

PTS 2a Mock SBA Series 2020

Paper 2- [Questions]- Version 3



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.
- 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 2a 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 repeated for future years.** Thank you.

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- 1. Which parameter isn't in the scoring system used to calculate the stroke risk in patients with Atrial Fibrillation?**
 - A. Age
 - B. Blood Pressure
 - C. Congestive Heart Failure
 - D. Diabetes
 - E. Family History

- 2. Which of the following pulses is associated with Atrial Fibrillation?**
 - A. Absent
 - B. Collapsing
 - C. Irregularly irregular
 - D. Pulsus paradoxus
 - E. Radio-Radial delay

- 3. An ejection crescendo-decrescendo systolic murmur would be suggestive of which valvular pathology?**
 - A. Aortic regurgitation
 - B. Aortic stenosis
 - C. Mitral regurgitation
 - D. Mitral stenosis
 - E. Pulmonary stenosis

- 4. What are the three cardinal signs of heart failure?**
 - A. Angina, shortness of breath, oedema
 - B. Cough, ankle oedema, fatigue
 - C. Headache, fatigue, shortness of breath
 - D. Pallor, ankle oedema, headache
 - E. Shortness of breath, fatigue, ankle oedema

- 5. A 56-year-old Asian man has come into your GP surgery, he has tried to modify his diet, exercise more and improve other lifestyle factors. He wishes to be put onto a tablet and his ambulatory blood pressure reading was 155/100. What would you advise?**
 - A. Amlodipine prescription
 - B. Candesartan prescription
 - C. Further lifestyle measures are recommended
 - D. He should return for a health check once he turns 60
 - E. Ramipril prescription

- 6. Which of the following signs on ECG would be most indicative of a diagnosis of Right Bundle Branch Block?**
 - A. R wave in V1, and Slurred S wave in V1
 - B. R wave in V1 and Slurred S wave in V6
 - C. R wave in V6 and Slurred S wave in V1
 - D. R wave in V6 and Slurred S wave in V6
 - E. Wide QRS and abnormal pattern.

- 7. Which of the following isn't a sign of critical ischaemia?**
- A. Pain
 - B. Paralysis
 - C. Paraesthesia
 - D. Perishingly cold
 - E. Pink
- 8. Which of these isn't a feature of tetralogy of Fallot?**
- A. Atrial septal defect
 - B. Hypertrophy of the right ventricle
 - C. Overriding aorta
 - D. Pulmonary stenosis
 - E. Ventricular septal defect
- 9. Which blood pressure reading taken in clinic would be classed as stage 1 hypertension?**
- A. 125/80
 - B. 135/85
 - C. 145/95
 - D. 165/105
 - E. 180/110
- 10. Which of the following is not a sign of infective endocarditis?**
- A. Janeway lesions
 - B. Osler's nodes
 - C. Roth spots
 - D. Splinter haemorrhages
 - E. Xanthelasma
- 11. A 22-year-old female presents to the GP complaining of generalised abdominal pain and bloating. She says the pain sometimes gets worse after eating food but gets better once she has defecated or passed wind. She also says she has been going to the bathroom more and been having episodes of diarrhoea but there hasn't been any blood or mucus in it. She hasn't had any recent travel and doesn't describe any other symptoms. What is the most likely diagnosis?**
- A. Coeliac Disease
 - B. IBS
 - C. Crohn's
 - D. Ulcerative Colitis
 - E. Infective gastroenteritis

- 12. A 35-year-old male presents to A&E after vomiting blood. He had been having some abdominal pain, feeling very nauseous and had been retching several times a day before finally vomiting blood this morning. He hasn't noticed any weight loss, fevers or any other systemic symptoms. He drinks 2/3 pints every evening and has been eating/drinking as normal. He doesn't take any prescribed or over the counter medication. What is the most likely diagnosis?**
- A. Peptic ulcer rupture
 - B. Oesophageal malignancy
 - C. Gastroesophageal reflux disease
 - D. Achalasia
 - E. Mallory Weiss tear
- 13. A 42-year-old female presents to the gastro clinic complaining of chest pain. She says that it feels like a burning sensation in the middle of her chest that gets worse when is lying or bending down. She also says that she wakes up in the evening feeling breathless. She hasn't been vomiting any blood, had any difficulty swallowing food and drink or lost any weight. What medication would you give first to try treat this patient?**
- A. Sulfasalazine
 - B. Omeprazole
 - C. Amoxicillin
 - D. Prednisolone
 - E. Ranitidine
- 14. Which of these is a not a cause of peptic ulcers?**
- A. H. Pylori
 - B. Increased stomach acid production
 - C. Recurrent NSAID use
 - D. Autoimmune gastritis
 - E. Mucosal ischaemia
- 15. A 35-year-old male presents to A&E with pain in the middle of his abdomen which comes and goes. He says that he has been vomiting a lot over the last 7 days his abdomen is slightly bloated, and he hasn't opened his bowels or passed wind in the last 3 days. He finds the pain gets much worse after he vomits, and he feels he has lost his appetite. He had an appendicectomy when he was 8 years old, but he has no other medical history of any other condition. What is the most likely diagnosis?**
- A. IBS
 - B. Large bowel obstruction
 - C. Small bowel obstruction
 - D. Crohn's
 - E. Coeliac Disease

16. A patient comes into the GP with a case of suspected gastritis due to an H. Pylori infection.

Which of these managements should you use first?

- A. Clarithromycin, lansoprazole and omeprazole
- B. Penicillin, co-amoxiclav and ranitidine
- C. Lansoprazole, cimetidine and amoxicillin
- D. Clarithromycin, amoxicillin and omeprazole
- E. Amoxicillin, ceftriaxone and lansoprazole

17. Which of these is not a risk factor for GORD?

- A. Obesity
- B. Hiatus hernia
- C. Smoking
- D. Pregnancy
- E. Recurrent endoscopies

18. A patient comes in with abdominal pain, bloating, constipation. You examine the abdomen and discover a hard mass in the left iliac fossa and carry out a digital rectal examination which shows an empty rectum. What is the first line investigation in this case?

- A. Abdominal X-ray
- B. Abdominal CT
- C. Abdominal ultrasound
- D. Abdominal MRI
- E. Full blood count

19. Which of these is not a possible complication of untreated GORD?

- A. Oesophageal ulcers
- B. Oesophagitis
- C. Achalasia
- D. Barret's oesophagus
- E. Oesophageal cancer

20. Which of these is correct regarding duodenal ulcers?

- A. They cause pain when eating and it is relieved several hours after eating
- B. They cause pain several hours after eating and the pain gets better when eating
- C. They cause pain when the patient is hungry, and it is relieved by eating
- D. They cause pain when eating and are relieved by drinking
- E. They cause pain when the patient drinks and is relieved by eating

21. Which is not a feature of Ulcerative Colitis?

- A. Affects from rectum to ileocaecal valve
- B. Affects males and females equally
- C. Has skip lesions
- D. Smoking is protective
- E. Weaker genetic link than Crohn's

- 22. A 40-year-old man presents with smelly, floaty stools and diarrhoea. He has lost 7lb and has a rash on his elbows. He has a family history of Type 1 diabetes. What is the most likely diagnosis?**
- A. Bowel Cancer
 - B. Coeliac Disease
 - C. Crohn's Disease
 - D. Infective illness
 - E. Ulcerative Colitis
- 23. Which of the following is not a risk factor for Oesophageal Cancer?**
- A. Achalasia
 - B. Alcohol
 - C. Obesity
 - D. Smoking
 - E. Spicy food
- 24. A 60-year-old male presents with blood and mucus in his stools for the past 3 weeks, he has had on off diarrhoea and constipation during this time. He has lost 2 stone over the 3 weeks. He smokes and reveals his father died of rectal cancer. Which is the most appropriate investigation?**
- A. Blood test: FBC, U+E, Tumour Markers etc
 - B. Colonoscopy
 - C. Double contrast barium enema
 - D. CT Colonoscopy
 - E. MRI
- 25. Where are majority of colon cancers found?**
- A. Ascending colon
 - B. Caecum
 - C. Descending colon
 - D. Transverse colon
 - E. Distal colon
- 26. Which of the following is the first line treatment for Coeliac disease?**
- A. Dexa Scan
 - B. Dietician Review
 - C. Gluten-free Diet
 - D. Prednisolone
 - E. Vitamin Deficiency Correction
- 27. A 19-year-old presents with abdominal pain in his umbilical region which has now migrated to the right iliac fossa. He is pyrexia and vomiting. Which of the of the following is not a likely differential?**
- A. Diverticulitis
 - B. Ectopic Pregnancy
 - C. Food poisoning
 - D. Perforated ulcer
 - E. UTI

- 28. Which of these is not a cause of diverticulum?**
- A. Alcohol
 - B. Low fibre diet
 - C. Obesity
 - D. NSAIDs
 - E. Smoking
- 29. A 48-year-old female complains of bright red rectal bleeding which can be found upon wiping, she has been constipated recently and admits to straining. She feels tired but has not noticed any weight loss. What would the likely diagnosis be?**
- A. Anal Fistula
 - B. Anal Fissure
 - C. Inflammatory Bowel Disease
 - D. Haemorrhoids
 - E. Rectal Cancer
- 30. A 38-year-old female presents to you with bouts of diarrhoea with urgency, fatigue, abdominal pain and mouth ulcers. She smokes and complains of a stressful life. What investigation result may you expect to see?**
- A. Anaemia due to Iron and Folate deficiency
 - B. C.Diff positive stool sample
 - C. Duodenal biopsy showing villous atrophy and crypt hyperplasia
 - D. Normal ESR and CRP
 - E. pANCA positive
- 31. Which of the following would you least expect to cause an acute kidney injury?**
- A. Acute tubular necrosis
 - B. Hypervolaemia
 - C. Nephrotoxins
 - D. Prostate hyperplasia
 - E. Sepsis
- 32. You are a GP and have just used a patient's creatinine levels to help calculate their estimated glomerular filtration rate. You manage to work out that it's 46 ml/min. What stage of CKD would you expect this patient to have?**
- A. Stage 2
 - B. Stage 3a
 - C. Stage 3b
 - D. Stage 4
 - E. Stage 5
- 33. Which of the following is not a significant risk factor for CKD?**
- A. Diabetes
 - B. Family history of CKD
 - C. Old age
 - D. Pregnancy
 - E. Recurrent UTI's

- 34. Which of the following organisms is the most common cause of pyelonephritis?**
- A. Staphylococcus Saprophyticus
 - B. Enterococcus
 - C. Escherichia coli
 - D. Klebsiella
 - E. Proteus
- 35. Which of the following is the best investigation to use in the management of pyelonephritis?**
- A. Full blood count
 - B. Midstream urine microscopy, culture and sensitivity
 - C. Nuclei acid amplification test
 - D. Ultrasound
 - E. Urine dipstick
- 36. Alex, a 45-year-old builder presents to your GP with a 7-month history of recurring perineal pain as well as pain and difficulty when passing urine. He says he needs to go to the toilet many times a day which is starting to affect his work. On further questioning he reluctantly tells you that he has also had some pain when ejaculating. Alex mentions a workplace incident that he thinks might be related, where he fell from height and injured his hip close to a year ago. You decide to carry out a digital rectal exam- you don't think his prostate is hard or irregular. What is the most likely diagnosis based on the history so far?**
- A. Benign prostatic hyperplasia
 - B. Cystitis
 - C. Prostate cancer
 - D. Prostatitis
 - E. Pyelonephritis
- 37. Lucy is a 30-year-old woman who is 2 months pregnant, as her GP you find that she has a lower urinary tract infection and are considering which antibiotic to prescribe her. Which of the following medications would you definitely avoid prescribing?**
- A. Amoxicillin
 - B. Cephalexin
 - C. Fosfomycin
 - D. Nitrofurantoin
 - E. Trimethoprim
- 38. James is a 25-year-old male who recently tested positive for Chlamydia, he went to get tested after he noticed pain on urinating and discharge from his penis. He is now quite concerned as his eyes have turned red and his ankles and feet have become swollen. Which of the following can be used to describe his symptoms?**
- A. Behcet's syndrome
 - B. Budd-Chiari syndrome
 - C. Charcot's triad
 - D. Reiter's syndrome
 - E. Saint's triad

- 39. Ray, a 32-year-old gentleman with heterozygous polycystic kidney disease (PKD) presents to the genetic counselling clinic. He informs you that his wife, who does not suffer from PKD, is pregnant and that they are expecting their first child in 3 months time. What is the likelihood that their newborn child will also have PKD?**
- A. 25%
 - B. 50%
 - C. 75%
 - D. 100%
 - E. 0%
- 40. Which of the following is not a complication of polycystic kidney disease?**
- A. Cardiovascular disease
 - B. Kidney stones
 - C. Nephrotic syndrome
 - D. Polycystic liver disease
 - E. Subarachnoid haemorrhage
- 41. How is Hodgkins lymphoma (HL) clinically different from Non-Hodgkins lymphoma (NHL)?**
- A. Clinical presence of B symptoms in HL and its absence in NHL
 - B. Disease is limited to lymph nodes in HL whilst in NHL disease can spread beyond lymph nodes
 - C. Presence of Reed-Sternberg cells in HL on histological observation and absence of such cells in NHL
 - D. Presence of Auer rods in HL on histological observation and absence of such cells in NHL
 - E. Physical examination reveals lymphadenopathy in HL whilst this is not the case in NHL
- 42. Which one of the following is not a definite risk factor for DVT?**
- A. Pregnancy
 - B. Recent surgery
 - C. Recent leg fracture
 - D. Progestogen-only pill (POP)
 - E. Recent history of cancer
- 43. A 46-year-old male comes into your GP practice and is found to have fever and fatigue. It becomes apparent when you are taking a history from him that he has recently come back from Africa. You suspect he could have malaria. What organism would you see in his blood film that would confirm that he has malaria?**
- A. Giardia lamblia
 - B. Trypanosoma brucei gambiense
 - C. Plasmodium falciparum
 - D. Toxoplasma gondii
 - E. Anopheles gambiae

- 44. A patient presents to A&E with a fever and confusion. Upon further investigation, you find that she has AKI and her FBC reveals thrombocytopenia and anaemia. You recognise this as Thrombotic Thrombocytopenic Purpura and realise it is a medical emergency and you need to treat her immediately without waiting for diagnostic confirmation. What is the urgent gold standard treatment for someone with TTP?**
- A. Platelets
 - B. Hydroxycarbamide
 - C. Immunosuppressants
 - D. Plasma exchange
 - E. Broad spectrum antibiotics
- 45. You are a junior doctor on the acute medical unit and are doing your clerking. You come across a 60-year-old woman who recently had an accident due to which she suffered a fractured right leg a week ago and she has been relatively bed bound since. She tells you she is concerned her right leg is slightly swollen compared to her left leg and her GP sent her here. On further questioning you find out she is currently on hormone replacement therapy. Which risk score would be most appropriate to determine the next step in managing this patient?**
- A. CHA2DS2VASc
 - B. FRAX score
 - C. HAS-BLED score
 - D. QRISK-3
 - E. Well's score
- 46. A 22-year-old male is diagnosed with Hodgkin's lymphoma. Imaging and bone marrow biopsy reveal that the lymphoma is present in his axillary lymph nodes and in his inguinal lymph nodes. He has also lost significant weight and reports having night sweats. What clinical stage is his Hodgkin's lymphoma currently, according to the Ann Arbor staging system?**
- A. Stage II A
 - B. Stage III B
 - C. Stage IV A
 - D. Stage IV B
 - E. Stage III A
- 47. Jennifer, a 49-year-old female, was recently started on chemotherapy in preparation for a bone marrow transplant. Which of the following is the least likely complication of her chemotherapy?**
- A. Cytopenia (anaemia, neutropenia and thrombocytopenia)
 - B. Excessive hair growth
 - C. Infertility
 - D. Nausea and GI disturbances (constipation/diarrhoea)
 - E. Secondary malignancies

48. You are the FY1 on an orthopaedic ward. A 65-year-old man is on the ward recovering from a recent total hip replacement following a neck of femur fracture. What is an appropriate thromboprophylaxis regimen?

- A. Alteplase
- B. Compression stockings and aspirin
- C. Dalteparin acutely and then maintenance treatment with apixaban
- D. Dalteparin acutely and then maintenance treatment with aspirin
- E. Aspirin acutely and then maintenance treatment with apixaban

49. What is the protein target of Rituximab?

- A. CD4
- B. CD8
- C. CD20
- D. HER2
- E. TNF-alpha

50. What is the ideal first line treatment for severe/complicated malaria?

- A. IV Artesunate
- B. IV quinine + doxycycline
- C. PO chloroquine
- D. PO primaquine
- E. Artemisinin combination therapy

51. A 24-year-old male presents to General Practice complaining of a painful elbow. Upon examination the GP suspects a diagnosis of olecranon bursitis. The patient asks the GP about the pathological process that occurs in this condition. The GP explains the process of inflammation. Which of the following is not a clinical feature of acute inflammation?

- A. Rubor
- B. Dolor
- C. Suppuration
- D. Tumor
- E. Loss of function

52. A 53-year-old male attends A&E complaining of central chest pain. An ECG is ordered which shows ST-elevation in the anterior leads. The patient is sent for PCI and recovery in the coronary care unit. On the ward round, the cardiologist explains that unlike other cells in the body, heart muscle cells are unable to regenerate and so part of his heart muscle is non-functional now. Which of the following cells are not capable of regeneration?

- A. Pneumocytes
- B. Hepatocytes
- C. Osteocytes
- D. Neurones
- E. Gut epithelial cells

- 53. A 74-year-old gentleman attends General Practice complaining of urinary symptoms. The GP performs a PR examination which shows a smooth, enlarged prostate. The GP suspects a diagnosis of benign prostatic hyperplasia. Which of the following definitions best describe hyperplasia?**
- A. Increased size of a tissue due to increase in number of constituent cells
 - B. Increased size of a tissue due to increase in size of constituent cells
 - C. Change in differentiation of a cell from one fully differentiated type to a different fully differentiated type
 - D. Abnormal growth of tissue in a body which persists despite removal of initial stimulus
 - E. Decreased size of a tissue due to programmed cell death
- 54. A 63-year-old female is undergoing investigations for a suspected malignancy. The radiologist report confirms the presence of a malignant tumour of smooth muscle. What is the name for a malignant tumour of smooth muscle?**
- A. Rhabdomyoma
 - B. Leiomyoma
 - C. Liposarcoma
 - D. Leiomyosarcoma
 - E. Rhabdomyosarcoma
- 55. A 14-year-old female presents to A&E with severe abdominal pain. The pain started as a general tummy ache but the pain has now localised to the right iliac fossa. The doctor suspects a diagnosis of acute appendicitis. What type of cells would you expect predominantly during this disease process?**
- A. B lymphocytes
 - B. Macrophages
 - C. Mast cells
 - D. Neutrophils
 - E. T lymphocytes
- 56. Which of the following pathologies would result in resolution?**
- A. Acute cholecystitis
 - B. Cerebral infarction
 - C. Full nephrectomy
 - D. Myocardial infarction
 - E. Partial lobectomy
- 57. A 17-year-old female attends General Practice complaining of diarrhoea. After investigations, a diagnosis of Crohn's disease is made. Crohn's disease is a condition where granulomatous inflammation occurs. What is the definition of a granuloma?**
- A. An aggregate of neutrophil polymorphs
 - B. An aggregate of lymphocytes
 - C. An aggregate of epithelioid histiocytes
 - D. New connective tissue + microscopic blood vessels forming on wound surface
 - E. A pus-filled cavity

- 58. A 64-year-old male attends General Practice complaining of exertional chest pain. A diagnosis of angina is made and the patient asks the GP what would cause this. The GP explains its most likely due to the process of atherosclerosis. Which of the following is not a constituent in an atherosclerotic plaque?**
- A. Connective tissue
 - B. Foam cells
 - C. Fragments of RBCs
 - D. Lymphocytes
 - E. Smooth muscle cells
- 59. A 63-year-old male attends General Practice complaining of persistent heart burn. The GP decides to investigate this further due to recurrent issues. An endoscopy reveals Barrett's oesophagus, a process where metaplasia occurs. What cell type is the end result of the metaplastic change in Barrett's oesophagus?**
- A. Simple squamous
 - B. Simple columnar
 - C. Stratified squamous
 - D. Stratified columnar
 - E. Simple cuboidal
- 60. Which of the following would be the most indicative of prostate cancer?**
- A. Hard, craggy prostate on digital rectal examination
 - B. History of urinary frequency and dribbling
 - C. History of weight loss
 - D. Raised PSA
 - E. Raised CRP/ESR
- 61. Which of the following is not a cause of Liver failure?**
- A. Alcohol overuse
 - B. Atrial Fibrillation
 - C. Budd-Chiari syndrome
 - D. Haemochromatosis
 - E. Wilson's Disease
- 62. Rachel, a 23-year-old female with a known history of depression and borderline personality disorder presents to the Emergency department with stomach aches and profuse vomiting. On examination she has a reduced GCS. Tox-screen]results indicate very high level of Paracetamol in the blood. What is the 1st line pharmaceutical treatment for paracetamol overdose?**
- A. Chlordiazepoxide
 - B. Desferrioxamine
 - C. Flumazenil
 - D. Naloxone
 - E. N-acetyl cysteine

- 63. Which of the following would you not expect to see in a patient with liver failure?**
- A. Asterixis
 - B. Dupuytren's contractures
 - C. Kayser-Fleischer rings
 - D. Leukonychia
 - E. Spider Naevi
- 64. Mr Jones, a 45-year-old man, presents to A&E complaining of central pain in his upper abdomen which has come on in the last few days. He also reports that he experiences interscapular pain. The doctor orders some blood tests which reveal a raised serum amylase is very elevated (around 4 times higher than normal) and decreasing renal function. The doctor sets up an IV infusion of normal saline, gives analgesia and contacts the Surgical SHO for an urgent assessment. What is the likely diagnosis?**
- A. Acute Pancreatitis
 - B. Appendicitis
 - C. Diabetic Ketoacidosis
 - D. Duodenal Ulcer
 - E. Paracetamol overdose
- 65. Mrs Thompson, a 54-year-old woman, presents to her GP with a history of new onset jaundice. Her history reveals that she has been experiencing lethargy and pruritis for over a year now but has not wanted to bother the doctors. On palpation the GP notes an enlarged liver. The GP orders several investigations and refers her to the Gastroenterology department at the local hospital.**
- The investigation results are as follows:**
- > **ALP – 170 (30-100)**
 - > **ALT – 90 (3-40)**
 - > **AST – 87 (3-30)**
 - > **GGT – 96 (8-60)**
 - > **Bilirubin – 70 (3-17)**
 - > **Prothrombin time (PT) – 24s (10-14s)**
- Very high levels of circulating antimicrobial antibodies (AMA) were also found.**
- What is the likely diagnosis?**
- A. Appendicitis
 - B. Acute Pancreatitis
 - C. Coeliac disease
 - D. Systemic Lupus Erythematosus (SLE)
 - E. Primary Biliary Cholangitis (PBC)
- 66. Which of the following is not characteristic of an upper Gi bleed?**
- A. Coffee ground vomit
 - B. Diarrhoea
 - C. Hypotension
 - D. Melaena
 - E. Tachycardia

- 67. Which of the following is a cause of Pancreatitis?**
- A. Coeliac Disease
 - B. Gastro-oesophageal reflux disorder (GORD)
 - C. Horner's syndrome
 - D. Mumps
 - E. Obesity
- 68. Mr Jones, a 57-year-old man, presents to his GP with intermittent pain in the right upper quadrant of his abdomen, made worse when he eats, especially fatty meals. He has a BMI of 35 and on examination has yellowish sclera. Last night he had a fever and rigors. What is the likely diagnosis?**
- A. Acute pancreatitis
 - B. Ascending Cholangitis
 - C. Biliary colic
 - D. Primary Biliary cholangitis
 - E. Vincent's angina
- 69. Mr Gascoigne, a 52-year-old male, is brought to the emergency department by the police after wandering confused in the street. He is a known alcoholic but from what history you can gather, it seems that he has not had a drink in the last 48 hours. Which of the following would be the most appropriate immediate pharmaceutical treatment for this patient?**
- A. Adrenaline
 - B. Amlodipine
 - C. Chlordiazepoxide
 - D. Methadone
 - E. Morphine
- 70. Wernicke's Encephalopathy is a complication of alcoholism caused by the deficiency of which vitamin?**
- A. Folate
 - B. Vitamin B1 (Thiamine)
 - C. Vitamin B12 (Cobalamin)
 - D. Vitamin C
 - E. Vitamin K
- 71. Which of the following cancers is least likely metastasise to the bone?**
- A. Breast
 - B. Kidney
 - C. Lung
 - D. Stomach
 - E. Thyroid

- 72. Which of the following side effects is most likely to occur with Alendronic Acid use?**
- A. Cough
 - B. Gout
 - C. Haemolytic anaemia
 - D. Oesophagitis
 - E. Urinary frequency
- 73. Richard, a 76-year-old gentleman, presents to his GP with ongoing left knee pain that has now led to him developing a slight limp. He experiences stiffness in the mornings but says it soon gets better as he makes his breakfast. On examination, his left knee is tender and shows some deformity. Richard mentions he used to be a keen footballer and had a nasty injury to his knee several years ago. The GP requests an X-ray. Given the likely diagnosis, which is least likely to be seen on the X-ray?**
- A. Joint space narrowing
 - B. Osteophyte formation
 - C. Soft tissue swelling
 - D. Subchondral cysts
 - E. Subchondral sclerosis
- 74. Which of the following investigations would be most appropriate in diagnosing Sjogren's syndrome?**
- A. EMG
 - B. Joint aspirate
 - C. Schirmer's test
 - D. Spirometry
 - E. Joint X ray
- 75. Which of the following X ray signs is mostly likely to be found a patient with psoriatic arthritis?**
- A. Bamboo spine
 - B. Pencil in cup
 - C. Periarticular erosions
 - D. Osteophytes
 - E. Rhomboid crystals
- 76. A 23-year-old student comes to your GP clinic complaining of back pain. He describes an aching pain that has come on over a few months and now wakes him at night. He denies weight loss, fevers or change in appetite. He has found gentle exercise to be helpful but struggles to keep up with his usual yoga class, finding the stretches difficult. Given the likely diagnosis, what is the most appropriate first line management?**
- A. Chemotherapy
 - B. Ibuprofen
 - C. Infliximab
 - D. Paracetamol
 - E. Watch and wait

- 77. Terry, a 52-year-old gentleman, presents to your GP clinic with knee pain. When he woke up this morning his knee was red and swollen, although Terry cannot think why. He also has a low-grade fever but feels well in himself. Terry is generally fit and well, although he tells you he recently had a small operation to remove a benign tumour from his neck. Which of the following is the most likely diagnosis?**
- A. Gout
 - B. Pseudogout
 - C. Reactive arthritis
 - D. Rheumatoid arthritis
 - E. Septic arthritis
- 78. Steve is a 48-year-old with an acutely painful left big toe. He hops into your clinic with a bare foot, saying even socks are too painful. You diagnose him with acute gout. He's been taking ibuprofen which seems to be helping with the pain and inflammation but wants to know if there's anything he can take long term to prevent it from happening again. Which of the following medications is the most appropriate to prescribe to prevent future gout attacks occurring?**
- A. Allopurinol
 - B. Colchicine
 - C. Hydroxychloroquine
 - D. Lansoprazole
 - E. Paracetamol
- 79. Beryl is an 83-year-old lady presenting to A&E with a hip fracture after falling from her chair in her care home. On examination Beryl looks frail and underweight. She suffered a stroke 4 years ago and has been left with right sided weakness and has fallen several times. Last year she broke her wrist. You are concerned about her bone health and order a DEXA scan. The T score comes back as -2.2. Which of the following is the most likely cause underlying Beryl's fractures?**
- A. Osteoarthritis
 - B. Osteomalacia
 - C. Osteopenia
 - D. Osteoporosis
 - E. Osteosarcoma
- 80. Jack is a 19-year-old who presents to your GP clinic with aching knees for 1 week. On questioning he discloses a myriad of other symptoms: a sore eye, rashes on both feet, burning on urination and mouth ulcers. Jack is distressed by these symptoms; he is usually very healthy with no past medical history (except a visit to the clinic for Chlamydia last month). Jack is keen for a diagnosis – which of the following is most likely?**
- A. Dermatomyositis
 - B. Fibromyalgia
 - C. Reactive arthritis
 - D. Sjogren's syndrome
 - E. Systemic sclerosis

- 81. A 79-year-old woman is having lunch in her hospital bed after recovering from a urinary tract infection. As she takes a sip of water from her glass, she drops it. The healthcare assistant in the bay then sees to her. They notice that the woman is slurring her speech and that the right side of her face is drooping. Of the following options, which is the most appropriate as your next course of action?**
- A. CT imaging of head
 - B. Immediately stop all anti-coagulation therapy
 - C. Intravenously administered alteplase
 - D. MRI imaging of head
 - E. Urgent speech and language therapy team referral
- 82. A 52-year-old man complains of an incident occurring a few hours ago as ‘a black curtain suddenly coming down’ over his right eye. He says that the episode was painless and only lasted a few minutes and that his vision was back to normal after. You check his observations and note the following: RR 14, HR 70, T 36.5°C, SPO₂ 98% room air, BP 165/95. On listening to his neck, you can hear a bruit. He has no other past medical history other than having type 2 diabetes which is controlled with medication. What is the most likely diagnosis?**
- A. Amaurosis fugax
 - B. Glaucoma
 - C. Optic neuritis
 - D. Papilledema
 - E. Retinal vein thrombosis
- 83. Peter, a 23-year-old investment banker, has come to A&E with bleeding from his mouth. His brother has come with him and says that an hour he watched as Peter suddenly gasped for air, fell to the floor and started making jerking movements for about a minute. He was unresponsive for a few minutes and then completely recovered. Peter says he’s doesn’t think he’s ever had seizure before, although when working late he sometimes notices his head or arm twitching. There is no other significant past medical, family or medication histories. Cardiovascular exam, neurological exam, blood tests and ECG are all normal. What pharmacological treatment should be offered to the patient before their discharge from hospital?**
- A. Clonazepam
 - B. Gabapentin
 - C. Rivastigmine
 - D. No treatment needed
 - E. Sodium valproate
- 84. Which of the following clinical features is not commonly found in patients with Parkinson’s disease?**
- A. Blank facial expressions except when told to smile
 - B. Extremely small handwriting
 - C. Hands shaking when trying to reach for something
 - D. Rigid limbs and difficulty getting out of bed
 - E. Slow walking

- 85. A 48-year-old woman presents with a daily headache and blurred vision that has worsened over the past several months. You are worried that she could have a space-occupying lesion. Which of the following clinical features is least likely to occur in patients with brain tumours?**
- A. Ascending paralysis from the lower limbs
 - B. Coma
 - C. Dysdiadochokinesis
 - D. Nausea and vomiting
 - E. Seizures
- 86. Dianne, 62-year-old woman, presents in A&E with extreme right-sided head pain and trouble seeing things with her right-eye. She struggles to dictate her history to you, claiming that she also has jaw pain too. She claims she is normally healthy but in the recent months has become more and more drained, with aches all over her body. She also mentions weak shoulders and hips. When you examine her, her right-side scalp is very painful to the touch. Her blood tests also came back and reveal a markedly raised ESR. What is the most appropriate next step in the management of this lady?**
- A. IM benzylpenicillin
 - B. Oral prednisolone
 - C. Prescribe codeine and advise plenty of bed rest at home
 - D. Routine 2 week referral to ophthalmology
 - E. Urgent CT head
- 87. Alan, a 48-year-old gentleman, attends A&E complaining of back pain. He works as a delivery driver and says that the pain started after loading a heavy pallet into his truck. On presentation, he is in visible discomfort and is unable to walk. He also says that he has been unable to go to the toilet since the pain started. A neurological examination of his lower limbs reveals intact sensation throughout, except his perineum. Power in both his legs is also reduced throughout. A digital rectal examination reveals poor anal tone. Which of the following diagnoses is the most likely?**
- A. Cauda equina syndrome
 - B. Compression of the spinal cord
 - C. Musculoskeletal injury
 - D. Nerve root compression
 - E. Vertebral fracture
- 88. Which of the following best describes the mechanism of action of the drugs neostigmine and pyridostigmine that are used to treat myasthenia gravis?**
- A. Blocks active site of acetylcholinesterase, increasing the amount of Ach available to the post-synaptic membrane
 - B. Crosses the blood-brain barrier and is converted into dopamine which acts to reduce the neurological symptoms
 - C. Inhibits the conversion of angiotensin I to angiotensin II
 - D. Inhibits the conversion of arachidonic acid to prostaglandins
 - E. Reduces intracranial pressure by setting up an osmotic gradient between the CSF and subarachnoid space

- 89. Which of the following is least likely to be a risk factor for developing peripheral neuropathies?**
- A. Diabetes Mellitus
 - B. Immunocompromised status
 - C. Lymphoedema
 - D. Systemic lupus erythematosus
 - E. Thiamine (Vit B1) deficiency
- 90. Adult patients with acute ischaemic stroke should receive alteplase treatment within what time after onset of their symptoms?**
- A. <3.5 hours
 - B. <4.5 hours
 - C. <24 hours
 - D. <48 hours
 - E. <7 days
- 91. What is the commonest cause of an infective exacerbation of COPD?**
- A. Haemophilus Influenzae
 - B. Parainfluenza Viruses
 - C. Rhinovirus
 - D. Staphylococcus Aureus
 - E. Streptococcus Pneumoniae
- 92. Harry, a 75-year-old ex-miner, is admitted to A&E after struggling with breathlessness and a cough. He is known to have COPD and usually manages this with oxygen at home, he has been a smoker for 25 years and previously worked as a coal miner for 30 years. The HCA documents his observations as follows:**
- > **O2 Sats : 87% on air**
 - > **HR : 100**
 - > **RR : 24**
 - > **BP : 115/75**
 - > **Temp : 37.4**
- On listening to his chest you hear a bilateral expiratory wheeze. You start him on oxygen and prescribe him salbutamol and ipratropium bromide nebulizers. You insert a cannula and send off bloods to the labs, a CXR is requested. What is the next most immediate step in Harrys Management?**
- A. Arterial blood gas sampling
 - B. Assess Peak Flow
 - C. Start non-invasive ventilation (BIPAP)
 - D. Take a sputum sample for microscopy, culture and sensitivity
 - E. Urine sample for microscopy and sensitivity
- 93. Which of the following is a sign of a life-threatening asthma attack?**
- A. Inability to complete sentences in one breath
 - B. SpO2 <92%
 - C. Pulse < 110
 - D. RR≥25
 - E. RR<25

94. Jess, a 21-year-old asthmatic has come to see her GP after she noticed that she feels shaky and her heart races after she takes one of her new medications for asthma. Which medication below is most commonly associated with a fine tremor?

- A. Beclametasone inhaler
- B. Montelukast oral medication
- C. Propriionate inhaler
- D. Prednisolone oral medication
- E. Salbutamol inhaler

95. Which type of lung cancer is most commonly seen in non-smokers?

- A. Adenocarcinoma
- B. Carcinoid tumour
- C. Large cell and differentiated carcinoma
- D. Small cell lung cancer
- E. Squamous cell carcinoma

96. Which lung cancer is strongly associated with asbestos exposure?

- A. Adenocarcinoma
- B. Large cell and differentiated carcinoma
- C. Mesothelioma
- D. Squamous carcinoma
- E. Small cell carcinoma

97. Sarah is a 35-year-old and is 7 months pregnant with her first child. Yesterday whilst cooking breakfast she developed a sharp chest pain on her left side and has felt progressively short of breath since. The pain feels sharp and worsens on taking a deep breath or speaking. She is normally fit and well, takes no regular medications and denies any previous episodes like this in the past. On examination her heart rate is 78 bpm, her respiratory rate is 20, temperature is 37.3 and blood pressure is 125/ 85. On listening to her chest you hear normal heart sounds and good air entry bilaterally. What is the mostly likely pathology behind Sarah's presentation?

- A. Angina
- B. Muscular strain
- C. Myocardial Infarction
- D. Pneumothorax
- E. Pulmonary Embolism

98. Which of the following is not a risk factor for a Pulmonary Embolism?

- A. Antiphospholipid syndrome
- B. Cancer
- C. Early mobility post-surgery
- D. Factor V Leiden mutation
- E. Synthetic Oestrogen

99. Mick, a 75-year-old care home resident, has been brought to A&E after suddenly becoming confused and drowsy. On examination he looks dehydrated. On auscultation of his chest you hear coarse crackles and reduced air entry bilaterally and he is coughing up green sputum. His vital signs are:

- > HR: 100**
- > RR: 28**
- > Temp: 38.2**
- > Oxygen Sats: 94% on 15L high flow oxygen**
- > BP: 100/65**

IV access is gained, and bloods are taken, fluid and antibiotics are administered. A CXR is ordered. His bloods come back showing urea levels of 8mmol/L. You suspect Mick is suffering from a chest infection. What is his CURB65 score?

- A. 1**
- B. 2**
- C. 3**
- D. 4**
- E. 5**

100. Jeremy, a 49-year-old man, has had a productive cough for 4 months and has noticed his sputum is sometimes tinged with blood. On questioning his GP finds out he is also experiencing significant night sweats, fatigue, a decreased appetite and has lost 4kg in the last 4 months. For the past 6 months Jeremy has been sleeping on the streets after being kicked out by his wife. His only past medical history is depression. He drinks heavily but doesn't smoke or take recreational drugs. He has not been abroad recently. On examination his chest sounds clear with good bilateral air entry. His vital signs are:

- > HR 75
- > RR 16
- > Temp 37.4
- > SpO2 98 % on air

The GP refers him for a chest x-ray which shows a cavitating lesion in the upper left lobe and hilar lymphadenopathy. A sputum sample is taken which comes back positive for growing acid-fast bacilli. What is the most likely diagnosis?

- A. Bacterial Pneumonia
- B. Lung Cancer
- C. Pulmonary Embolism
- D. Tuberculosis
- E. Lung abscess

[END OF PAPER 2]

Answers- see separate document- PTS 2a 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 when you have marked your paper. This is found here and on the answer sheet: <https://forms.gle/Q1HPgsCgwSR9xq2dA>

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