers page.
- You are permitted to use a Sheffield University approved **calculator** should you wish.
- The use of mobile phones or other **electronic devices is strictly prohibited** in this exam and should be handed in or switched off for the duration of the exam.
- This examination is **not negatively marked**.
- Please complete all **100 questions** provided.
- The paper consists of **100 marks** in total.

### Disclaimer:

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Please **do not share** this document on **google drives** or **directly to future 3a students**, this takes away from their opportunity to complete the mock SBA in the run up to their exams when it has maximal impact as a revision resource. **This mock paper will be edited and repeated in future years**. Thank you.

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**[Question paper begins on the following page]**

**1. What is the initial treatment for DKA if the child or young person is not alert, is nauseated or vomiting, and is clinically dehydrated?**

- A. IV fluids (5% dextrose) + SC insulin (0.1units/kg/hr)
- B. IV fluids (0.9% NaCl 10ml/kg) + SC insulin (0.1units/kg/hr)
- C. IV fluids (0.9% NaCl 10ml/kg) + SC insulin (0.2units/kg/hr)
- D. PO fluids + SC insulin
- E. PO fluids + IM insulin

**2. Aside from hyperglycaemia, acidosis and ketonaemia, which other abnormality may be seen on blood investigation of DKA prior to treatment?**

- A. Mildly raised bicarbonate
- B. Mildly raised creatinine
- C. Severely decreased potassium
- D. Severely raised sodium
- E. None

**3. Tommy, a 9 year old, has been experiencing a fever, cough and runny nose for the last few days. However this morning, his dad said that he noticed a rash that started behind his ears and has spread down over his body. He seems very unsettled and his fever has been getting progressively higher and is now at 39 degrees. What is the likely diagnosis?**

- A. Chickenpox
- B. Common cold/influenza
- C. Henoch-Schonlein purpura
- D. Measles
- E. Meningococcal septicaemia

**4. Which of the following is not a clinical feature of Turner Syndrome?**

- A. Congenital heart defects
- B. Hyperthyroidism
- C. Short stature
- D. Webbed neck
- E. Widely spaced nipples

**5. Which three vaccines should a baby receive at 8 weeks old?**

- A. 6-in-1 + MenB + Hib/MenC
- B. 6-in-1 + MenB + MMR
- C. 6-in-1 + rotavirus + MenB
- D. 6-in-1 + rotavirus + pneumococcal
- E. 6-in-1 + influenza

**6. A 2 year old boy presented with a high fever and malaise. A salmon-coloured rash was present at times of fever. Shortly afterwards, he developed severe oligoarticular joint disease. Which treatment would be least appropriate in this case?**

- A. Antibiotics
- B. Anti-TNF $\alpha$
- C. Intra-articular steroid injection
- D. Methotrexate
- E. Paracetamol

**7. Which of the following is a complication of JIA?**

- A. Chronic anterior uveitis
- B. Coeliac disease
- C. Crohn's disease
- D. Hypothyroidism
- E. Rheumatoid arthritis

**8. Which of the following drugs is not known to cause Stephen-Johnson syndrome?**

- A. Allopurinol
- B. Lamotrigine
- C. Levothyroxine
- D. Penicillin
- E. Phenytoin

**9. A 7 month old is able to sit unsupported and roll over in both directions but is not yet mobile. She is able to reach out for toys with a palmar grasp and transfers toys between hands. She says both 'mama' and 'dada' but does not discriminate between her parents. She also makes other speech sounds but has no recognisable words. How would you describe her development?**

- A. Global developmental delay
- B. Gross motor delay
- C. Language delay
- D. Language and gross motor delay
- E. Normal development

**10. At what age will a baby raise head to 45° from horizontal, follow moving objects by turning their head and smile responsively?**

- A. 4 months
- B. 6 months
- C. 10 months
- D. 12 months
- E. 6 weeks

**11. A 13 year old male presents to his GP along with his mother. His mother describes her son appearing distant at times and falling behind at school, despite being very bright. She reports his attention as being generally poor. She describes him being clumsy in the morning and often dropping his breakfast. She noticed him jerking this morning and decided to get it checked out. What is the most likely diagnosis?**

- A. Benign rolandic epilepsy
- B. Juvenile absence epilepsy
- C. Juvenile myoclonic epilepsy
- D. Lennox-Gastaut syndrome
- E. Tonic-clonic seizures

**12. You assess an 8 year old child in clinic, who was referred by his GP. The referring letter states their mother has described a classic presentation of seizures, having had 3 to date. There is also a family history of epilepsy. You take a history and perform a thorough neurological examination, which is all normal. You agree that he is likely to be having seizures. What is the most appropriate first step?**

- A. Immediately start an anti-epileptic medication- delay could cause harm
- B. Reassure and send home - he will grow out of it
- C. Request a CT scan of the head and follow up when results are back
- D. Request an EEG and follow up when results are back
- E. Request an MRI of the head and follow up when results are back

**13. Which of the following are not a complication of chickenpox?**

- A. Bacterial superinfection
- B. Cerebellitis
- C. Disseminated intravascular coagulation
- D. Progressive disseminated disease
- E. Pyelonephritis

**14. A 4 year old child presents with fever, headache and photophobia. They have been getting progressively more unwell following a cellulitis infection which has not responded adequately to antibiotics prescribed by their GP one week ago. They are drowsy and vomiting. On examination, their neck is stiff and they have a positive Kernig sign. You perform a lumbar puncture. Given the most likely diagnosis, what would the CSF show?**

- A. Clear appearance, normal WBCs, low protein, raised glucose
- B. Clear appearance, raised lymphocytes, raised protein, low glucose
- C. Turbid appearance, raised polymorphs, raised protein, low glucose
- D. Turbid appearance, raised polymorphs, low protein, normal glucose
- E. Turbid appearance, raised lymphocytes, raised protein, low glucose

**15. A 7 year old child presents to her GP following a 3 day history of fever and sore throat. She has now developed a maculopapular rash that feels rough to touch, with flushed cheeks and perioral sparing. On examination, her tongue is coated and white. What is the diagnosis?**

- A. Hand, foot and mouth disease
- B. Kawasaki disease
- C. Scarlet fever
- D. Slapped cheek syndrome
- E. Tonsillitis

**16. A 6 year old male presents after having blood in his urine for 3 days. A urine dip is performed. On examination, there is a palpable mass on his left side. What is the most important diagnosis to exclude?**

- A. Constipation
- B. Neuroblastoma
- C. Urinary tract infection
- D. Vesicoureteral reflux
- E. Wilms tumour

**17. A 10 year old male is seen by his GP. He has severe learning difficulties and global developmental delay. He has characteristic facies of a large head, long face, large everted ears, and a prominent mandible. He also has mitral valve prolapse and poor muscle tone. What is the most likely underlying genetic syndrome?**

- A. Down syndrome
- B. Fragile X syndrome
- C. Noonan syndrome
- D. Prader-Willi syndrome
- E. Williams syndrome

**18. A 16 year old male is seen by his GP. He has delayed onset of puberty- small penis, reduced testicle size and no facial or body hair. He also had a reduced sense of smell, poor balance and learning difficulties. What is the most likely underlying diagnosis?**

- A. Idiopathic hypogonadotropic hypogonadism
- B. Kallmann syndrome
- C. Klinefelter syndrome
- D. Prader-Willi syndrome
- E. Turner syndrome

**19. A 2 year old female presents with multiple itchy lesions mainly on the face and trunk, with some on the limbs. The lesions appeared 3 days ago and are papular with surrounding erythema. Some lesions have been scratched, bled and scabbed over. She has had a mild fever but is largely well. What is the most likely diagnosis?**

- A. Chickenpox
- B. Contact dermatitis
- C. Dermatitis herpetiformis
- D. Impetigo
- E. Urticaria

**20. A neonate presents with poor feeding, irritability, and fever. They have a purpuric rash appearing. On examination, they have a bulging fontanelle. A lumbar puncture is performed and is found to have raised polymorphs, high protein and low glucose. Given the diagnosis, what is the most likely causative organism.**

- A. Group B streptococcus
- B. Haemophilus influenza
- C. Neisseria meningitides
- D. Staphylococcus aureus
- E. Streptococcus pneumoniae

**21. Which of the following features of a suicide attempt is least likely to increase the risk of a future completed suicide?**

- A. An impulsive act
- B. Leaving a suicide note
- C. Locking the door to avoid discovery
- D. Terminating utilities contracts before the act
- E. Using a rope to hang oneself

**22. Which of the following is not a first-rank symptom of schizophrenia?**

- A. 3<sup>rd</sup> person auditory hallucinations
- B. Persecutory delusions
- C. Somatic passivity
- D. Thought insertion
- E. Visual hallucinations

**23. Which of the following drugs is used to prevent and treat the extra-pyramidal side effects (EPSEs) of antipsychotics?**

- A. Flumazenil
- B. Lorazepam
- C. Prochlorperazine
- D. Protamine sulphate
- E. Pyridostigmine

**24. Martin is a 46-year-old man that presents to his GP with his partner, who is concerned about Martin's mental health. Martin has been unable to work for the past 5 months and prefers to stay indoors. His partner believes that this is related to witnessing his friend being killed after being hit by a bus at the local bus station. Martin tells the GP that he often feels like he is back at the bus station, watching in slow motion as his friend is ran over. In addition, he complains of feeling on edge when he hears the sound of car engines. His partner expresses frustration at Martin's unwillingness to take public transport and feels that it is unnecessary for Martin to be walking his teenage children to school every day for fear that they may cross the road without looking both ways. Given Martin's likely diagnosis, what is the most appropriate initial management?**

- A. Dialectical behavioural therapy
- B. Exposure-response prevention CBT
- C. Eye movement desensitisation and reprocessing (EMDR)
- D. Sertraline
- E. Trauma-focussed CBT

**25. Which of the following features is least suggestive of a hypomanic episode?**

- A. Flight of ideas
- B. Grandiose delusions
- C. Irritability
- D. Reduced need for sleep
- E. Sexual disinhibition

**26. A 25-year-old man is brought into the section 136 assessment suite by the police, after being found wandering the streets in the early hours of the morning. On questioning, he tells you that voices from the heavens are talking to each other about his destiny, and he believes that a 'great reckoning' is coming upon the world. He is otherwise difficult to understand, as he jumps from one topic to another, which seem to have no obvious logical connection. At the time of his arrest, the police found cannabis on him, and he tells you that he smokes cannabis daily. Which of the following best describes his thought form?**

- A. Knight's move thinking
- B. Flight of ideas
- C. Third person auditory hallucinations
- D. Circumstantiality
- E. Perseveration

**27. A patient presents to the GP complaining of feeling irritated and down. He states that only 'strong drugs' will be good enough to help him, and he declines a prescription of an SSRI as he believes they won't help. He suggests to the GP that he should get a prescription of diazepam, as he knows that helps him to relax. On examination he appears slightly drowsy, his eyes and nose are watering, and there are needle tracks on both of his arm. If the GP is considering offering a detoxification regime, which of the following medications would be most appropriate to initiate?**

- A. Chlordiazepoxide
- B. Loperamide
- C. Methadone
- D. Naloxone
- E. Naltrexone

**28. Which of the following statements regarding lithium prescribing is incorrect?**

- A. Thyroid and renal function should be checked every 6 months
- B. There is a significant risk of agranulocytosis
- C. Lithium is teratogenic
- D. Lithium has a narrow therapeutic index
- E. Tremor is a recognised side effect

**29. A 34-year-old female with a history of alcohol misuse is brought to the GP by her friend, as she seems confused and disorientated. The patient is agitated and tells the GP that she needs to go to hospital because she is disturbed by the small animals that keep jumping across the room. She can't remember how she got here but does remember that she last had alcohol about two days ago. She has no other past medical history of note other than depression. On examination you note a coarse tremor, profuse sweating, a temperature of 38.1C and tachycardia. Given the likely diagnosis, which of the following would be most appropriate to management this patient?**

- A. Admission to hospital for medically assisted alcohol withdrawal
- B. Carry out a Mental Health Act assessment, and consider detention under Section 2 of the MHA for assessment of psychiatric symptoms
- C. Prescribe a 7 reducing regime of chlordiazepoxide. Advise to return to the GP surgery if symptoms have not settled after this time
- D. Prescribe oral lorazepam and advise to return to GP surgery if symptoms have not settled in 24 hours
- E. Watch and wait, with strict safety-netting

**30. A patient with a diagnosis of OCD is reviewed in a general adult psychiatry clinic. He tells you that he has felt little benefit from his current treatment. The patient has been taking fluoxetine and attending exposure-response prevention (ERP) CBT for 12 weeks now, but this has not seemed to have adequately controlled his obsessions. The patient is not keen to try another SSRI, as he has been experiencing nausea during the course of his treatment. What is the most appropriate next step in managing this patient?**

- A. Encourage adherence to fluoxetine and ERP CBT, review in 3 months
- B. Stop fluoxetine, encourage adherence to ERP CBT and refer for psychodynamic therapy
- C. Switch fluoxetine to clomipramine
- D. Switch fluoxetine to fluvoxamine
- E. Switch fluoxetine to risperidone

**31. Miss X is a 26 year old woman presenting to your surgery. She complains of a 2 week history of low mood, weight loss and lack of sleep. She has no history of any health problems and takes the oral contraceptive pill. Her PHQ-9 score is 7/27 and GAD is 3/21. What is the most appropriate next step?**

- A. Prescribe amitriptyline 10mg OD
- B. Prescribe citalopram 10mg OD
- C. Prescribe lithium 200mg nocte
- D. Prescribe nothing and review patient in 2 weeks
- E. Prescribe zopiclone 7.5mg nocte

**32. Mr X is a 30 year old man, with moderate depression. You have commenced 20mg of Citalopram OD. Which of the following statements is not true?**

- A. A response should be seen within 1 week
- B. Citalopram can cause discontinuation symptoms when stopped
- C. Citalopram can cause hyponatremia
- D. Patients treated with antidepressants should be monitored for risk of suicide
- E. Treatment with Citalopram is likely to be for a least 6 months

**33. A 17-year-old boy is brought in by his mother, who is concerned about her son. She says, over the last 9 months his performance at school has deteriorated. He's told his mother on more than one occasion that his headteacher has put a thought in his head that he should drop out of school. He occasionally hears the sound of a bell that he cannot locate the source of. On questioning, he tells you his headteacher is able to control his actions, making him sit in a chair all day and not talk to anyone. He said this was done through a controlling machine in his office, transmitting signals through the bell tower. What best describes this phenomenon?**

- A. Delusion of passivity
- B. Delusional perception
- C. Running commentary
- D. Somatic hallucination
- E. Thought broadcast

**34. A 28 year old male presents to A&E following an overdose of 32 paracetamol tablets. He recently broke up with his long-term girlfriend and mother of his 5 month old son, who she's refusing to let him see. He has been drinking up to 50 units of alcohol per week. Which of the following are not risk factors for suicide following self-harm?**

- A. Being male
- B. Being married if female
- C. Comorbid psychiatric illness
- D. Comorbid substance abuse
- E. Older age

**35. Mr X is a 82 year old gentleman, who recently had a left hemiarthroplasty following a fall. He has a diagnosis of Alzheimers, has short-term memory loss and occasionally misidentifies staff as being his wife or daughters. He was previously living at home with a care package, but staff feel he needs to be discharged to a care home to receive the support he requires. Mr X says he would prefer to be discharged home with a care package. A capacity assessment is completed and Mr X is deemed to not have capacity for this decision. Which one of the following statements is false, when describing the second stage of the two-stage test for assessing mental capacity?**

- A. A person's ability to make a decision has three features - an ability to understand, retain, and weigh-up.
- B. A person can communicate their decision in writing.
- C. It is enough for a person just to understand the salient details of the decision.
- D. It is important not to assess a person's understanding before they have been given relevant information about the decision.
- E. Capacity is time and decision specific.

**36. A 47 year old secondary school teacher has been worrying about inadvertently touching some of the 16 year old male students in her class. She is worried that when she accidentally brushes against them when walking past, this could be seen as a sexual act. She cannot stop thinking about this and during lessons has to sit down, as she fears if she walks around the classroom, she will brush up against a male student and inadvertently touch them in a sexual way. She is highly anxious all the time, even at home and feels sad most of the time. These thoughts started 6 months ago when a teacher was suspended for a similar problem. Which one of the following statements about obsessional thoughts is false?**

- A. Sexual content is not unusual
- B. They are typically intrusive and repetitive
- C. They can occur in depressive disorders
- D. They are usually egosyntonic
- E. They are usually resisted

**37. Mrs A is a 75 year old woman, presenting to your surgery accompanied by her husband. Her husband is concerned about Mrs A's memory, as she's left the hob on when cooking a few times and has started finding it difficult to give the correct change to cashiers when she goes shopping. You decide to do an assessment of her cognition. Which of the following would be the most appropriate assessment to use?**

- A. AUDIT
- B. Beck's Depression Inventory
- C. 6CIT
- D. GAD-7
- E. PHQ-9

**38. Mrs P is a 92 year old woman with a diagnosis of Alzheimer's dementia and lives in a care home with 24 hour support. Over the last 3 days staff have noticed she has been increasingly confused, agitated and restless. You attend the care home for an assessment and suspect this could be delirium. Which of her medications has not been associated with development of delirium in the elderly?**

- A. Adcal-D3
- B. Furosemide
- C. Oxybutynin
- D. Propranolol
- E. Ranitidine

**39. A 42 year old male with an established diagnosis of paranoid schizophrenia has been started on Clozapine. He has trialled 2 other antipsychotics, which both helped somewhat but he continued to experience paranoia and auditory hallucinations. He's happy to take Clozapine but asks for clarification on how often he will need blood tests. What statement below best describes the initial blood monitoring required for Clozapine?**

- A. Every day for 7 days
- B. Every month for 6 months
- C. Every week for 12 weeks
- D. Every week for 18 weeks
- E. Twice weekly for 4 weeks

**40. A 26 year old male with drug-induced psychosis is admitted to the early intervention ward under a section 2. He is commenced on Olanzapine, however soon complains of a feeling of inner restlessness and struggles to sit still when watching TV. What side effect is he describing?**

- A. Acute Dystonia
- B. Akathisia
- C. Parkinsonism
- D. Neuroleptic Malignant Syndrome
- E. Tardive Dyskinesia

**41. A 29 year old woman, Gravida 2 para 1, presents to GP with severe abdominal pain, contractions and spotting per vaginum. Current pregnancy is 35 weeks gestational age. On her 20 week scan the placenta was lying normally. Her previous pregnancy was delivered vaginally. The patient currently takes labetalol and is having serial ultrasound scans and umbilical artery dopplers as her fetus is small for gestational age. On examination her abdomen is tender, the fetus is cephalic. What is the most likely diagnosis?**

- A. Miscarriage
- B. Placental abruption
- C. Placenta praevia
- D. Uterine rupture
- E. Vasa praevia

**42. Which of the following is not a risk factor for Venous Thromboembolism in pregnancy?**

- A. Previous Venous thromboembolism
- B. Factor V Leiden deficiency
- C. Multiple pregnancy
- D. Low BMI
- E. Pre-eclampsia

**43. A couple presents to a fertility clinic as they were unable to achieve pregnancy after 1 year of unprotected intercourse. The woman is 28 years old with regular and normal menses. A hysterosalpingogram shows normal uterine contour and patent tubes bilaterally. The male partner is 29 years old with negative medical history. Examination is unremarkable, with normal testicular volume and secondary sexual characteristics. What is the first line investigation for the male partner?**

- A. FSH + LH levels
- B. MRI of pituitary and hypothalamus
- C. Semen analysis
- D. Serum karyotype
- E. Testicular biopsy

**44. A 29 year old patient had a positive urinary pregnancy test 6 weeks ago, and has presented with passing blood per vaginum. She is clinically stable. You suspect a threatened or inevitable miscarriage. A transvaginal ultrasound is carried out which shows an intrauterine fetal pole with no fetal heartbeat. The crown rump measurement is less than 7mm. What is the next most appropriate step?**

- A. Inform the mother that she has had a miscarriage
- B. Repeat the Ultrasound in 7 days
- C. Give IM Methotrexate and monitor beta HCG levels
- D. Discharge the patient with no further follow-up as a viable pregnancy is likely
- E. Prepare for immediate surgical evacuation of the retained products of conception

**45. A 28 year old woman is high grade HPV positive and has had an abnormal cervical smear which showed low grade dyskaryosis. She is referred for a colposcopy which shows low grade Cervical Intraepithelial neoplasia 1 at the transformation zone. What is the most appropriate management?**

- A. Discharge back to routine cervical screening recall (3 years)
- B. See and treat- carry out a Large Loop Excision of the Transformation zone immediately
- C. Do not treat- discharge and screen again at 12 months in the community
- D. Do not treat- discharge and screen again at 6 months in the community
- E. Take a biopsy and only treat if this shows biopsy proven CIN 1

**46. A 4-hour-old baby boy, born by vaginal delivery at 36 weeks' gestation, is noticed by his mother to be making a grunting noise when he breathes. On examination the infant is irritable, pale, and floppy. He has an increased respiratory rate (65 breaths per minute), tachycardia (170 bpm), and low blood pressure (45/25 mmHg). His temperature is 36.2°C . Group B streptococcal carriage had not been screened for. Which of these is not a risk factor for Group B Streptococcus (GBS) infection?**

- A. Foetal macrosomia
- B. Maternal pyrexia
- C. Prematurity
- D. Previous sibling GBS infection
- E. Prolonged rupture of the membranes

**47. A 46-year-old woman presents with postcoital bleeding. When asked, she says her vaginal discharge is purulent and a red-brown. She has a history of unprotected intercourse with multiple sexual partners and is a smoker. She has no temperature, her white blood cell count is normal and she denies any dyspareunia. What is the most likely diagnosis?**

- A. Bacterial vaginosis
- B. Cervical cancer
- C. Cervical polyp
- D. Endometriosis
- E. Pelvic infection

**48. A 42-year-old smoker presented to labour and delivery at 28 weeks of gestation with worsening abdominal pain of a few hours' duration. She had also had some vaginal bleeding within the past hour. She was found to have low-amplitude, high-frequency uterine contractions, and the fetal heart rate tracing showed recurrent late decelerations and reduced variability. Her uterus was tender and 'woody' on palpation. What would be the immediate management?**

- A. Caesarean section
- B. Dexamethasone
- C. Induce vaginal delivery
- D. Opiate analgesia
- E. Surgical ligation

**49. A 32-year-old patient at 22 weeks gestation presents with heavy bleeding and lower abdominal pain. Clots are found and on examination, the cervical os is open. On ultrasound, products of conception were found in the cervix. What is this classification of miscarriage?**

- A. Incomplete miscarriage
- B. Inevitable miscarriage
- C. Missed miscarriage
- D. Recurrent miscarriage
- E. Threatened miscarriage

**50. The most common type of vaginal cancer is:**

- A. Primary squamous cell carcinoma
- B. Primary Adenocarcinoma
- C. Secondary (metastatic) Vaginal cancer
- D. Primary clear cell adenocarcinoma
- E. Primary melanoma

**51. Which of the following is not associated with increased risk of Placenta Praevia?**

- A. Maternal age >40 years
- B. Multiple pregnancy
- C. Nulliparity
- D. Previous placenta praevia
- E. Previous uterine surgery

**52. A nulliparous 28-year old lady presents to A&E at 38 week's gestation in early labour and she is now showing dark-red vaginal bleeding after spontaneous rupture of the placental membranes, and CTG shows acute fetal compromise. What is the most likely cause of this bleeding?**

- A. Ectopic pregnancy
- B. Miscarriage
- C. Placenta praevia
- D. Placental abruption
- E. Vasa praevia

**53. A 31-year old woman has been diagnosed with vasa praevia by an ultrasound during her third trimester. Which of the following investigations or management options is contraindicated in this case?**

- A. Administer corticosteroids for fetal lung maturity from 32 weeks
- B. Digital vaginal examination for further inspection of the internal os
- C. Book an elective caesarean section for delivery
- D. Transvaginal ultrasound to confirm vasa praevia
- E. Admit for prophylactic hospital admission from 30-32 weeks gestation

**54. A 26-year old lady attends clinic as she is struggling to conceive. She came off the combined contraceptive pill one year ago and has been trying to conceive since then. When questioned about her menstrual history she says that used to have very painful and heavy periods when she was younger before starting the pill, and this has returned again since coming off it. She also complains of occasional pain on intercourse and pain on bowel movements. What is the most likely diagnosis?**

- A. Adenomyosis
- B. Chronic pelvic inflammatory disease
- C. Chronic pelvic pain
- D. Endometriosis
- E. Irritable bowel syndrome

**55. Which hormone is initially produced by the corpus luteum and causes secretory changes to the endometrium such as stromal hypertrophy and increased blood supply?**

- A. GnRH
- B. hCG
- C. FSH
- D. Progesterone
- E. Oestradiol

**56. A surge in which hormone causes ovulation?**

- A. FSH
- B. GnRH
- C. LH
- D. Oestrogen
- E. Progesterone

**57. Obstructed labour occurs when the fetus cannot pass through the birth canal. In order for a fetus to effectively progress through the birth canal it requires certain head movements. Which of the following describes the correct process of fetal descent through the birth canal?**

- A. Descent, engagement, extension, internal rotation, crowning, extension of presenting part, external rotation of head, delivery.
- B. Descent, engagement, flexion, internal rotation, crowning, extension of presenting part, external rotation of head, delivery
- C. Descent, engagement, flexion, external rotation, crowning, extension of presenting part, external rotation of head, delivery
- D. Descent, engagement, flexion, internal rotation, crowning, flexion of presenting part, external rotation of head, delivery
- E. Engagement, descent, extension, internal rotation, flexion, external rotation of head, delivery

**58. A 23-year old lady attends her 20-week booking appointment and undertakes routine asymptomatic bacteriuria screening, the result comes back positive for the presence of bacteriuria.**

**What are the most appropriate next steps?**

- A. Leave it untreated unless it becomes symptomatic
- B. Confirm presence of bacteriuria with second culture and then begin culture dependent antibiotic
- C. Immediately treat with nitrofurantoin
- D. Immediately treat with amoxicillin
- E. Leave it untreated and test again for bacteriuria again in one week.

**59. At what amniotic fluid index (AFI) would a pregnancy be diagnosed with polyhydramnios?**

- A. Less than 5cm
- B. Greater than 14cm
- C. Greater than 24cm
- D. Greater than 30cm
- E. Polyhydramnios is not defined by AFI

**60. What is the most common cause of polyhydramnios?**

- A. Idiopathic
- B. Macrosomia
- C. Maternal diabetes
- D. Structural deformities of the fetus
- E. Viral infections

**61. Fred is an 85 year old man who is brought to the GP by his daughter after he has repeatedly been found near his local corner shop wearing his slippers, not being able to make his way home over the past 5 months. His daughter says that his walking has changed and he now shuffles, and that is periodically confused and is getting worse. During the consultation Fred occasionally mutters to himself as if he is talking to someone. What is the most likely diagnosis?**

- A. Alzheimer's Disease
- B. Delirium
- C. Lewy Body Dementia
- D. Parkinson's Disease
- E. Stroke

**62. Which is the least common presentation in a patient with left sided Middle Cerebral Artery Ischaemic stroke?**

- A. Aphasia
- B. Headache
- C. Personality changes
- D. Right sided hemiplegia
- E. Right sided weakness

**63. Which of the following investigation results would enable a diagnosis of osteoporosis?**

- A. BMI: 19
- B. DEXA scan: T score of -2.8
- C. DEXA scan: T score of -1.2
- D. Fractured neck of femur on X-ray
- E. FRAX score: High Risk

**64. Which of the following is the definition of polypharmacy:**

- A. A single patient taking 2 or more medications to control the same disease
- B. A single patient taking 5 or more medications daily
- C. Prescribing that increases the risk of drug-drug interactions
- D. The co-occurrence of two or more chronic conditions
- E. The prescription of two drugs which may interact to cause adverse effects

**65. Which of the following is not part of a 'confusion screen'?**

- A. Chest X-ray
- B. C-Reactive Protein
- C. Electrocardiogram
- D. Full Blood Count
- E. Urinalysis

**66. Mary is a 54 year old who presents with urine leakage when she runs. She has 3 vaginal deliveries, with her youngest child she had retained placenta resulting in a hysterectomy. Her BMI is 28. She does not experience leakage at night or just as she gets to the toilet. What is the most likely diagnosis?**

- A. Overactive Bladder Syndrome
- B. Overflow Incontinence
- C. Stress Incontinence
- D. True Incontinence
- E. Urge Incontinence

**67. Which of the following is not true about Total Anterior Circulation Stroke (TACS)?**

- A. Affects supply from the Anterior Cerebral Artery
- B. Affects supply from the Middle Cerebral Artery
- C. Presents with unilateral weakness of face, arm and leg
- D. Presents with higher cerebral dysfunction
- E. Never presents with homonymous hemianopia

**68. What is first line treatment of stress incontinence?**

- A. Absorbent pads
- B. Colposuspension
- C. Pelvic Floor Physiotherapy
- D. Urethral sling surgery
- E. Urodynamics

**69. Which subtype of dementia is the most prevalent?**

- A. Alzheimer's Disease
- B. Frontotemporal Dementia
- C. Lewy Body Dementia
- D. Mixed Dementia
- E. Vascular Dementia

**70. Which of the following is not a key feature of delirium?**

- A. Changes in cognition
- B. Disturbance of consciousness
- C. Develops over a short period of time and fluctuates over the course of a day
- D. Underlying dementia
- E. Underlying medical condition

**71. Horner's syndrome is a condition caused by a disruption of sympathetic activity. Which of the following is NOT seen in Horner's syndrome?**

- A. Anhydrosis
- B. Enophthalmos
- C. Miosis
- D. Mydriasis
- E. Ptosis

**72. Mr Walker has been referred to your neurology clinic with a 6-month history of weakness in his left hand, difficulty walking and dysphagia. You request an EMG and diagnose MND. Which of the following medications will you start him on?**

- A. Donepezil
- B. Edaravone
- C. Riluzole
- D. Rivastigmine
- E. Ropinirole

**73. Mrs Smith, a 50-year-old lady, comes to see you in your GP practice with a week's history of an electric-shock-like pain in the lower left side of her face that lasts for a few seconds and occurs whenever she touches her face or brushes her teeth. She has no neurological signs on examination of her cranial nerves. She has no other significant past medical history or family history. You make a diagnosis of trigeminal neuralgia. What is the first line treatment according to the NICE guidelines?**

- A. Carbamazepine
- B. Gabapentin
- C. Lamotrigine
- D. Phenytoin
- E. Valproate

**74. Dorothy is a 73 year old lady who has attended clinic today with her daughter Caroline. Caroline says that Dorothy has been having a bit of trouble with her memory over the past 3 years or so, and she has lost interest in things, but it didn't really seem to be getting worse so they did not seek help. However, things have got worse over the last couple of months. Caroline now feels that Dorothy is struggling to cook meals at home, has had some speech problems, and is becoming slower and more clumsy, and she now struggles to walk. On questioning, Dorothy is well orientated to time and place. Dorothy has a past medical history of hypertension, hypercholesterolaemia, type 2 diabetes and has had 2 strokes, one about 3 years ago and one a few months ago. You think she has dementia. Which type of dementia is most likely?**

- A. Alzheimer's Disease
- B. Frontotemporal Dementia
- C. Lewy Body Dementia
- D. Mixed dementia
- E. Vascular dementia

**75. Rebecca is a 25 year old woman with a history of unilateral pulsating headaches. She says they last for several hours, she feels sick and has to lie down in a dark room. She describes seeing zig-zags just before the headache comes on. You suspect migraines. Which of the following is not an identified trigger for Migraines?**

- A. Alcohol
- B. Cigarette smoke
- C. Exercise
- D. Periods
- E. Spicy food

**76. Sophie is a 30 year old woman who has a past medical history of migraines, asthma and anxiety. She has been controlling her migraines for years with PRN sumatriptan as they were not too frequent. However, over the last few months the migraines have been getting more frequent and her symptoms have been worse. She would like something to prevent her migraines. What would be the first line management option you would offer her?**

- A. Acupuncture
- B. Botox injections
- C. Gabapentin
- D. Propranolol
- E. Topiramate

**77. Kenneth is a 65 year old man who presents with a 5 month history of difficulty walking and feeling stiff. He has not had any falls. On examination he has a shuffling gait, cog-wheel rigidity and a resting tremor. He has no problems with his speech and does not report any cognitive impairment or hallucinations. What is the most likely diagnosis?**

- A. Corticobasal degeneration
- B. Lewy body dementia
- C. Normal Pressure Hydrocephalus
- D. Parkinson's disease
- E. Progressive Supranuclear Palsy

**78. imon has recently been diagnosed with Parkinson's disease. He has been started on L-dopa but this is not controlling his symptoms. You decide to add ropinirole. What is the mechanism of action of ropinirole?**

- A. Activates dopamine receptors to mimic the action of dopamine
- B. Activates serotonin receptors to mimic the action of serotonin
- C. Inhibits acetylcholinesterase to increase levels of acetylcholine in the brain
- D. Inhibits catechol-o-methyltransferase to prevent the methylation of L-dopa to 3-O-methyldopa
- E. Inhibits monoamine oxidase B to prevent the breakdown of dopamine

**79. John is a 72 year old man who presented to his GP after having an episode of slurred speech and a left sided facial droop yesterday. This lasted for roughly 2 hours before wearing off and he has not had any symptoms since. The GP suspected TIA and refers to you in neurology. Which of the following is the most appropriate initial management to treat TIA?**

- A. Aspirin 300mg
- B. Clopidogrel 75mg
- C. Metformin 500mg
- D. Rivaroxaban 10mg
- E. Warfarin 5mg and titrate dose until INR 2-3

**80. Dave is a 67 year old man with a past medical history of hypertension and type 2 diabetes. He has smoked 20 cigarettes a day for the last 20 years, and drinks 30 units a week. He has a BMI of 32. Dave's brother has recently had a TIA and Dave is concerned about his risk. Which of the following is a risk factor for TIA?**

- A. Being female
- B. Caucasian race
- C. Gout
- D. Increasing age
- E. Physical activity

**81. A 35 year old female presents to the GP clinic with heavy menstrual bleeding (HMB) that has been ongoing for the last 3 months. Her last menstrual period was 2 weeks ago. She is not on any contraception as she is trying to conceive. On examination you find a large palpable mass in the suprapubic area of the abdomen. Given the most likely diagnosis what is the most appropriate immediate management?**

- A. Mirena coil
- B. Myomectomy
- C. Referral to the community midwife
- D. Tranexamic acid
- E. Urgent referral to oncology

**82. Which of the following is not included in the Rotterdam criteria for diagnosing Polycystic Ovarian Syndrome?**

- A. Anovulation
- B. High progesterone levels
- C. Hirsutism
- D. Increased ovarian volume (>10cm<sup>3</sup>)
- E. 12 or more peripheral ovarian follicles

**83. Which of the options below is not a role of metformin in PCOS?**

- A. Appetite reduction
- B. Decreases androgen production
- C. Decreases LH from the anterior pituitary
- D. Decreases sex-hormone binding globulin in the liver
- E. GnRH antagonist

**84. Which of the options below is most appropriate to prevent oral candidiasis when using inhaled corticosteroids?**

- A. Prophylactic miconazole topical gel
- B. Prophylactic nystatin
- C. Prophylactic oral fluconazole
- D. Rinsing mouth out with water
- E. Using the inhaler after a meal

**85. A 6 year old (20kg) is brought in to the emergency department by his parents. He is clinically dehydrated, tachypnoeic, but not shocked. His breath smells like pear drops. You carry out some basic investigations and discover that his blood glucose is 20 mmol/l, arterial pH is 7.2 (assume 5% fluid deficit) and there is ketonaemia. After 200ml of bolus, what is the most appropriate fluid resuscitation in this patient's current state?**

- A. 0.9% NaCl plus KCl 40mmol/L, at a rate of 79ml/hour
- B. 0.9% NaCl plus KCl 40mmol/L, at a rate of 95ml/hour
- C. 0.9% NaCl plus KCl 20mmol/L, at a rate of 79ml/hour
- D. 0.9% NaCl plus KCl 20mmol/L, at a rate of 95ml/hour
- E. 0.9% NaCl plus dextrose, at a rate of 86ml/hour

**86. A 85 year old man is admitted to the hospital for a fall, which resulted in a fractured neck of femur. You are a FY1 reviewing his medication on the geriatrics ward. Which medication would you consider stopping to prevent future falls?**

- A. Alendronate
- B. Aspirin
- C. Finasteride
- D. Simvastatin
- E. Tamsulosin

**87. A 30 year old female, G2P1, presents to you with her 11 year old daughter to the antenatal ward, gestation 36+5, presenting with a 1 day history of dark urine, with RUQ pain. Her LFTs are AST 160 (3-30), ALT 170 (3-40). Her BP is 152/86mmHg, which is slightly raised from her normal (chronic hypertension). What is the most appropriate management option below?**

- A. Deliver baby
- B. Laparoscopic cholecystectomy
- C. Urgent USS Abdo
- D. Ursodeoxycholic acid
- E. Watch and wait

**88. A 32 year old female has an appointment with the gynaecologists regarding recurrent miscarriages. She has no known past medical history, but she has suffered with joint pain in the last few years. On examination you find that she has dysmorphic nail features that are seen below: What is the most likely diagnosis?**

- A. Ehlers Danlos
- B. Polycystic Ovary Syndrome
- C. Protein C deficiency
- D. Scleroderma
- E. Systemic Lupus Erythematosus



**89. A 29 year old pregnant female, gestation 28/40, has been diagnosed with gestational diabetes. Her fasting glucose level was 7.5mmol/L. What is the most appropriate initial management?**

- A. Insulin and lifestyle changes
- B. Insulin and Metformin and lifestyle changes
- C. Lifestyle changes only
- D. Metformin and lifestyle change
- E. Wait for the results of the OGTT

**90. A 7 day old premature neonate was delivered at 32 weeks gestation. On routine examination you identify abdominal distension and white-coloured vomit. What is the most important diagnosis to rule out?**

- A. GORD
- B. Hirschsprung's disease
- C. Intussusception
- D. Meconium Ileus
- E. Necrotising enterocolitis

**91. A 75 year old male presents with a 4 month history of fatigue, shortness of breath and a loss of appetite. He is an ex-smoker of 30 per day. You also notice that he has a moon face, a buffalo hump and lots of bruises on his skin. He also is diagnosed with COPD and takes salbutamol, inhaled budesonide and salmeterol. CT scans of the adrenal glands and head show no pathology. What is the most likely cause for his Cushing syndrome?**

- A. Squamous cell carcinoma of the lung
- B. inhaled budesonide
- C. Cushing's disease
- D. Small cell carcinoma
- E. Adrenal tumour

**92. A 45 year old male presents with increased thirst, nocturia, frequency, a headache and muscle weakness. He is investigated for diabetes. These tests come back normal. It is noticed on his second visit that he has a very high blood pressure. An abdominal CT is performed which shows bilateral hyperplasia of the adrenal glands. That electrolyte imbalance would you expect and what is the management?**

- A. Hypernatremia and Hypokalaemia. Surgery.
- B. Hyponatremia and Hyperkalaemia. Surgery.
- C. Hypernatremia and Hyperkalaemia. Surgery.
- D. Hypernatremia and Hyperkalaemia. Spironolactone.
- E. Hypernatremia and Hypokalaemia. Spironolactone.

**93. A 32 year old male presents with unilateral flank pain that starts in the loin area and moves to the groin. He has also noticed blood in his urine and dysuria. He suffers from gout and hypertension. Given the likely diagnosis, what is the diagnostic investigation?**

- A. Kidney, ureter, bladder CT
- B. Kidney, ureter, bladder USS
- C. Urinalysis
- D. Cystogram
- E. Abdominal CT

**94. A 75 year old female on a COTE ward for 2 days has not voided for the past 12 hours, has vomited once in the last hour and appears confused. Her creatinine is measured and is more than 3 times higher than her baseline. She has been started on a few medications whilst on the COTE ward: metformin, ramipril, amoxicillin and alendronic acid. What stage AKI is she and what drug most likely caused it?**

- A. Stage 1: amoxicillin
- B. Stage 2: metformin
- C. Stage 3: ramipril
- D. Stage 3: amoxicillin
- E. Stage 2: ramipril

**95. A 60 year old male smoker with an occupational history of working in a chemicals factory. He presents to the GP with frequency, urgency, nocturia, weight loss and painless haematuria. What is the most appropriate next step?**

- A. Check HbA1c
- B. Urinalysis
- C. Trimethoprim/ Nitrofurantoin
- D. 2 week wait urgent referral for cystoscopy and biopsy
- E. Referral to diabetic clinic

**96. A 50 year old female smoker comes to the GP with epigastric pain immediately after eating and vomiting. Urea breath test is positive. She is a smoker, drinks lots of caffeine and takes ibuprofen. What is the most appropriate management?**

- A. Lifestyle modifications- stop smoking, reduce caffeine intake and stop ibuprofen
- B. Lifestyle modifications + omeprazole
- C. Omeprazole + metronidazole
- D. Lifestyle modifications + omeprazole + clarithromycin
- E. Lifestyle modifications + lansoprazole + clarithromycin + metronidazole

**97. You are reviewing Dorothy, 70 year old woman on the renal ward. Her eGFR is 50mL/min/1.73m<sup>2</sup>. What stage CKD is she?**

- A. Stage 1
- B. Stage 2
- C. Stage 3A
- D. Stage 3B
- E. Stage 4

**98. You are a paramedic and are called out for a seizure in a 18 year old girl. When you arrive the girl is just recovering from the seizure, which her friends tell you ended about 30 seconds before you arrived, whilst you talk, she starts to have another seizure. What is the most appropriate management?**

- A. Put the patient in the recovery position whilst waiting for the seizure to reside
- B. Carry the patient into the ambulance to get her immediately to hospital
- C. ABCDE then administer sodium valproate
- D. ABCDE then administer buccal midazolam
- E. ABCDE then administer IV lorazepam

**99. You are a GP seeing a 72 year old male. He is complaining of slowing down of movements, difficulty turning when walking, poor balance and a loss of his sense of smell. On examination you notice a symmetrical pin-rolling tremor in his hands, rigidity in both arms, bradykinesia, a shuffling gate and a lack of facial expressions. His medications include: atorvastatin, aspirin, clopidogrel, ramipril and haloperidol. What is the most likely diagnosis?**

- A. Idiopathic Parkinson's disease
- B. Progressive supranuclear palsy
- C. Drug-induced Parkinsonism
- D. Multi-system atrophy
- E. Dementia with Lewy bodies

**100. You are seeing a 60 year old known COPD sufferer who is still getting short of breath and has a cough despite treatment with salbutamol. He does not have asthmatic features, has quit smoking and is completely vaccinated. What is the next step in treatment according to NICE?**

- A. Add a long acting beta agonist (LABA)
- B. Add a Leukotriene receptor antagonist (LRTA)
- C. Add a long acting muscarinic antagonist (LAMA) + a long acting beta agonist (LABA)
- D. Add a long acting beta agonist (LABA) + an inhaled corticosteroid (ICS)
- E. Add a LABA + LAMA + ICS

[END OF PAPER 2]

**Important note-** this mock SBA is meant to be used as a learning tool, it intentionally covers a broad range of topics and asks challenging questions in order to enable you to set future goals for learning and most importantly to learn from the answers and explanations, adding these to your notes. This is a revision resource and not a reflection of the true exam.

**Answers-** see separate document: PTS 3a Mock SBA Series- Paper 2- ANSWERS

**Scores/Feedback-** When you have marked your paper please complete the Paper 2 Google form to record your scores and feedback on questions. This is found here and on the answer document.

Paper 2 Google Form- <https://forms.gle/GSE2LUAbGb4r6UA66>

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