

- d) Multidrug-resistant TB (MDR-TB) remains a public health crisis and a health security threat. But this threat hasn't reached Zambia yet.
- c) In Zambia, the Sustainable Development Goals health target of ending the TB epidemic by 2030 is attainable even before the target.
7. Which of the following is true in tuberculous meningitis?
- Tuberculous meningitis always follows episodes of bacterial meningitis
 - Patients with tuberculous meningitis may present with a headache that has been either intermittent or persistent
 - In TB meningitis, mental status changes never progress to coma
 - Fever is always present
 - The absence of any significant physical findings always excludes active TB
8. A 24-year-old patient presents with 2 2-day history of fever to the Adult Medical Emergency unit while you are the clinician on duty. On examination, you found that his Blood pressure was 82/55 mmHg with neck stiffness; he is jaundiced and has splenomegaly. He is passing urine well, and the colour was normal. The unit consultant tells you on the phone to assess the patient. You noticed that the patient has petechial, purpura and ecchymotic patches. Which of the following diagnoses will you tell the consultant about this patient?
- Cerebral malaria
 - Cryptococcal meningitis
 - Neisseria meningitides meningitis
 - Pneumococcal pneumonia meningitis
 - Hypovolemic shock
9. Finger clubbing is a typical finding in all, BUT which of the following conditions?
- Chronic bronchitis.
 - Bronchiectasis.
 - Primary biliary cirrhosis.
 - Cryptogenic fibrosing alveolitis.
 - Community-acquired lobar pneumonia.
10. Typical chest findings in a large right pleural effusion include which of the following features?
- Normal chest expansion.
 - Impaired percussion note.
 - Absent breath sounds.
 - Vocal resonance decreased.
 - Pleural friction rubs.
11. Typical chest findings in right lower lobe consolidation include which of the following features?
- Decreased chest expansion.
 - Dull percussion notes.
 - Decreased breath sounds.
 - Increased vocal resonance.
 - Rhonchi and crepitation's
12. Typical chest findings in the right lower lobe collapse include which of the following?
- Decreased chest expansion.
 - S, tony dull percussion note.
 - Bronchial breath sounds.
 - Decreased vocal resonance
 - Crepitations
13. The best duration of treatment to ensure Peptic Ulcer healing with eradication therapy is which of the following?
- 1 week

MCQS: CHOOSE THE BEST SINGLE ANSWER IN THE ANSWER -GRID PROVIDED

1. You have decided to start tuberculosis treatment in a patient. During systematic inquiry, you found that the patient had never taken anti-tuberculous drugs before. If Rifampicin Isoniazid H, Ethambutol E, Pyrazinamide Z, and Streptomycin S, with the numerals representing the number of months of treatment, which of the following will be the regimen you will give the patient?
 - a) 2 SREZ/4SR
 - b) 4 RHEZ/2HE
 - c) 2 RHEZ/4RH
 - d) 3SZH/4EZ
 - e) 4 RHEZ/4RH
2. You repeat the sputum after three months of tuberculosis treatment in a patient. The results are still positive. In which of the following scenarios are you going to diagnose Multidrug-resistant tuberculosis?
 - a) When there is resistance to Rifampicin
 - b) When there is resistance to Streptomycin and Quinolones
 - c) When there is resistance to Ethambutol and Penicillin
 - d) When there is resistance to Rifampicin and Isoniazid
 - e) When there is resistance to Streptomycin, Rifampicin and quinolones
3. Which of the following statements is true about tuberculosis?
 - a) Haematogenous spread rarely gives rise to military tuberculosis
 - b) Tuberculosis in adults is often the result of reinfection
 - c) TB of the gastrointestinal tract mainly affects the duodenum but occasionally the peritoneum
 - d) Genitourinary system tuberculosis is always associated with infertility in males
 - e) In TB adenitis, scrofula is the term used to describe lymph node enlargement with discharging sinuses
4. When Tuberculosis affects organs outside the lungs, it is known as extrapulmonary tuberculosis. Which of the following statements is NOT true about extrapulmonary tuberculosis?
 - a) The most common site of skeletal TB involvement is the spine (Potts' disease)
 - b) One of the common symptoms of extrapulmonary tuberculosis is back pain or stiffness.
 - c) In spine tuberculosis, known as Potts' Disease, lower-extremity paralysis occurs in up to half of patients.
 - d) Tuberculous arthritis usually involves only one joint
 - e) Hips and Knee joints are never infected by tuberculosis
5. A 30-year-old immune-competent patient presents with a long-standing, productive cough with hemoptysis. You are investigating the patient for suspected tuberculosis. Which of the following radiological findings is typical in pulmonary tuberculosis?
 - a) Pleural effusion
 - b) Pneumonia
 - c) Hyperinflated chest
 - d) The presence of cavitations in the lung parenchyma
 - e) Peri-hilar reaction
6. Which of the following statements is true about tuberculosis?
 - a) Tuberculosis (TB) is one of the top 10 causes of death worldwide
 - b) Annually, 10 million people fall ill with TB, and 1.5 million die from the disease only among people with HIV.
 - c) TB is a leading killer of HIV-positive people but does not affect HIV-negative individuals.

- b) 2 weeks
 - c) 4 weeks
 - d) 8 weeks
 - e) 1 year
14. Antacid therapy relieves symptoms by which of the following mechanisms?
- a) By complete neutralisation of gastric acid
 - b) By eradicating *Helicobacter pylori*
 - c) Indefinitely
 - d) By protecting the mucosa from acid
 - e) By preventing gastric acid formation
15. Basal and peak acid output are most important in the diagnosis of which of the following?
- a) Duodenal ulcer
 - b) Gastrinoma
 - c) Gastric ulcer
 - d) Gastric carcinoma
 - e) Rickets
16. Gastric atony can occur in which of the following?
- a) Motor neuron disease
 - b) Marfan's syndrome
 - c) Friedreich's ataxia
 - d) Diabetes insipidus
 - e) Diabetes mellitus
17. Which of the following may be followed by gastric surgery?
- a) Osteomalacia
 - b) Weight loss
 - c) Pulmonary tuberculosis
 - d) Gallstones
 - e) Gastric cancer
18. Which of the following is a characteristic of *Helicobacter pylori* bacteria?
- a) Survives in gastric acid contact
 - b) Adhere to the gastric mucosa in an alkaline layer
 - c) Have you never seen healthy people?
 - d) Can be simply identified in the endoscopy room by their urease activity
 - e) Are associated with peptic ulcer relapse
19. The stomach is sometimes involved in which of the following conditions?
- a) Coeliac disease
 - b) Lymphoma
 - c) Crohn's disease
 - d) Anastasia
 - e) Barrett's esophagus
20. Prostaglandin analogues heal peptic ulcers but cause which of the following?
- a) Are slow to take effect
 - b) Have some action on gastric acid
 - c) Have an unusually high relapse rate
 - d) Cause diarrhea
 - e) Are unlikely to be drugs of first choice
21. A patient with a third episode of gastrointestinal hemorrhage from an unknown site should be offered which of the following?
- a) Early endoscopy
 - b) Barium radiology
 - c) Laparotomy

- d) Intravenous acid-suppressing therapy
e) A Sengstaken tube
22. Body mass index is measured by which of the following?
a) Weight/height
b) $\text{Weight}^2 / \text{height}$
c) $\text{Weight} / \text{height}^2$
d) $\text{Weight}^2 / \text{height}^2$
e) $\text{Weight}^3 / \text{height}$
23. Which of the following best describes Fiber-optic upper digestive endoscopy?
a) Is less accurate than video endoscopy
b) Is superior to barium meal examination
c) Replaces the need for small
d) No option is correct
24. A Known diabetic comes to your clinic with a well-controlled blood sugar. Their spouse mentions they have not been consistent with their insulin injections this past 2 months and only take them on days leading up to the review. What investigation can help prove or dispel this statement from the spouse?
a) Fasting blood sugar
b) Blood cholesterol levels
c) C-peptide levels
d) Fasting insulin levels
e) Glycosylated hemoglobin
25. A 20-year-old man presents to the ER with a history of palpitations and generalised muscle weakness. On examination, Vitals are BP: 125/90mmHg, Pulse: 55/min (irregularly regular), Respirations 19/min and Temperature: 36.4 Celsius. The cardiovascular system is unremarkable. CNS examination reveals depressed tendon reflexes and power of 3/5 in all four limbs. Full blood count is normal; serum potassium is 7.8mmol/L. And ECG tracing showed tall peaked T waves and a widened QRS complex. What medication is indicated?
a) Calcium gluconate
b) Potassium infusion
c) Ringer lactate infusion
d) Spironolactone
e) Metformin
26. A patient with stage 3 chronic kidney disease on dialysis presents with easy fatigability, palpitations and weakness. On examination, they are pale and have an Hb of 8 g/dL. What is the best management option?
a) Ferrous sulphate
b) Erythropoietin stimulating agents
c) Folic acid
d) Steroid administration
e) Dialysis
27. Chronic Kidney disease staging is based on the?
a) Urine output
b) Glomerular filtration rate
c) Blood creatinine levels
d) Blood urea levels
e) Potassium levels

28. Which of the following will NOT cause progression of renal injury in chronic kidney disease?

- a) Ibuprofen use
- b) Dehydration
- c) Proteinuria
- d) Smoking
- e) Enalapril use

29. A woman comes to your facility with a history of pain on urination for 2 days. This is associated with increased urinary frequency and inability to hold urine. She was treated for a similar illness last week and finished her Nitrofurantoin medication 3 days ago. Over the past 3 months, she has had an episode every month. The examination is remarkable. Urinalysis shows leucocytes and nitrites. What investigation is best suited to guide your next step in this woman's management?

- a) Urine culture and sensitivity
- b) Cystoscopy
- c) Full blood count and differential count
- d) Blood culture
- e) Retrograde urethrogram

30. What is the recommended management of an uncomplicated lower urinary tract infection?

- a) IV antibiotics for 7 days
- b) Oral antibiotics for 14 days
- c) IV antibiotics for 14 days
- d) Oral antibiotics for 7 days
- e) IV antibiotics for 7 days, then oral for 7 days

31. A patient presents to you with a burning epigastric pain that is worsened by feeds. The pain is non-radiating and has no known relieving factors. She has had this problem for nearly 3 years, and it is on and off. What organism must be tested for in this condition?

- a) Staphylococcus aureus
- b) Hemophilus influenza
- c) Clostridium botulinum
- d) Helicobacter pylori
- e) Campylobacter jejuni

32. A 50-year-old male presents to you with a history of epigastric pain that he describes as dull and burning in nature at times. He mentions having had this problem for over 3 decades now. He is worried because, this time, the pain is non-remitting and is associated with projectile vomiting that is blood-streaked at times. He complains of weight loss and easy satiety. On questioning, he agrees to a very dark stool, nearly black. Examination only reveals pallor. What is the best diagnostic test for this patient?

- a) Abdominal ultrasound
- b) Abdominal MRI
- c) Colonoscopy
- d) Complete blood count and differential
- e) Upper GI endoscopy

44. A 57-year-old man presents with complaints of chest pain and fever. The pain is not associated with exertion and is alleviated somewhat by sitting up and leaning forward. The patient states that he had a recent upper respiratory tract infection a week earlier. Physical examination reveals a friction rub on cardiac auscultation. What is the most likely etiology of this patient's chest pain?
- Pericarditis
 - Costochondritis
 - Reflux esophagitis
 - Peptic ulcer disease
 - Ischemic heart disease
45. A 20-year-old woman contacts a medical doctor and asks if he would like to join her for dinner. The doctor treated the woman during her 2-week hospitalisation for treatment of major depressive disorder 7 months ago. He has not treated or seen the patient since she was discharged from the hospital. He is attracted to this former patient and would be interested in dating her. Which of the following is the most appropriate action by the medical doctor regarding this patient's invitation?
- He can date her because she is no longer his patient
 - He can date her, but only after at least 1 year has passed since he treated her
 - He cannot date her because she was once his psychiatric patient
 - He can only date her on condition no one at his hospital knows about the dating
 - He cannot date her unless she agrees never to seek care at his hospital in the future
46. A study is designed to evaluate the feasibility of acupuncture in adults with chronic headaches. Sixty adults with chronic headaches are recruited for the study. In addition to their usual therapy, all adults are treated with acupuncture three times a week for 2 months. Which of the following best describes this study design?
- Case-control
 - Case series
 - Crossover
 - Cross-sectional
 - Clinical trial
47. A 20-year-old man comes to your clinic with a history of generalised body malaise and lethargy for the past 2 weeks. The review of symptoms is unremarkable. On examination, the patient has hair loss in the eyelashes and patches on the head. He has a generalised maculopapular rash all over the body, including the palms of his hands and sores on the foot. The rash is reddish. He gives a history of a healed penile ulcer that was painless but 'open' in his words. The ulcer came 2 weeks after intercourse with his new girlfriend. What is the diagnosis?
- Gonorrhoea
 - Syphilis
 - Herpes simplex virus 1
 - Measles
 - Chlamydial infection
48. A 16-year-old girl is admitted with confusion. On examination, her blood pressure is 80/50 mm Hg. Laboratory results show plasma sodium of 115mmol/L with urine sodium > 20mmol/L. What is the most likely cause of hyponatremia?
- Vomiting
 - Diarrhoea
 - Pancreatitis
 - Severe burns
 - Adrenal failure
49. A 26-year-old man presented to the Emergency Unit with a first-time hematemesis that lasted for a day. His vitals were normal except for slight tachycardia of 104 beats per minute. His

hemoglobin was 8g/dl. Gastroscopy revealed grade 3 oesophageal varices. What is the best initial treatment for him?

- a) Propranolol
- b) Oral octreotide
- c) Banding of the oesophageal varices
- d) Blood transfusion
- e) Hematinics

50. A teenager comes to your department worried about an ulcer on his penis. The patient agrees to have been sexually active and admits to engaging in unprotected sex. On examination, the ulcer is located on the glans. It has rolled-up edges with a punched-out base. Rapid plasma reagin (RPR) was positive. What is the recommended treatment for this patient?

- a) Benzathine penicillin
- b) Procaine penicillin
- c) Ceftriaxone
- d) Azithromycin
- e) Doxycycline

51. George is a 23-year-old mine worker. He presents to you with a 5-day history of painful urination that is burning in nature. He has now noticed a pus discharge from the urethra. He gives a history of having unprotected sex with an unknown woman a week before the onset of symptoms. Examination revealed no signs. Vitals: Temperature: 36.7 Celsius, Pulse: 70/min, Respirations: 16/min and BP: 120/70mmHg. HIV and RPR are negative, and full blood count is normal. What is the diagnosis?

- a) Gonococcal urethritis
- b) Disseminated Gonococcal infection
- c) Gonococemia
- d) Gonococcal conjunctivitis
- e) Gonococcal arthritis

52. Which sexually transmitted infection presents similarly with gonorrhea and is likely to co-exist with Gonococcal infection?

- a) Syphilis
- b) HIV
- c) HSV
- d) Chlamydia
- e) Pubic lice

53. Which one is NOT a complication of *N. gonorrhea* infection?

- a) Infertility in women
- b) Lymphocytosis
- c) Reiter's syndrome
- d) Fitz-Hugh Curtis syndrome
- e) Septic arthritis

54. A sexually active teenage lady presents to your clinic with complaints of a 3-day old rash on her vaginal region. The rash gives a burning sensation and has rapidly progressed over 3 days, causing painful urination as well. She admits to having had unprotected sex 5 days before the onset of the rash. She also complains of mild chills, lethargy and malaise. On examination, the rash is located on the labia and anterior vagina. The rash is ulcerative and vesicular. Some vesicles can be seen capturing and becoming purulent. What medication is indicated here?

- a) Cloxacillin
- b) Septrin
- c) Fluconazole

33. A patient was involved in a road traffic accident and sustained a minor injury. The attending doctor found no fractures and prescribed Ibuprofen for 7 days for pain management. The patient's pain persisted, and he got off-the-counter Ibuprofen, which he has taken for over 1 month now. He comes to you with complaints of epigastric burning pain that has worsened after feeds in the past week. He has no previous history of such pain and is worried. You prescribe medication for peptic ulcer disease. What relevant counsel would you give this patient?

- a) Daily exercise
- b) Change the type of pain medication to acetaminophen if needed
- c) Change diet to a vegetarian diet
- d) Drink more water first thing in the morning
- e) Use Aspirin for the pain

34. Which medication is NOT part of the triple therapy cocktail in eradication of *H. Pylori* infection?

- a) Esomeprazole
- b) Clarithromycin
- c) Amoxicillin
- d) Metronidazole
- e) Tinidazole

35. Which of the following is the strongest risk factor for developing gastric cancer?

- a) Antacid use
- b) Alcohol use
- c) Smoking
- d) Smoked food ingestion
- e) Chronic *Helicobacter pylori* infection

36. A 17-year-old male student presents with the chief complaint of rash. There is no headache, fever or myalgia. A slightly pruritic maculopapular rash is noted over the abdomen, trunk, palms of the hands, and soles of the feet. Inguinal, occipital, and cervical lymphadenopathy are also noted. Hypertrophic, flat, wart-like lesions are noted around the prepuce.

- a) Urine dipstick
- b) VDRL test
- c) Chlamydia titer
- d) blood cultures
- e) skin scraping

37. A 92-year-old woman with a history of ischemic heart disease and hypertensive heart disease is brought unconscious to the emergency room from a nursing home. She has been compliant with losartan 25 mg daily, aspirin 75 mg daily and rosuvastatin 10 mg daily since having a myocardial infarction 5 years earlier. Her blood pressure is 70/30 mm Hg. She is febrile (38°C) and tachypnoeic. Laboratory studies reveal a white blood cell count of 22,000/ μ L with 92% neutrophils. Urinalysis reveals numerous Gram-negative organisms. Which of the following most likely accounts for this patient's signs and symptoms?

- a) Septic shock
- b) Neurogenic shock
- c) Cardiogenic shock
- d) Anaphylactic shock
- e) Hypovolemic shock

38. A 35-year-old woman with rheumatic fever in childhood presents with a cough and shortness of breath. She has an apical systolic murmur and bilateral pedal oedema. An echocardiogram reveals an ejection fraction of 38% with no wall motion abnormalities. Which of the following drugs would best minimise recurrent admissions in this woman?
- Aspirin
 - Digoxin
 - Enalapril
 - Furosemide
 - Torsemide
39. A 52-year-old black man undergoing a routine medical check-up is found with a blood pressure of 180/95 mm Hg. His BP profile over 4 days showed all readings above 150/90 mm Hg. He remains asymptomatic, and physical examination and investigations do not show any evidence of target organ damage. Which would be the best drug to initiate him on?
- Atenolol
 - Lisinopril
 - Amlodipine
 - Telmisartan
 - Torsemide
40. What is the best first-line combination antiretroviral therapy?
- Abacavir, lamivudine and efavirenz
 - Abacavir, lamivudine and tenofovir alafenamide
 - Tenofovir alafenamide, lamivudine and dolutegravir
 - Tenofovir disoproxil fumarate, lamivudine and efavirenz
 - Tenofovir disoproxil fumarate, lamivudine and dolutegravir
41. A 61-year-old HIV patient has been on first-line combination antiretroviral therapy for 2 years. The estimated glomerular filtration rate and blood sugar are normal, but urinalysis shows proteinuria 1+ and glucose 2+. What is the most likely drug to cause such urinalysis findings?
- Abacavir
 - Efavirenz
 - Tenofovir
 - Lamivudine
 - Zidovudine
42. A 42-year-old man is seen because of a long history of slowly developing congestive heart failure. His blood pressure is normal. He has a history of alcohol intake, which he has since stopped. Coronary artery angiography reveals no vascular disease. No heart murmurs are heard. The white blood cell count, differential, and erythrocyte sedimentation rate are normal. What is the most likely diagnosis?
- Myocardial infarction
 - Dilated cardiomyopathy
 - Carcinoid heart disease
 - Coarctation of the aorta
 - Constrictive pericarditis
43. During the SARS-CoV-2 pandemic, you receive a lot of queries regarding laboratory confirmation for the virus. Which of the following is the highest-yielding specimen for SARS-CoV-2 RNA?
- Blood
 - Saliva
 - Oropharyngeal specimen
 - Nasopharyngeal specimen
 - Broncho-alveolar lavage fluid

- a) Hb of 13g/dL
 - b) BP of 130/95mmHg
 - c) GCS of 10/15
 - d) Temperature of 38 Celsius
 - e) Oxygen saturation of 95%
68. A patient presents to your facility with a febrile illness. Laboratory investigation shows a malaria parasite percentage of 10%. What is the best treatment for this patient?
- a) Artesunate followed by Artemether/lumefantrine
 - b) Artemether/lumefantrine followed by Artesunate
 - c) Artesunate only
 - d) Artemether lumefantrine only
 - e) Chloroquine
69. A patient referred from a rural health centre after being found with malaria presents with a urine output of 200ml/24 hours. The urine is Coca-Cola coloured. The malaria slide shows an 8% parasite load. What is the diagnosis?
- a) Uncomplicated malaria
 - b) Hematuria
 - c) Cerebral malaria
 - d) Severe malaria
 - e) Pyrexia of unknown origin
70. A patient comes to the ER with shortness of breath and a fever. The fever has been present for 5 days, and shortness of breath 2 days. He has associated vomiting, headache and lethargy. On examination, he has chest in-drawings and uses accessory muscles to breathe. His respiratory rate is 26/minute. Fine bilateral crepitations are heard on auscultation. Chest X-ray reveals diffuse reticular infiltrates with Kerly-B lines. Malaria parasites are identified on the blood slide. What is the preferred medical treatment for this patient?
- a) Quinine
 - b) Chloroquine
 - c) Artemether/Lumefantrine
 - d) Cotrimoxazole
 - e) Artesunate
71. Which investigation helps determine the parasite load/percentage in malaria diagnosis?
- a) Thick malaria slide
 - b) Thin malaria slide
 - c) RDT
 - d) PCR
 - e) Blood culture
72. Which of the following causes heart failure by Volume overload?
- a) Systemic hypertension
 - b) Myocardial infarction
 - c) Regurgitate valve
 - d) Restrictive cardiomyopathy
 - e) None of the above
73. In a patient with heart failure, high output status includes which of the following?
- a) Hypertension
 - b) Thyrotoxicosis

- d) Sitz baths
 - e) Acyclovir
55. Which one is a relief agent used to treat exacerbations of asthma?
- a) Short-acting beta agonists
 - b) Long-acting beta-agonists
 - c) Inhaled steroids
 - d) Theophylline
 - e) Leukotriene modifiers
56. A known asthmatic is brought into the ER with difficulties breathing. On examination, he is wheezing and unable to complete sentences. Vitals: Pulse 120/min, Respirations: 30/min, Temperature: 36.5 Celsius and BP: 110/70mmHg. Oxygen saturation was 89%. Auscultation reveals inspiratory and expiratory wheezes. What is the diagnosis?
- a) Moderately severe asthmatic episode
 - b) Severe asthmatic episode
 - c) Mild asthmatic episode
 - d) Severe persistent asthma
 - e) Moderate persistent asthma
57. A Known asthmatic patient presents to the ER with difficulties breathing and cough. He ran out of his inhaler 2 weeks ago. On examination, he has an expiratory wheeze, is afebrile, and is able to talk but struggling with eating. Vitals: Respirations: 20/min, Pulse: 101/min, Temperature: 36.8 Celsius and BP: 130/70mmHg. What medication is indicated to stabilise this patient?
- a) Oral prednisone
 - b) IV antibiotics
 - c) Inhaled budesonide
 - d) Salmeterol
 - e) Leukotrienes
58. Which of the following medications is likely to precipitate an asthmatic attack?
- a) Adrenaline
 - b) Dexamethasone
 - c) Paracetamol
 - d) Aspirin
 - e) Hypertonic saline
59. Which of the following is the most prevalent mental illness?
- a) Schizophrenia
 - b) Conversion disorders
 - c) Depression
 - d) Generalised anxiety disorder
 - e) Opioid use disorder
60. A 30-year-old woman presents to your clinic with complaints of scanty menses and weight loss besides having a 'great appetite', she also complains of heat intolerance and palpitations at times. On examination, she has hand tremors, proptosis with lid lag and a characteristic pretibial scaly shiny rash. Vitals: Pulse: 111/min, BP: 145/90mmHg, Temperature: 37.5 centigrade and Respirations: 20/minute. What diagnostic test would be relevant for this patient?
- a) TSH
 - b) ACTH
 - c) Free T4
 - d) Cortisol levels
 - e) Dexamethasone suppression test.
61. The patient comes with a history of restlessness, hyperactivity, and difficulties sleeping; she has a history of weight loss in the past few months. Her spouse complains of irregular menses despite not being on hormonal contraceptives and has an increased libido. He also complains that she

has become clumsy and easily irritable. On examination, she has tremors. Vitals: Pulse: 120/min, BP: 150/95mmHg, Respirations: 19/minute, Temperature: 38 centigrade. Full blood count was normal, TSH was markedly reduced, and T3 and T4 were normal. What is the diagnosis?

- a) Manic psychosis
- b) Bipolar disorder
- c) Hyperthyroidism
- d) Cushing's disease
- e) Essential hypertension

62. A patient presents with weight loss, pretibial myxedema, proptosis, hand tremors, heat intolerance, hyperactivity and raised vitals. She has a goitre, only appreciated on swallowing test. Her TSH is reduced, and T3 and T4 are raised. What is the most common cause of this presentation?

- a) Toxic adenoma
- b) Multinodular goitre
- c) Graves' disease
- d) Hashimoto's thyroiditis
- e) Euthyroid goiter

63. Which of the following medications are used in the treatment of hyperthyroidism?

- a) Levothyroxine
- b) Methimazole
- c) Hydrocortisone
- d) Enalapril
- e) Risperidone

64. A nurse has been missing work due to recurrent urinary tract infections. She is brought to you for treatment. On examination, she has truncal obesity with thin limbs; she has multiple ecchymotic patches, she has abdominal striae and a buffalo hump. On examination, her BP is 150/90mmHg, and her Random blood sugar is 13mmol/L. What is your diagnosis?

- a) Obesity
- b) Diabetes mellitus
- c) Chronic kidney disease
- d) Cushing's syndrome
- e) Urinary tract infection

65. A patient presents with mood swings, easy bruising, hypertension, glucose intolerance, moon facies, buffalo hump, truncal obesity, recurrent infections and poor wound healing. Prolonged use of which drug could be responsible?

- a) Dexamethasone
- b) Hydrochlorothiazide
- c) Alcohol
- d) Metformin
- e) Salbutamol

i. A patient presents to the ER with complaints of headache, chills, muscle aches and body hotness for 3 days. A review of symptoms reveals no added symptoms. On examination, the patient is stable, alert, not pale, and not jaundiced. He is febrile and diaphoretic. Vitals Temperature: 38 centigrade, BP: 110/70mmHg, Pulse: 75/minute and Respirations: 16/minute. Full blood count is normal, RDT for malaria is positive. What is the treatment of choice for this patient?

- a) Artemether/lumefantrine PO
- b) Artesunate IV
- c) Quinine IV
- d) Chloroquine
- e) Fansidar

Which of the following is a sign of severe malaria?

- c) Hypertrophic cardiomyopathy
 - d) Diabetes mellitus
 - e) Dilated cardiomyopathy
74. In a patient with heart failure, pressure overload conditions include which of the following?
- a) High output states
 - b) Systemic hypertension
 - c) Chronic ischemia
 - d) Restrictive cardiomyopathy
 - e) Dilated cardiomyopathy
75. Which of the following explains heart failure pathogenesis in a patient with acute myocardial infarction?
- a) Myocyte hypertrophy
 - b) Pericardial thickening
 - c) Valvular dysfunction
 - d) Myocyte loss
 - e) None of the above
76. Which of the following best describes heart failure from the hemodynamic stand?
- a) High-pressure versus low-pressure
 - b) Systolic versus diastolic
 - c) Afterload versus preload
 - d) Rheumatic fever versus non-rheumatic fever
 - e) None of the above
77. Clinical manifestations of heart failure include all, but which of the following?
- a) Shortness of breath on exertion
 - b) Easy fatigability
 - c) Pedal edema in a patient without orthopnea
 - d) Paroxysmal Nocturnal Dyspnea (PND)
 - e) Central Cyanosis
78. Which of the following best describes the effect of activation of the Renin-Angiotensin-Aldosterone System (RAAS) in a heart failure patient?
- a) Increased preload
 - b) Increased afterload
 - c) Increased preload and afterload
 - d) Water and Sodium retention
 - e) Vasoconstriction
79. Which of the following neuro-hormonal changes in heart failure will cause vasodilation?
- a) Increased sympathetic activity
 - b) Activation of the RAAS
 - c) Increase production of vasopressin
 - d) Nitric oxide production
 - e) Increased production of endothelia
80. Which of the following conditions is the most common cause of heart failure in Zambia?
- a) Paget disease
 - b) Schistosomiasis
 - c) Hypertension
 - d) Tuberculosis
 - e) Hypertrophic cardiomyopathy
81. Cardinal manifestations of heart failure include which of the following features?
- a) Dysphagia
 - b) Odynophagia
 - c) Dysuria

Haem Hem

Hallman

Harmetec

orange

5-year-old male patient was admitted to the Emergency Room with easy fatigability. His medical history is remarkable for tooth extraction two weeks ago. He also reports a history of being on and off. On examination, his temperature is 37.8°C and BP 120/80 mmHg. He is pale with a tinge of jaundice. His chest is clear, and he has a pan-systolic murmur at the apex. Abdominal examination reveals splenomegaly. Urinalysis shows red blood cells in urine.

- What is your working diagnosis?
- What investigations would you do to confirm it?
- What criteria are used to diagnose this condition?
- Outline your management plan for this patient. Please, fully manage him if all the facilities are available.

30-year-old male patient was admitted to the Emergency Room with a history of severe epigastric pain. His past medical history is unremarkable. He reports to have just been fine; in fact, he was from having a copious meal with some wine with his friends. You examined him and found a normal temperature but low blood pressure of 86/55 mmHg. He is conscious but in severe pain.

- What is your working diagnosis?
- What investigations would you do to confirm it?
- How would you classify this condition?
- Discuss the pathophysiology and common causes.
- Outline your management plan for this patient. Please, fully manage him if all the facilities are available.

influenza
influenza

57-year-old business executive was brought to the emergency room unconscious. He had been feeling generally unwell for the past two weeks prior to the presentation. His wife noticed that his food and liquid intake had been reducing. The HIV test done two months earlier was negative. He had a history of hypertension but not diabetes. On examination, he is obese with a Glasgow coma scale of 7/15. His neck is stiff, and he is mildly pale and has features of severe meningism.

Vitals were as follows;

BP 100/60mmHg, Temp 37°C , Pulse 120/min thread, Respiratory rate 32/min.

Available laboratory results were as follows;

K^{+} : 4.9 mmol/l

Na^{+} : 155mmol/l

Urea: 23 mmol/l

Creatinine: 121 mmol/l

Blood sugar: 56mmol/l

- What is your working diagnosis?
- What investigations would you do to confirm it?
- How would you classify this condition?
- Discuss the pathophysiology and common causes.
- Outline your management plan for this patient. Please, fully manage him if all the facilities are available.

A 30-year-old female patient presents with joint pains, fever and cough. The duration of symptoms is about a week. On examination, the patient is tachypnoeic and has crackles in the right lower lobe. The patient is a known smoker and takes wine on occasions.

The Intern attending to her ask you to conduct further evaluation.

- What additional information would you like to get?
- What aspects should one consider when making a differential diagnosis?
- List some common causes.
- Discuss the management

THE END

T B, comp, influenza
effusion
sarcoid

- e) Atrial fibrillation
90. Which of the following statements is true about right-sided heart failure?
- Patient experience severe shortness of breath
 - Basal crepitations are commonly found
 - Easy fatigability is a common finding
 - Left-sided heart failure is the most common cause
 - It presents without edema
91. Which of the following statements is true about left-sided heart failure?
- Pedal edema is the most important finding
 - Tender Liver is found in all patients with left-sided heart failure
 - Ascites are a common feature
 - Crepitations (Rales) at the lung bases are a very significant finding
 - Cardiac output is not impaired
92. Which of the following is the most important investigation in a patient with heart failure?
- Full blood count
 - Chest X-ray
 - Urinalysis
 - Echocardiogram
 - Electrocardiogram
93. Which of the following targets should be considered for the efficient treatment of heart failure?
- Edema, crepitation and Raised JVP ✓
 - Ascites, jaundice and dyspnea
 - Crepitations, jaundice and edema
 - Preload, afterload and contractility
 - palpitations
94. In a patient diagnosed with heart failure, which of the following is the most important treatment response monitoring tool?
- An electrocardiogram is done every day of treatment
 - Echocardiogram every week of treatment
 - Full blood counts every day
 - Daily weight ensures that the patient loses 0.5 to 1 Kg per day of treatment.
 - Monitoring kidney function tests daily.
95. In the treatment of heart failure, the most important diuretic shown to reduce mortality in various studies is which of the following?
- Lasix
 - Hydrochlorothiazide
 - Bendrofluzide
 - Spironolactone
 - Metolazone
96. You examine a 50-year-old woman who complains of a long-standing history of joint pains on both sides and stiffness when moving the joints. The pain is on and off, and she usually uses diclofenac to abate the pain. Your examination reveals hand deformities of the 'swan-neck' and boutonniere type. More than 10 Joints are tender on palpation. CRP is elevated, and the rheumatoid factor is positive. What is the diagnosis?
- Osteoarthritis
 - Rheumatic fever
 - SLE
 - Rheumatoid arthritis
 - Gout
97. Which of the following are the intended benefits when spironolactone is prescribed in heart failure patients?

- d) Obstruction due to an internal hernia
65. Mrs Mwale's breast lump biopsy and IHC results show a ductal carcinoma with both progesterone and estrogen receptors positive but HER2 negative. The type of molecular subtype of breast cancer Mrs Mwale has is called
- Luminal A
 - Luminal B
 - HER2+
 - TNBC
66. Mr Chiti, who was burnt on the lower limb 20 years ago, presents with an ulcer on the affected limb. You diagnose that as a Marjolin ulcer. Marjolin ulcer
- Complications of burns involving squamous cell carcinoma
 - Occur following repeated breakdowns of hypertrophic scars
 - Complications of keloids
 - None of the above
67. You receive a 3-year-old burns patient whose is the following important aspects of addressing burn wounds are
- The % and degree of burns
 - The %, depth and time of injury
 - The %, depth, degree and time of injury
 - The %, depth and degree of burns
68. As an attending physician, you are worried about the triad of death in your patients. All are components of the triad of death or lethal triad EXCEPT
- Lymphocytosis
 - Acidosis
 - Hypothermia
 - Congulopathy
69. A 6-month-old baby is brought in with hot guttles/eyes. Such burns usually cause
- Superficial burns
 - Superficial partial
 - Deep burns
 - Full thickness burns
70. Tomelo sustained painful burns involving the epidermis and papillary dermis. They appear red and blistering. The burns healed after 12 days. Tomelo can be said to have sustained
- Superficial burns
 - Superficial partial thickness burns
 - Deep partial thickness
 - Full thickness
71. A 56-year-old woman presents with a 1-month-old swelling most anterior neck swelling associated with light-headedness and changes in her voice. She reports 2 weeks history of chest pain and cough. X-rays reveal lung metastasis. Which of the following is the following thyroid carcinoma is likely to have such an aggressive nature?
- Medullary
 - Neurogenic
 - Anaplastic
 - Papillary
72. Mr Mwa, a medullary thyroid cancer patient, is likely to have high concentrations of _____ in the blood
- Calcitonin
 - Calcitriol
 - Calcidiol
 - Cholecalciferol

- d) Fatigue
- e) Fluid depletion

82. Which of the following features is attributable to low cardiac output in heart failure?
- a) Shortness of breath
 - b) Paroxysmal nocturnal dyspnea
 - c) Tender hepatomegaly
 - d) Easy fatigability
 - e) Pulmonary edema
83. Which of the following are known aggravating factors in heart failure?
- a) Dietary excess in sodium
 - b) Decreased fluid intake
 - c) Good compliance with medication
 - d) Reduced physical activity
 - e) Use of Angiotensin receptor blockers
84. In a patient with heart failure, increased sympathetic activity is associated with which of the following?
- a) Bradycardia
 - b) Reduced venous return
 - c) Reduced contractility
 - d) Increased oxygen consumption
 - e) Improved cardiac functioning
85. Which of the following best describes Heart failure?
- a) Failure to breathe adequately
 - b) Inability to attend to daily activities
 - c) Inability to pump enough blood to meet metabolic needs
 - d) Easy fatigability
 - e) Dysfunctional electrical heart conduction
86. Which of the following is not a cause of Heart failure?
- a) Inappropriate workload
 - b) Restricted filling
 - c) Myocytes loss
 - d) Atrial myxoma
 - e) Hypertension
87. Which of the following statements is true about compensatory mechanisms in heart failure?
- a) These mechanisms are dangerous in acute loss of cardiac output
 - b) There is increased renal blood flow in heart failure
 - c) Remodeling occurs in heart failure
 - d) There is ischemia affecting the lungs
 - e) There is a reduced respiratory rate
88. Which of the following statements is true about physical signs of heart failure?
- a) Finger clubbing occurs in all patients.
 - b) Rales at the apical(top) regions are a very significant finding in heart failure.
 - c) Apex beat is never displaced in heart failure patients
 - d) Raised Jugular Venous Pressure (JVP) is the most significant finding in right ventricular failure
 - e) The liver span is reduced in right-sided failure
89. Which of the following conditions can cause acute heart failure?
- a) Cardiomyopathy such as Dilated cardiomyopathy (DCM)
 - b) Large acute myocardial Infarction
 - c) Rheumatic heart disease
 - d) Hypertension

91. In the OPD, you receive a patient with abdominal pain on the background of heavy alcohol consumption on an empty stomach. You suspect gastric perforation. Your next step would be
- Ask for an ultrasound
 - Ask for supine X-ray
 - Ask for endoscopy
 - None of the above is correct
92. While on surgical rotation as a student, while examining a suspected perforator patient, you notice the senior doctor presses on the abdomen and releases quickly, after which the patient is in pain. The name of this diagnostic sign is?
- Blumberg sign
 - Murphy's sign
 - Rovings sign
 - Girry Turner's sign
93. While on surgical rotation as a student, while examining a suspected perforator patient, you notice the senior doctor presses on the abdomen and releases quickly, after which the patient is in pain. This pain is likely to be
- Referred pain
 - Visceral pain
 - Parietal pain
 - Psychological pain
94. A perforated appendicular abscess can give rise to peritonitis. Which of the following will not give a non-infectious cause of peritonitis?
- Peritoneal dialysis
 - Perforated sigmoid volvulus
 - Gastric perforation
 - Diverticulitis
95. A diabetic patient presents with a swollen right upper limb. She has low sensation in that limb and looks overly septic. You make a small incision and smudge your finger under the skin with 'fish dirty water' coming out. This is diagnostic for a diagnosis. Known to be a capsule permeable and potentially fatal bacterial infection that spreads along the fascial planes and causes vascular thrombosis.
- Cathritis
 - Necrotizing fasciitis
 - Gas gangrene
 - Tetanus
96. A 44-year-old HIV+ patient with poor ART compliance presents with a painful scrotal swelling for 2 weeks and extends to the buttocks. Examination reveals foul smell with scrotal swelling and multiple black blisters. Based on the history above, What's the most likely diagnosis?
- Gas gangrene
 - Kaposi sarcoma
 - Fournier's gangrene
 - Lymphoma
97. A diabetic ulcer patient develops crepitus over the affected limb. You make a diagnosis of gas gangrene, which of the following statements are true regarding the resolution in your diagnosis?
- Incubation is approx. 5 days
 - Crepitus becomes palpable due to gas formation
 - Cephalosporins are used prophylactically
 - Surgical debridement of the wound is not usually required
98. 75-year-old is informed by his doctor that he has a "Robert's ulcer". Such an ulcer is a form of
- Squamous cell carcinoma
 - Basal cell carcinoma
 - Melanotic ulcer
 - Ischemic ulcer

CHOOSE THE BEST SINGLE ANSWER

- The 16-year-old has been on skin traction for a minimally comminuted fracture. X-rays show a visible callus, and clinically, the fracture site is no longer mobile. The approximate time for an osseointegration to occur is:
 - Less than 7 days
 - Up to 2-3 weeks
 - 4-12 weeks
 - 1-2 years
- A 10-year-old has been on traction for a femur fracture; your supervisor is concerned about the quality of the callus that has formed. Regarding callus:
 - Stage last 1-2 years
 - It's the stage in which cells lay down an interstitial matrix that becomes impregnated with calcium salts
 - It is the last sign of union clinically
 - The formation process takes longer in children than in adults
- Following being crushed between a brick wall and a reversing car, a patient sustained a pelvic fracture. The potential blood loss in pelvic fractures is:
 - 250-500mls
 - 500-1000mls
 - 1000-2000mls
 - >2000mls
- Mrs Potts is involved in RFA and has sustained a femur fracture. The potential blood loss from this fracture is:
 - 250-500mls
 - 500-1000mls
 - 1000-2000mls
 - >2000ml
- Mr. Chibwe is attempting to reduce a hip dislocation. Which of the following techniques would you recommend?
 - Stimson
 - Kochers
 - Hypertonic
 - Watson Jones
- When reviewing ankle fracture on X-ray, a 'Weber A' fracture is a fracture _____. The syndesmosis:
 - Above
 - Below
 - At the level of
 - Weber A has no relation to the syndesmosis
- The fracture pattern below, according to Salter-Harris, is:
 - Type I



- b) Type II
 - c) Type III
 - d) Type IV
7. While rotating in casualty, you overheard a junior Doctor express concern over the possibility of arterial limb injury in a patient. Signs of limb arterial injury following RTA include all EXCEPT
- a) Pulse discrepancies
 - b) Pale
 - c) ABI > 0.9
 - d) Expanding hematoma
8. A 23-year-old Eden University student has noticed numbness and tingling sensation in her little finger for 1 week. Which nerve is likely affected
- a) Radial nerve
 - b) Ulnar nerve
 - c) Medial nerve
 - d) Brachial nerve
9. Mrs Mwaura returned to the physiotherapist complaining that she was unable to extend her wrist in both limbs 4 days after starting to use her crutches prescribed for the management of her right ankle fracture. Your likely diagnosis would be
- a) Ulnar nerve injury
 - b) Radial nerve injury
 - c) Median nerve injury
 - d) Brachial nerve injury
10. Five days following a fracture of the upper limb bone, the patient presented with what she saw on the internet as a 'Claw hand'. Which upper limb fracture is likely to give rise to such a condition?
- a) Malclav humerus fracture
 - b) Supracondylar fracture
 - c) Elbow medial condyle fracture
 - d) Monteggia fracture
11. Following a knife injury, the attending doctor tells the patients that she has sustained a nerve injury, describing it as "the nerve being completely divided." This type of nerve injury is referred to as
- a) Neurotmesis
 - b) Axonotmesis
 - c) Neuropraxia
 - d) Any of the above
12. With regards to head injury, ALL are signs of basal skull fracture EXCEPT
- a) Periorbital ecchymosis
 - b) Cranial nerve palsy
 - c) Battle sign
 - d) Rhinorrhea
13. Upon review of a patient in ICU, you conclude that the patient is 'Brain dead.' This refers to
- a) GCS < 3/15
 - b) Non-reactive pupils bilaterally
 - c) Absent brainstem reflexes
 - d) All of the above
14. CT scan of a head injury patient shows a subdural hematoma. Regarding subdural hematomas,
- a) 80% of all head injuries
 - b) Results from injury to the middle meningeal artery
 - c) Crescent shaped on CT
 - d) 10% Mortality
15. A 19-year-old head injury patient is noted to have short periods in which he regains consciousness. Such a phenomenon is associated with
- a) Subdural hematoma

11. Mr. Bowdy, a 70-kg male patient, presents to ED following a stab wound to the abdomen. He is hypotensive, markedly tachycardic, and appears confused. What per cent of blood volume has he lost?
- 5%
 - 15%
 - 33%
 - 40%
12. Mulega, the 20-year-old patient, is in septic shock and remains hypotensive despite 500g giving adequate fluid resuscitation. The vasopressors commonly used as 1st line are?
- Norepinephrine
 - Arginine vasopressin
 - Dobutamine
 - Milrinone
13. Which constellation of clinical findings is suggestive of cardiac tamponade?
- Hypotension, wide pulse pressure, tachycardia
 - Tachycardia, hypotension, jugular venous distension
 - Hypotension, wide pulse pressure, jugular venous distension
 - Hypotension, muffled heart tones, jugular venous distension
14. Mr. Iunga, 43 years old, is struck by a motor vehicle while crossing the street; he arrives in the E.D. hypotensive, bradycardic, and unable to move his extremities. What should be your first thought as to the likely cause of his hypotension?
- Hypovolemic shock
 - Obstructive shock
 - Vasodilatory shock
 - Neurogenic shock
15. The first step in the evaluation and treatment of a patient with an infected Dog bite on the leg with cellulitis, bullae, thin greyish fluid draining from the wound, and pain out of proportion to the physical findings is
- Obtain C-reactive protein
 - CT leg
 - MRI leg
 - Operative exploration of the leg
16. A 65-year-old patient presents with a painless, 'rodent ulcerated' lesion on her right cheek. The lesion has been present for 1 year. Physical examination of the patient's neck reveals no lymph node enlargement. The most likely diagnosis is
- Melanoma
 - BCC
 - SCC
 - Sebaceous cyst
17. Mr. Chango has a 3-mm basal cell carcinoma (BCC) of the skin confirmed histology. This lesion should be treated with:
- Biopsy and gross total excision
 - Dermatologic laser vaporisation
 - Excision with 2- to 4-mm normal margin
 - Electrodesiccation
18. The primary risk factor for the development of squamous cell carcinoma (SCC) is
- UV exposure
 - Cigarette smoking
 - Chemical agents
 - Chronic non-healing wounds
19. A 45-year-old with 1cm x 0.5cm mass over the right thigh. The biopsy should be?
- Core needle biopsy
 - Incision biopsy

- b) Epidural haematomas
- c) None
- d) Subarachnoid haematomas
- 16. Unlike in Type-II trauma, shock management targets what in head injury?
 - a) $+8\text{mmHg}$
 - b) $+6\text{mmHg}$
 - c) $+4\text{mmHg}$
 - d) $+15\text{mmHg}$
- 17. The commonest type of intracranial haemorrhage is
 - a) Subdural haemorrhage
 - b) Epidural haemorrhage
 - c) Intra-cerebral
 - d) Subarachnoid haemorrhage
- 18. A 70-year-old woman has been admitted to the ED after a stroke. Based on the chest X-ray below, what support device is suboptimal, and what complication is the patient at risk of?



- a) Endotracheal tube left lung atelectasis
- b) Endotracheal tube, pneumothorax
- c) Feeding tube left lung atelectasis
- d) Feeding tube, pneumothorax
- 19. Mr. Mhuiri is just from placing an ICD in an R.T.A. victim with massive haemorrhage. The instructions for Mr. Mhuiri recommends a thoracotomy is
 - a) Draining more than 500ml of blood immediately, the ICD is place
 - b) Draining more than 1500ml of blood immediately, the ICD is place
 - c) Draining more than 1000ml of blood immediately, the ICD is place
 - d) Draining more than 2000ml of blood immediately, the ICD is place
- 20. While on a major ward round, the consultant surgeon asks the question, "Which condition is associated with paradoxical chest movement?" Your answer would be
 - a) Cardiac tamponade
 - b) Flail chest
 - c) Pulmonary hypertension
 - d) Pneumothorax
- 21. A patient involved in a motor vehicle accident arrives at the ED with severe pain in the right chest. CXR reveals multiple rib fractures. Which of the following would immediately make you suspect a flail chest?
 - a) Difficulties breathing
 - b) Increased stridor
 - c) Paradoxical breathing
 - d) Decreased O2 saturations
- 22. For a patient with a hemothorax, the chest drain should be placed in _____

- 2nd intercostal space
3rd intercostal space
4th intercostal space
5th intercostal space
3. Mr Mwatunwa, a worker at ZESCO, fell off the electric pole height, landing on a shovel. He sustained an open pneumothorax. The immediate management of an open pneumothorax prior to referral is?
- a) ICD
b) Placing of a three-way occlusive dressing
c) Complete closure of the wound
d) Positive ventilation pressure placement
e) Placement of a needle in the 2nd intercostal space
24. A patient with a penetrating injury to the chest should undergo thoracotomy if:
- a) There is more than 500 mL of blood that drains from the chest tube when placed
b) There are more than 200 mL/h of blood for 3 hours from the chest tube
c) There is an air leak that persists for >48 hours
d) There is a documented lung injury on a CT scan
25. Chimwenwe just fractured a bone in her lower leg that resulted in compartment syndrome. What happens to the body when a person has compartment syndrome?
- a) A muscle becomes ruptured
b) The pressure inside the muscle drastically increases
c) A bone breaks in more than one location
d) The skin is lacerated
26. All are true of compartment syndrome of limbs EXCEPT
- a) Diagnosis is unlikely if the pulse is felt distally
b) There is pain on passive stretching of the limb
c) Pain is out of proportion to the signs
d) Muscles of the calf and forearms are commonly involved
27. The major cause of impaired wound healing is?
- a) Anaemia
b) Diabetes mellitus
c) Local tissues infection
d) Malnutrition
28. Mrs. Kembe is being treated for a long-standing ulcer. She has a history of using steroid cream in an attempt to bleach her skin. The steroids used impair wound healing by
- a) Decreasing angiogenesis and macrophage migration
b) Decreasing platelet plug integrity
c) Increasing release of lysosomal enzymes
d) Increasing fibrinolysis
29. In haemorrhage, larger arterioles vasoconstrict in response to the sympathetic nervous system. Which categories of shock are associated with vasodilation of larger arterioles?
- a) Septic shock
b) Cardiogenic shock
c) Neurogenic shock
d) A & C are correct
30. 32-year-old patient has a blood pressure of 70/50 mm Hg and a serum lactate level of 30 mg/100 (normal: 6-16). His cardiac output is 1.9 L/min (normal 5-6 L/min and his central venous pressure 2 mmHg (normal 5-7 mmHg). The most likely diagnosis is:
- a) CHF
b) Cardiac tamponade
c) Hypovolemic shock
d) Septic shock

- c) Excision biopsy
 - d) Tri-cut biopsy.
40. According to the 'SURVIVING SEPSIS CAMPAIGN', the aim of which is timely diagnosis and treatment of sepsis, which of the following is NOT an early goal in the treatment of severe sepsis?
- a) MAP > 65mmHg
 - b) CVP > 8mmHg
 - c) Urine Output > 0.5ml/kg/hr
 - d) Serum lactate <2 mmol/l
41. A 45-year-old woman with a history of poor oral hygiene presents with a 4-day-old submandibular swelling with foul oral odour. You make a diagnosis of Ludwig's angina. Ludwig's angina is?
- a) Monomicrobial infection of some neck spaces
 - b) Abscess involving the infratonsillar region of the neck
 - c) Form of dental infections causing cellulitis
 - d) It can be treated non-operatively with antibiotics only
42. A female, 43, is diagnosed with acute cholecystitis. This condition is considered?
- a) A primary infectious process with secondary inflammation
 - b) A sterile primary inflammatory process
 - c) A primary inflammatory process with occasional bacterial contamination
 - d) A primary autoimmune process
43. A 54-year-old otherwise healthy woman presents to the emergency department with abdominal pain, fever, chills, and confusion. Blood pressure is 95/70, heart rate 110, and temperature 39°C. Laboratory tests demonstrate a white blood cell count of 15,000, normal haematocrit and platelets, as well as a direct bilirubin of 2.2. Initial management should be
- a) Discharge home with oral antibiotics with planned cholecystectomy in the coming weeks
 - b) Emergent cholecystectomy
 - c) Intravenous (IV) fluid resuscitation and antibiotics
 - d) Observation and pain control
44. Cholecystitis can be either infectious or acalculous by classification. Risk factors for acalculous cholecystitis include:
- a) Sepsis
 - b) Severe burns
 - c) Multiple trauma
 - d) All of the above.
45. A 55-year-old man has CT evidence of complicated appendicitis with a contained abscess in the RLQ. He is mildly tachycardic, afebrile, and normotensive with focal RLQ tenderness but no peritonitis. What is the optimal approach for this patient?
- a) Immediate laparotomy
 - b) Laparoscopic exploration and abscess drainage
 - c) Percutaneous drainage, intravenous (IV) fluids, bowel rest, and broad-spectrum antibiotics
 - d) IV fluids, bowel rest and broad-spectrum antibiotics
46. During an appendicectomy, the surgeon discovers an appendicular mass. What should be his next step?
- a) Remove the appendix
 - b) Remove the mass
 - c) Role out an appendicular abscess
 - d) Role out the appendicular abscess and close the abdomen
47. Which of the following physical signs is associated with the correct definition suggestive of acute appendicitis?
- a) Rovsing sign: pain in the RLQ on palpation of the left lower quadrant
 - b) Dunphy sign: pain in the RLQ with palpation on the left
 - c) Obturator sign: pain with extension of the leg
 - d) Iliopsoas sign: pain on internal rotation of the right hip

48. Mr Chwicka, a 28-year-old woman, presents with 300 gms. fever, and leukocytosis. During imaging studies, the Alvarado score is used to determine the patient's likelihood of having appendicitis. All of the following variables make up the Alvarado score EXCEPT:

- a) Anorexia
- b) Left shift of neutrophils
- c) Disappears sign
- d) RLQ pain

49. Ultrasound evaluation of an obstructed inguinal hernia is suggestive of an incarcerated hernia. All are FALSE regarding an 'interoscule' hernia content EXCEPT:

- a) Resonant on percussion
- b) Both dull and tympanic on percussion
- c) Peristalsis is always seen
- d) Bowel sounds are present all the time

50. A 2-year-old African American boy presents with a reducible umbilical hernia under 2-cm diameter. This is best managed by:

- a) Immediate surgery and repair with mesh
- b) Immediate surgery repair without mesh
- c) Laparoscopic repair with mesh
- d) Periodic observation and evaluation

51. Clinically, a complete inguinal hernia is one where:

- a) Content is reaching only the deep ring
- b) Content is reaching only the acetum
- c) Content is limited to the inguinal canal
- d) Content can be reduced by the patient

52. During physical examinations of hernia at the CR, ~~inguinal~~ hernias:

- a) They lie below and lateral to the pubic tubercle
- b) Lie above the crease of the groin
- c) It can be reduced completely
- d) All are true

53. A female obese patient has been diagnosed by you with a Spigelian hernia. This type of hernia usually occurs:

- a) On the lateral border of the rectus abdominus muscle
- b) In the linea alba
- c) In the medial wall of the inguinal canal
- d) In the posterior wall of the costovertebral angle

54. You have been asked to demonstrate the location of the 'Midpoint of inguinal ligament' by the consultant surgeon. This point is:

- a) The mid-point between ASIS and PS
- b) The area where you can locate the femoral artery
- c) The same as the midpoint of the inguinal point
- d) The landmark for the location of the deep ring

55. "The only contraindication to not performing a Digital Rectal Exam is when the patient has no anus, or the physician has no fingers" This is a common statement in surgical practice. The justification for performing a digital rectal exam in all adult surgical male patients is:

- a) Ensure there is no intestinal obstruction
- b) To rule out Benign Prostatic Hyperplasia
- c) To ensure the patient has no colon tumours
- d) It is routine practice in all surgical patients

56. 4-years following a laparotomy for gastric perforation, Mr Lwendo developed an 'incisional hernia'. This type of hernia is an example of:

- a) Iatrogenic hernia
- b) Congenital hernia
- c) Acquired hernia

A special type of hernia

While reviewing a file for a female hernia patient. You note that the previous physician had closed this patient's hernia as a NYHUS type "B". This type of hernia refers to?

- 1) Indirect hernia
- 2) Direct hernia
- 3) Pantaloon hernia
- 4) Femoral hernia

8. Mr Mwalema presents with signs and symptoms of strangulated hernia. All the following are signs and symptoms of either obstruction or strangulation, EXCEPT

- 1) Tenderness
- 2) Irreducibility
- 3) Presence of positive cough impulse
- 4) Absent bowel sounds

59. A 30-year-old MU, in a rural area is a patient with recurrent hernias. The medical issue NOT associated with hernia recurrence is

- a) Malnutrition
- b) Steroid use
- c) Smoking
- d) Alcohol abuse

60. You wish to perform barium studies to investigate a patient with complaints of vomiting undigested foods soon after meals. Which of the following would be the most appropriate barium study to be done?

- a) Barium swallow
- b) Barium meal
- c) Barium follow-through
- d) Barium enema

61. All are complications of gastric outlet obstruction EXCEPT

- a) Paradoxical aciduria
- b) Hypokalaemia
- c) Hypomagnesaemia
- d) Hypophosphatemia

62. An Elderly male patient from a hospice care home is brought to the hospital with a recent onset of colicky abdominal pain, distension and obstipation. On examination, the abdomen is markedly distended and tympanic. There is marked tenderness. A plain abdominal x-ray shows a markedly distended loop located mainly in the lower left quadrant. You recognized this as a "bean sign" on the x-ray. The likely diagnosis is

- a) Small-bowel obstruction
- b) Large-bowel obstruction
- c) Gallstone ileus
- d) Sigmoid volvulus

63. A 23-year-old presents to the ER with features of intestinal obstruction. The most common cause of small bowel obstruction in such young adults is

- a) Incarcerated hernia
- b) Crohn's disease
- c) Malignancy
- d) Postoperative adhesions

64. Therapy of a small bowel obstruction usually consists of prompt surgical correction. In patients with no evidence of closed-loop obstruction and in whom there is no fever, leucocytosis, or tachycardia, a period of careful observation with nasogastric decompression may be successful in all of the following conditions EXCEPT

- a) Partial small bowel obstruction
- b) Obstruction in the early postoperative period
- c) Obstruction due to Crohn's disease

71. While performing scintigraphy on a patient with suspected thyroid malignancy, thyroid nodule nodules that take up excess radioactive substance during a thyroid scan would appear as?
- Hot nodule
 - Warm nodule
 - Cold nodule
 - Red nodule
72. Mrs Mwale has been scheduled for surgical removal of the thyroid gland. This surgical procedure is called?
- Thyroidectomy
 - Thyoplasty
 - Thyroidectomy
 - Thermogenesis
73. An 18-year-old grade 12 pupil presents with a mass in her right breast. What features below would be supportive of your diagnosis of breast fibroadenoma on clinical examination?
- It is soft
 - It is hard and fixed to the skin
 - It is lumpy, and the edge is difficult to feel
 - It is firm and round and moves around under your fingers
74. A female patient presented with a firm mass of 2 x 2 cm in the upper outer quadrant of the breast. She has a family history of ovarian carcinoma. The oncogene that needs to be checked for in such a situation is:
- p53
 - BRCA2
 - Her2 gene
 - C-myc gene
75. Peau D'orange is an appearance of breast carcinoma by:
- Infiltration of Cooper ligaments
 - Infiltration of lactiferous ducts
 - Obstructions of Dermal lymphatics
 - Involvement of the skin
76. Mr Lumoro has been diagnosed with advanced lung cancer. Which of the following TNM staging is equivalent to advanced lung cancer?
- T3, N0, Mx
 - T1, N1, M0
 - T3, N1, M1
 - T2, Nx, Mx
77. A 26-year-old man is diagnosed with adenocarcinoma of the stomach. He wants to know what could have caused him to develop this condition. He does an internet search. Which of the following is a risk factor for developing gastric cancer would be first in his internet search?
- Exposure to ionising radiation
 - Blood group B
 - A diet high in fibre
 - H. pylori infection
78. A 45-year-old woman is suspected of having breast cancer. What type of test will a physician want to diagnose the cancer?
- Blood test
 - Mammography
 - CT scan
 - Pap test
79. While on the ward, you are called by the nurse with concerns that 30 days post laparotomy, the patient has developed a surgical site infection (SSI). Your evaluation reviews a wound dehiscence with exposed bowels and pus discharge. Such SSI is classified as:
- Superficial incisional

- b) Deep incisional
c) Organ space infection
d) Abscess
82. All are factors to wound infection, excluding
a) Prolonged operation
b) Diabetes
c) Malnutrition
d) All of the above
83. The general effects of burn injuries are
a) Decreased metabolic rate
b) Impaired immune function
c) Impaired fluid absorption
d) Metabolic alkalosis
84. As a final-year student, you have an interesting opportunity to observe the surgery (not note when the surgeon asks you to be his assistant or an experienced laparotomy). As he starts the surgery, he makes a midline laparotomy incision. The advantage of this incision is ALL except
a) significant exposure of the viscera
b) causes minimal blood loss or nerve damage
c) can be used for emergency procedures
d) It is less susceptible to significant scars
85. The 1ST stage of wound healing is known as
a) Inflammatory
b) Hemostasis
c) Proliferation
d) Remodelling
86. What is the estimated risk of transmission of human immunodeficiency virus (HIV) from a needlestick from a source with HIV-infected blood?
a) <0.5%
b) 1%
c) 5%
d) 10%
87. Appendicectomy is an example of a?
a) Clean wound
b) Clean contaminated
c) Contaminated
d) Dirty
88. Clean wounds have a _____ % chance of developing surgical site infection
a) <2%
b) <10%
c) 20%
d) >40%
89. Repair of gastric perforation surgery is an example of
a) Diagnostic type of surgery
b) Ablative type of surgery
c) Reconstructive type of surgery
d) Transplantation type of surgery
90. Mr Tembo is about to undergo a re-laparotomy for peritonitis. Such kind of peritonitis is called _____
a) Primary
b) Secondary
c) Tertiary
d) Both primary and tertiary

A 36-year-old man has not been doing so well health-wise. He had been a long-standing patient, often treated for recurrent joint pains for years. He has now developed hypertension, and as part of his blood work-up to screen for other risk factors, the following results are issued from the lab.

Na⁺ 142 mmol/l, K⁺ 3.9 mmol/l, Urea 6.2 mmol/l, creatinine 91 µmol/l, 10-hour fasting blood glucose 7.7 mmol/l (normal 3.9 to 5.9), HbA1c 31 mmol/mol or 5% (normal <7%).

- From the results above, you think the patient may have diabetes but there is a discrepancy in HbA1c and fasting blood glucose. What do you think is the underlying chronic condition which has caused this discrepancy? (1 mark)
- What pathophysiological process can explain this discrepancy? (2 marks)
- What could have caused the high blood glucose? (2 marks)

Question 4

You are a newly graduated intern after successfully passing your internal medicine exam. You are called to the Emergency Department to assess a 21-year-old student who has presented with bloody diarrhoea. The diarrhoea started two weeks previously and was associated with increasing nausea and malaise and mild swelling of the lower limbs. She was having difficulty passing urine. She had eaten a tasty steak from the local butcher at a friend's brain the day before developing diarrhoea.

On examination, she was pale with evidence of petechiae over her legs. Her face appeared puffy. Blood pressure was 160/95 mmHg. She was afebrile but had tachycardia and crackles on inspiration at both lung bases. There was an old appendicectomy scar in the right iliac fossa.

Investigations showed:

Haemoglobin	8.5 g/dl	
White cell count	13.2 x 10 ⁹ /l	
Platelets	35 x 10 ⁹ /l	
PT	12 s (11.5-15.5)	
APTT	34 s (30-40)	1.7
Fibrinogen	4 g/l (1.8-5.4)	✓
Serum sodium	139 mmol/l	
Serum potassium	6.1 mmol/l	
Serum urea	40 mmol/l	
Serum creatinine	411 µmol/l	
Serum albumin	27 g/l (37-49)	
Dipstick urine	Blood ++ Protein +	

- What is the single most important next investigation to determine the diagnosis? (1 mark)
- The blood film collected from this patient is likely to show **three (3)** haemogram findings. (3 marks)
- List the **four (4)** principles of therapy. (4 marks)

Question 5

- a) It inhibits aldosterone
 - b) Improves survival in patients with chronic heart failure
 - c) It causes sodium depletion
 - d) It increases diuresis being a diuretic
 - e) Increases orthopnea
98. In the treatment of chronic left-side heart failure, which of the following represents the most important pharmacological intervention?
- a) Prescription of Lasix
 - b) Prescription of Digoxin
 - c) Prescription of ACE inhibitors
 - d) Prescription of aspirin
 - e) Prescription of Amiodarone
99. Which of the following is the most pathognomic feature of infective endocarditis?
- a) Presence of fever
 - b) Presence of vegetation on the valves
 - c) Presence of anemia
 - d) Presence of skin and nail lesions (Jane Way's lesions)
 - e) Presence of dyspnoea
100. A patient admitted with a diagnosis of infective endocarditis should be treated for a minimum number of?
- a) 5 days of oral antibiotics
 - b) 7 days of IV antibiotics
 - c) 14 days of oral antibiotics
 - d) 21 days of IV broad-spectrum antibiotics
 - e) 7 days of oral antibiotics

THE END

-The End-

2024



EDEN UNIVERSITY
SCHOOL OF MEDICINE
DEPARTMENT OF MEDICINE & CLINICAL SCIENCES
BACHELOR OF SCIENCE IN CLINICAL MEDICINE

BSC CM 5,2 PAPER II

INTERNAL MEDICINE- MME 510

EXIT - EXAMINATION

DURATION 3 HOURS

MAY 10 2024

STUDENT ID No.	
NRC No. /PASSPORT No.	
EXAMINATION VENUE	

INSTRUCTIONS TO CANDIDATE

1. Indicate your student ID and NRC numbers on this question paper and the booklets use
2. Do NOT start writing before you are told
3. Read the questions very CAREFULLY before attempting to answer
4. Maximum marks = 100 Marks
5. This paper contains ONE (1) section

**CELLPHONES, SMART WRISTWATCHES AND PROGRAMMED CALCULATORS
ARE NOT ALLOWED IN THE EXAMINATION ROOM
DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO BY THE
INVIGILATOR**

c Diminished chest movement on the right chest wall, Reduced chest wall expansion, Increased right vocal fremitus. Stony dullness on RT chest. Reduced air entry on RT.

⇒ Right pleural effusion.

D Provisional Dx and 3 DDX.

Provisional dx — Pulmonary Tuberculosis
DDX

1. Community Acquired Pneumonia.
2. Congestive Cardiac Failure.
3. Lung Cancer.
4. Liver cirrhosis.

E INVESTIGATIONS

LABORATORY.

Blood:

• FBC — ↑ WBC, ↑ monocytes, ↑ lymphocytes

• ABGs

• Blood culture

• Urea & electrolytes.

• CD4/viral load

• HIV workup test, RPR, CAT, TAT, HepB & C

Sputum / Pleural Fluid.

• Sputum for M/C/S., gene expert.

• Pleural fluid for M/C/S, Gene expert

RADIOLOGY.

Imaging.

— CXR — To see whitish opacity in lungs.

MGT of TB.

Nursing Mgt.

— Tepid sponging for fever.

— Paracetamol 1g tid x 3/4.

CLINICAL SCENARIOS AND DATA INTERPRETATION (100 MARKS)

Read the clinical scenarios and select the best option (s) according to the questions. You are advised to select only the number of options specified. If you choose more than the specified options, the entire question will be marked WRONG. There is no negative marking.

QUESTION 1

A 25-year-old man from Kanyama presented to the General Hospital Adult Medical Emergency Unit (AMEU) with a history of seizures. This was his first episode of seizures, and he was reported to have convulsed three times before admission, with each seizure lasting about 3 minutes. He was said to be "okay" before the seizures. The patient was HIV-negative and had no known medical illness. His brother mentioned that he enjoyed his alcohol often with barbequed beef and pork. On examination, he was unconscious, with a GCS of 6/15. Respiratory and cardiovascular system examinations were unremarkable.

After doing all preliminary lab tests, you quickly order a CT scan of the brain, which shows the following.



- i. What is the causative agent? (1 mark)
- ii. What risk factors predisposed this patient to developing the condition above? Choose two. (2 marks)
- iii. What other single test can you perform to confirm the diagnosis? (1 mark)
- iv. List two (2) medications that will you give to treat the condition. (2 marks)

Question 2

A 37-year-old housewife reports 3 weeks of generalized fatigue, several days of dark urine and one day of scleral icterus. She denies vomiting but complains of mild, continuous pain in the right upper quadrant and intermittent nausea. Physical examination reveals the patient to be jaundiced, but comfortable. She shows no signs of malnutrition and has no spider angiomas or palmar erythema. The liver is tender and measures 15cm by percussion in the mid-clavicular line. It is palpable 4cm below the costal margin on inspiration. The spleen is not palpable. The rest of the examination is unremarkable.

25/11/25

Q1 25yrs old, coughing $\frac{6}{52}$, Fever & night sweats. Has HIV a week ago

A. History taking.

COUGH: - Is the cough dry or productive.

- If productive, is it smelly & what's the colour of sputum.

- What aggravates and relieves cough

- Is it associated with chest pains, ~~fever~~ ~~dis~~

- What time is cough occurring - night or day time.

- Ask any history of TB contact

- Ask any Hx of Unintentional weight loss

FEVER: - Is it intermittent or continuous.

- Timing of fever

NIGHT SWEATS: - Is it drenching night sweats.

HIV

- Is he taking ART and what side effects is he facing, drug adherence.

- Is there any Hx of breathlessness, wheezing

- Any Hx of loss of appetite.

B Severe wasting, Mod pallor, RDS, Parameters of RDS.

- Nasal flaring

- Use of accessory muscles.

- Central Cyanosis.

- Tachypnoea.

- Low O₂ Saturation < 90%.

- i. Match all of the following laboratory findings with the various diagnostic possibilities. (4 marks)

	Aspartate aminotransferase (AST) (IU/L)	Alanine aminotransferase (ALT) (IU/L)	TOTAL BILIRUBIN (mg/dl)	Alkaline Phosphatase (IU/L)
A	235	90	5.5	190
B	1100	1320	5.5	190
C	235	325	5.5	190
D	235	325	10.5	990

Diagnosis

1. Acute Viral Hepatitis
2. Chronic Viral Hepatitis
3. Alcoholic Hepatitis
4. Bile duct obstruction.

Choice

 A

- ii. If the patient has a strong family history of liver disease, what tests are available to screen for inherited disorders? List four (4). (4 marks).
- iii. You performed the tests in question (ii) and they were all negative. However, the patient was found to be HIV positive and you initiated the patient on anti-retroviral therapy. Further work-up showed the following:
- CD4 count of 424 cells/mm³
 - HIV RNA 123,344 copies/mL
 - positive hepatitis B surface antigen (HBsAg)
 - positive hepatitis B e antigen (HBeAg)
 - HBV DNA level of 1,560,000 IU/mL.

The follow-up HBV DNA level 12 weeks after starting therapy is 26,120 copies/mL and 24 weeks after starting therapy it is 2,840 copies/mL. The HIV RNA level was below the limit of detection at week 12. Cirrhotic changes on ultrasound are observed.

Choose one of the following most accurately describes this initial response to HBV therapy. (2 marks)

- a) Primary non-response
 - b) Complete virologic response
 - c) Partial virologic response
 - d) Maintained virologic response
 - e) Sustained virologic response
- iv. What four (4) parameters would indicate the patient has a decompensated cirrhosis? (4 marks)

Question 3

INVESTIGATIONS.

LABORATORY

Blood: FBC: $\uparrow$ thrombocytosis, Polycythemia
RPR, BCT.
RBS, ABGs.

Radiology.

Imaging: Brain CT Scan.
EEG.

LP to differentiate Ischaemic from
Arterial Angiography.
Subarachnoid hemorrhage.

MGT.

Nursing Care.

- Regular turning of a patient 2 hourly.
- NGT for feeding & avoiding aspiration.
- Urinary bladder catheterization.
- O₂ therapy.
- IV fluids RL.

MEDICAL.

- Within 4.30 hrs ~~pm~~ I will give Tissue plasminogen Activator (Alteplase).
- Lower BP by giving labetalol.
- Statins - Orvastatin.
- Anticoagulant - Heparin.
- Antiplatelet - ASA after a week.

COMPLICATIONS OF STROKE

- | | |
|------------------------------------|------------|
| - Aspiration pneumonia | - DVT |
| - Decubitus ulcers. | - Seizures |
| - Depression. | |
| - BRUXISM (Clenching of the teeth) | |
| - Intestinal obstruction. | |
| UTI - Due to indwelling catheter. | |

- Semifowler's position of the patient.
- O₂ therapy 5L/minute.
- Pleural tap for therapeutic purpose
- MEDICAL MRI.
- ATT (2RHZE/4RH)
- If a patient is on DTG, double DTG
- Pyridoxine 25mg OD

Q2 Sweating, stops singing, In trance
collapses to the ground

A. First Assessment & AID to offer.

- A - Airway patency
- B - Breathing
- C - Circulation.
- D - Disability.
- E - Exposure to harmful environment.

B BP 217 Pulse 122 Mouth deviated to Left
very noisy respiration similar to
deep snoring on applying stimulus
yes responds to pain & she flexes Rt limb
verbally unresponsive.

- GCS V = 1
M = 3
E = 2
6/15

C DX

CVA (Stroke).

D What Questions will you ask the guardian.

- If she was adhering to HTN meds.
- Any history of HTN in the family.
- Any Hx of Headache and tingling
- Any Hx of Comorbidities e.g. HIV, DM, DVT, valvular Heart disease.

Complications of H/F

1. Brain Injury 2° Hypoperfusion
2. Acute Kidney Injury
3. DVT
4. Loss of memory.
5. Stroke
6. Respiratory failure.

Principles of H/F Rx.

1. Relieve the symptoms of H/Failure
2. Improve the heart functioning/structure
3. Avoid further complications.
4. Prolong life.

Q5. 25yr old Male. easy fatigability. Tooth extraction 2 wks ago. Fever on/off. O/E $T 37.8^{\circ}C$. BP $120/80$ mmHg. Pale & jaundice, clear lungs, pansystolic murmur @ apex. Has Splenomegaly. Urinalysis has RBC in urine.

A. DX.

Q6. 30yr old pt c Epigastric Pain. He takes wine. Normal temp BP 86/55. Conscious but in severe pain.

A. Dx

Peptic Ulcers Disease

B. Investigations

LABORATORY

Blood

FBC — ↓Hb

Blood culture

Rapid H. pylori test — Antibodies of H. pylori

Radiology

Endoscopy — visualization

— Seal the bleeder / Arrest bleeding.

USS of Abdomen — R/o perforated ulcer

Urea breath test — measures amount of carbon dioxide in the breath w/c can indicate H. pylori infection.

Stool Antigen-test — Detects the Presence of H. pylori antigens in the stool.

C CLASSIFICATION.

1 GERD

2 Gastric

3 Duodenal.

D Pathophysiology

Imbalance of mucus and hydrochloric acid. Either low secretion of mucus and

↑ hydrochloric acid will erode the mucus membrane.

Q4. Indika 34 yrs old PC Breathlessness, tired easily
Feel Swelling in the evening. Cough & Hemoptysis
2 days ago. No Fever, Chest pain or night
sweats O/E Harse voice, redness of cheeks
engorged neck veins & bilateral creptation
posterior. Heart sounds - Drastolic rumble
loudest @ apex, Bilateral pitting oedema
FBC, KFT, normal HIV negative.

A. DX.

Congestive Cardiac Failure. Grade III

B Cause of Cough & Harse voice
- Due to pulmonary congestion.

C. Cardinal Investigations.

LAB Investigations.

Blood - Full blood count for Hb levels
for severe Anaemia.

- ABGs PH < 7.3 . P_{aO_2} ?

- Cardiac markers (enzymes) Troponin I
& T, CK-MB (creatinase kinase-MB)

RADIOLOGICAL

Cardiac echo: Enlarged Cardiac shadow.

~~Chest Xray~~ - Valvular Incompetency.
- Cardiac effusion

CXR - Enlarged Cardiac shadow.

- Kelly B lines, Batwing

- Ground Glass appearance.

ECG - ST ^{effusion} seg

Cardiac Catheterization

Coronary Angiography.

BNPs. B - natriotic pepti

Brain natriuretic peptide - Hormone

Produced by heart valves in response to
stretching caused by increased blood volume & pressure

ii. If the Pt has a strong family Hx of liver dz, what tests are available to screen for inherited disorders.

- ① Serum Ceruloplasmin and 24 hour urine copper for Wilson dz.
- ② Alpha 1 antitrypsin levels (for Alpha 1 -antitrypsin deficiency).
- ③ Genetic testing for HFE mutations (for hereditary hemochromatosis).
- ④ Genetic testing for metabolic liver diseases (e.g. Gilbert's Syndrome, Congenital Najar Syndrome).

iii. It is partial virologic response.

iv 4 Parameters that indicate decompensated cirrhosis.

- (a) Ascites
- (b) Hepatic encephalopathy
- (c) Jaundice
- (d) Portal HTN (oesophageal varices)
- (e) Shrinkage, nodules, of the liver, finger clubbing.

Q3. 36 yr old man treated for Jnt pain for years, Hypertensive, Sodium 142, K^+ 3.9, urea. 6.2 Creatinine 91, FBS 7.7 mmol/L, HbA1C 31 mmol/mol or 5% (Normal < 7).

(a) Chronic Arthritis. (treatment - steroids)

CAUSES.

1. H. Pylori - Infection.
2. Drugs: NSAIDs, Steroids.
3. Lifestyle: Alcohol, Spicy food, Carbonated drinks.
4. Cancers: Zollinger Ellison. Syndrome.
5. Acid Injections.

MGT

4. Nursing:

- IV Normal Saline bolus. followed by Maintenance Fluid 2.5 - 3L/24hrs.

Medical.

- Paracetamol 1g tid x 3d.
- Diclofenac 75mg IM Stat.
- If H. Pylori is (+ve) give Amoxicillin 1g BD x 14d + Metronidazole 400mg tid x 14d + Omeprazole 20/40mg OD x 14d + Magnesium trisilicate soap tid x 5d. Peccide oral gel.

Counselling.

Stop beer drinking.

- Avoid taking NSAIDs / Steroids / Spicy food, Carbonated drinks.
- Advise not to miss meals.

Q. There is discrepancy

B Pathophysiology.

Due to chronic Infection, there is chronic anaemia whereby RBCs are low. These RBCs are the ones that carry glucose that's why Glycated Haemoglobin is low.

C. Hyperglycemia can be caused by stress and prolonged use of steroids and undiagnosed diabetes.

Q4. 21 yr old student c bloody diarrhoea $2\frac{1}{2}$ wks
c increased nausea, malaise & fluid swelling of lower limbs. Has difficulty in passing out urine. Eaten Steak from a local butchery by diarrhoea o/e Pallor, Petechia over the legs, Puffy face, BP $160/95$ mmHg, Agnrexia, but had tachycardia & bilateral crepitations. Old appendicectomy c RT iliac fossa
Invest Hb 8.5, WCC 13.2, PLT 35 PT 12 sec (Normal 11.5 - 15.5). APTT 34 sec
Fibrinogen 4g/L, Ser Sodium 139

Q. Serum K^+ 6.1, Ser urea 40, Creatinine 411
Album 27 (Normal 37-49) Aspartic
Blood + Protein +

A. Investigation to confirm Dx.

Stool M/C/S.

BCR

B. $\downarrow$ Hb 8.5, ~~WCC~~ normal 14-16

$\uparrow$ WCC 13.2 Normal 5-10.5

$\downarrow$ PLT Normal 150-450,000

8/12/24 Q1

25yr old Hx of Seizures convulsed 3x
by admission. Each seizure lasted $\pm$ 3 minutes
RVD (NR) Alcohol, Pork & beef,
O/E Unconscious $\bar{E}$ GCS 6/15 CT Scan

① Taenia Solium Causing neurocysticercosis

② Risk Factors.

- Eating Undercooked pork.
- Eating ~~Salads~~ Infected vegetables
Infected with Taenia Solium.
- Endemic areas with T. Solium.

③ Test to Confirm the diagnosis.

LP for CSF M/C/S

EUSA test (Serology)

PCR $\rightarrow$ Ultimate test to Confirm

④ Medications

1. Albendazole 15-30mg/kg 8-30 days
2. Dexamethasone 8-12mg OD x 3-5/7
3. Valproate / Diazepam / Carbamazepine /
Phenytoin.

Q2. 37yr old housewife. Generalized fatigue $\frac{3}{5}$
Dark urine, 1 day of Scleral icterus.
No vomiting, Mild pain RT upper Quadant
& Intermittent nausea. P/E Jaundiced, No
Splenomegaly. Tender liver 15cm.
AST Refr

- B. Acute viral infection - ALT is higher than AST
A. Alcoholic hepatitis - AST is $\geq$ ALT
C. Chronic viral hepatitis - ALT are low
D. Bile duct obstruction - Bilirubin levels
are very high.

FACIAL NERVE #8

- Ask the patient to show the teeth.
- Winkle the fontanelle.
- Test eye closure tightly.
- ~~Test smiling~~ Pursued lip.

Sensory:

- Test the taste $\frac{2}{3}$ of the tongue using salt.
- Use the cotton swab to test the sensory on the face.

Trochlear #4. / ABDUCENS / OCULOMOTOR

Trigeminal #5

- ① Corneal reflex - take cotton swab touching the cornea - There must be a blink of an eye.
- ② Jaw movement.
By telling the patient to open & close the mouth.
- ③ Facial Sensation
Lightly touching their face with a cotton swab.

Vestibulocochlear. nerve.

- Rub the fingers near the ear.
- Check the Romberg's Sign.

Glossopharyngeal. / Vagus.

- Ask the person to swallow water.
- Gage Reflex (Ask the pt to say thh hhhh)
- Taste (portion $\frac{1}{3}$)

Wash your hands

Expose the area to be examined

1. Cranial nerve # 1

- Pt shd close both eyes, and close one nostril and bring Orange peel close to the nostril and ask Mr Phiri to recognise the ~~test~~ Scent, Do the same with the other nostril.

2. Optic Nerve. #2. ABILITY & OCCULOMOTORIAL
Visual. Ask Mr Phiri not to remove eye
Acuity glasses, He should ~~also~~ stand 6 metres
away from Snellen Chart and
close the ~~one~~ eye. He should be
able to read the acuity.

ACCOMODATION

Ask the patient to look @ your distal
finger and move the finger close to
the patient. The doctor shd notice the
change of pupil size.

VISUAL FIELD.

Use the confrontation test
Close ~~one~~ eye and the Dr shd
also close the alternate eye.

The Dr's finger should be moved &
the patient should locate without
moving the head.

⑤ Fundoscopy

- Use of the ophthalmic fundoscopy
machine to check the corneal blood
vessels.

c. 4 Principles of therapy.

- ① ~~Dehydrate the patient. correct dehydration~~
- ① To prevent further complication
- ② To replace fluid & electrolyte by correcting dehydration.
- ③ To treat the infection.
- ④ Nutrition Support.
- ⑤ Monitoring & Supportive Care.

Mr Nathan Banda 56 yrs. $\pm$ 2 1/2 Hr
of left side facial weakness. CNS exam.

a. Take & Discuss all neurological ~~exam~~ Hx.

- I will greet the and introduce myself to him.
- Ask for an ^{informed} consent.
- Ask for His Demographic data
Name, Age, Location, Marital Status, religion.
Date of Admission.
- Any Hx of HTN. in his life.
- Any Hx of blurred vision.
- Any Hx of ~~Ear~~ Sores e.g. Herpes Zoster.
- Any ^{drooping of mouth} ~~drooping of mouth~~ & Eye laceration.
- Any Hx of pain, Headache, Fever.
- Any Hx of mouth deviation.
- Are you able to chew using left and swallowing.
- Hx of hearing loss, vertigo & tinnitus.

b. Discuss full neurological examination.

- Greet, introduce yourself, get an informed consent..

Tests

1. Accessory Nerve

Ask the patient to shrug the shoulders, and turn the neck against resistance.

12. Hypoglossal

- Ask the pt to roll the tongue or move the tongue from the sides / push tongue against their cheek.

c) Differential diagnosis for condition - that causes facial asymmetry

- ① CVA
- ② Bell's Palsy
- ③ Ramsay Hunt Syndrome
- ④ Brain stem tumours
- ⑤ Facial Nerve trauma
- ⑥ Myasthenia Gravis
- ⑦ Guillain Barre Syndrome
- ⑧ Amyloidosis
- ⑨ Sarcoidosis

d) Risk Factors

Hepatitis Zoster Virus

- HIV (uncontrolled)

- HIV / AIDS

- Uncontrolled Diabetes

- Neurosyphilis

- Atherosclerosis → Cardioembolism

- Hyperlipidaemia

- DM

- extremes of age

- Hyperlipidaemia

c) Classification (Dumtown)

Acute : < 72 hours

Sub Acute : $72/24 \leq 2$ weeks

Chronic : > 2 weeks

Distribution

LMNL : Weakness on the lower face,
The eyelids and the forehead is not
affected

Periphereal : Half of the face is
affected

LMNL : The whole face is affected

Severity

Mild : Slight weakness

Moderate : Noticeable weakness

Sign Serere : Significant weakness

d) Investigations

Imaging : CT brain

Internal carotid doppler

Cerebral artery angiography

Chest X ray

Cardiac - echo

ECG ; MRI

Laboratory

RPR

b) Significance of finger clubbing in pt with respiratory conditions.

- It indicates the following lung conditions:-

- 1) bronchoectasis
- 2) lung cancers
- 3) lung abscess
- 4) Tuberculosis (TB)
- 5) Empyema
- 6) Cystic fibrosis
- 7) Benign mesotheliomas
- 8) Idiopathic pulmonary fibrosis

c) Diagnosis

- Chronic obstructive pulmonary disease (COPD)

d) Investigations

Lab

- ABGs
- FBC
- Inflammatory markers eg ESR and CRP
- Sputum m/c/s

Imaging

- CXR
- Bronchoscopy
- CT chest
- cardiac eco and ECG

Others

- Spirometry
- lung biopsy

- Lipid profile
- DVT
- PCR
- CRP
- CSF for MCS

c) Management

- First of
- Aspirin (ASA) 300mg stat + 75 maintenance OD. PO
- Physio - Therapy
- If fever or pain give PCM
- Supportive care

d) Counselling & Education

- Advise to med if taking any
- Counsel on diet
- counsel on promiscuity
- counsel to family on feeding technique, the pt should be @ 45° - 90° to avoid aspiration.

Qn II M/40 Hx of cough $\times \frac{1}{2}$, shortness of breath over several months, smoker 20 cigarettes/day and works at chikanga cement.

(i) Clinical assessment of respiratory

- History taking
- Physical examination
- Investigations
- Diagnosis

16. Low CSF ^{Glucose} ~~men~~ is caused by
- bacterial & TB meningitis.
17. Aseptic meningitis / mollaret's
meningitis. - $\uparrow$ lymphocytes.
18. Lyme Meningitis. - $\uparrow$ protein & $\downarrow$ Glucose
low lymphocytosis
19. Viral meningitis in $\downarrow$ low immunity
- varicella Zoster.
20. Encephalitis - Inflammation of
brain tissue.

ESSAY

1. 55 yr old $\bar{c}$ c/o lethargy & confusion $\times 3$
known T2 DM $\bar{c}$ well controlled
on oral hypoglycemic agents for 3 yrs.
O/E lethargic, Disoriented in Time & place.
Normal V/S. Lab RBS 6.5. Hb 14
PLT 179 Potassium 4.2 Albumin 30g/L
WCC 6.5 Sodium 121 mmol/L Creatinine 102
Serum osmolality 268 /kg.

A. Two abnormalities seen in above
scenario

Normal Potassium 3.5 - 5.5 mmol/L.

Sodium 135 - 145 mmol/L.

Creatinine

male 0.6 - 1.2 mg/dl. (52 - 106 μ mol/L)

Female 0.5 - 1.1 mg/dl (44 - 97 μ mol/L)

Serum osmolality 275 - 295 mOsm/kg.

Albumin 3.5 - 5.5 g/dl (35 - 55 g/L)

$\rightarrow$ There is low Sodium & low albumin.
Low serum osmolality.

Pharmacological

- Nicotine patch + Nicotine gum/Lozenges.
- Corticosteroids e.g. prednisolone
- Bupropion (reduces nicotine cravings and withdrawal ^{systems})

1. CSF in Bacterial meningitis
 - $\uparrow$ Protein, $\downarrow$ Glucose, Neutrophilic leucocytosis
2. Headache, nausea, vomiting, Restlessness, neck stiffness. — Kernings signs
3. Common in pts who are immunosuppressed.
4. Rifampicin — Is given to N. Meningitis contacts.
5. *Neisseria meningitidis* — ~~causes~~ epidemic meningitis
6. Encapsulated yeast causing meningitis is cryptococcal meningitis
7. Type of stain for Cryptococcal is India ink.
8. Neurocysticercosis — Undercooked pork.
9. Neurocysticercosis — causes epilepsy.
10. 1^o cause of amebic meningoencephalitis — *Entamoeba histolytica*
11. Abnormal CSF findings.
 - Glucose level will be low.
12. Fungal ~~bacteria~~ Meningitis. CSF.
 - $\uparrow$ protein, Lymphocytosis, normal glucose
13. TB meningitis.
 - PCR is important for TB meningitis
14. Aseptic meningitis. — caused viruses.
15. Bacterial meningitis. — Rapid polysaccharide Antigen detection.

- bronchodilator reversibility test.
- Serum ATT

e) Complications of COPD

- Respiratory distress syndrome.
- Lung cancer
- Atelectasis
- Respiratory failure
- Cor-pulmonale (pulmonary hypertension)
- Hypoxia
- Infections e.g. TB
- Pneumothorax

f. Left supraclavicular lymphadenopathy

- metastasis of lung cancer

g. Virchow's node.

h. Connection of this condition and smoking, yes there is

Pathophysiology
Smoking causes chronic inflammation, structural changes and airway/flow limitation caused by exposure to noxious particles found in cigarette smoke leading to chronic bronchitis and emphysema.

(i) Management of COPD

Non-pharmacological

- Give O_2
- Encourage to quit smoking
- Encourage ^{and advise} to change the work

Supportive care e.g. Paracetamol for fever and headache.

2. Treatment for HIV in Zambia
- Fixed dose for ART

EFV + 3TC (XTC) + DTG:

ABC + 3TC/XTC + DTG.

Septin for prophylaxis ^{Toxoplasmosis} _{chronic diarrhea}

3. Which 2 conditions would you avoid use of DTG.

~~TB~~ patients.

- Hepatitis B & C

- Hepatotoxicity

- Osteoporosis.

- Hypersensitivity.

Others

• PUD - Antacids

• Epilepsy - Pheny

• DT - Flutiform

Q5. Bloody diarrhoea $\frac{3}{52}$, Associated $\bar{c}$ Nausea & malaise & mild swelling of lower limbs. Dysuria, Steak. Pale, Petechiae over the legs. Puffy face BP $160/95$ mmHg. Apyrexia, Tachycardia? Crackles on inspiration both lung bases. Old appendectomy scar - RT iliac foss. Inv. Hb 8.5 g/dl, WCC 13.2 , PLT 35 , PT 12 Sec (Normal $11.5 - 15.5$ seconds) APTT 34 (30-40 Sec) Fibrinogen 4 g/l ($1.8 - 5.4$) Serum Sodium 139 Potassium 6.1 Serum urea 40 Serum Creatinine 411 μ mol/l Serum Albumin 27 ($37 - 49$) Dipstick urine ^{Blood} ++ Protein +

a. What single test to determine dx.

→ Kidney biopsy (Standard investigation)
→ Immunological test

b. Blood Tests collected. Hemogram.

Hb 8.5 g/dl WCC 13.2 . PLT 35 .

C. 4 Principles of therapy.

- To prevent Kidney complications
- To Treat the trigger.
- To manage the symptoms
- To Improve life expectancy.

Q.

Q7 A 39yr old Female Reports to have nervous, anxious & palpitations Diarrhoea, losing weight, Change of hair colour, fingernail growth, Heat Intolerance. HR >110 bpm, tremors, Increased reflexes in lower extremities. Nontender thyroid enlargement TSH is low 0.1 mIU/L

A Most Dx is Hyperthyroidism.

B. ~~A~~ findings to confirm the diagnosis

- Fine needle aspiration of thyroid gland
- Thyroid ultrasound Scannings / MRI / CT
- Serum for T_3 .
- Serum for radioactive test.

C. Treatment modalities & their S/E

1. Surgery — Infection, Pain
Hypothyroidism, ~~Swelling~~
~~of salivary gland~~, Hoarseness
of voice (vocal cord damage
oesophageal injury, Vocal
cord paralysis.

2. Radioactive Iodine

— Hypothyroidism, Cancer of thyroid gland, Teratogenic to fetus, Neck tenderness, Swollen salivary gland, Dry mouth, taste changes

SP. Sulphadoxine Pyrimethamine.

B. Diagnosis. — SIADH

~~Acute~~

C CAUSES OF SIADH.

1. Infections — Severe pneumonia, U.T.I, meningitis
- 2 Medications — Phenytoin, chemotherapy, vincristine
- 3 Trauma. (Head)
- 4 Tumours (Brain tumors.)
- 5 DIABETES Mellitus & its medications.
6. Stroke
7. Cerebral vasculitis

D. Additional tests

1. ADH level.
2. Thyroid function tests.
- 3 Cortisol level — to rule out Adrenal insufficiency as a cause of SIADH.

E. TREATMENT. OF SIADH

- 1 Restrict fluid Intake. 800-1000 ml/day
- 2 to reduce water retention & promote water excretion.
- 2 Sodium Supplementation by giving hypertonic NaCl 3-5% under close monitoring
3. Monitor Serum Sodium, osmolality & urine output.
- 4 Address underlying causes.

Q2. HIV C CD4 96 cell/ml, Had left hemiparesis, Positive Serology of parasite organism on CSF. His MRI Scan shows

1. Toxoplasmosis Rx
 - Steroid — Dexamethasone
 - Fansidar (Sulphadoxine pyrimethamine)

3 Propylthiouracil (PTU) / Carbimazole
- Nausea, vomiting, Headache
Dizziness, Itchiness, oral Rash.

4. Carbimazole →

Q8. 55 yr old Asian. with acute SOB
fatigue, febrile illness VS BP 109/
Pulse 120 (R) SPO₂ 67% RA RR 60/min
38.8°C. Clear lung fields, Not Cyanosed
Rapid antigen test (+ve) ABG pH 7.55

A. Laboratory findings w/c will be
abnormal.

1. C-Reactive Protein.
2. Elevated liver enzymes.
3. FBC - Elevated lymphocytes.
4. Low Serum ~~bloo~~ glucose.

B. CXR. Picture C.

C. Category of Severe Covid 19
according to WHO.

1. O₂ Sats < 90%
2. Resp rate > 30 b/min.
3. Use of accessory muscles.

D. Treatment guidelines in management
COVID.

1. Steroids - Dexamethasone 6mg ~~po~~ IV.
2. Remdesivir for viral treatment.
200mg IV OD x 5 then maintenance
100mg IV OD for 5/7.

Q9. 34 yr old African complains of neck
& back pain stiffness worse in the morning
for 2 hrs & relieved by exercise. Involved
in RTA 12 yrs ago. He had Eye pain
Iritis & got eye drops.

A - Fatigue & weight loss. ~~4~~ Lumbar X-ray

- Stopped posture
- Enthesitis - Inflammation of tendon or ligament ^{at the} attachment site.
- Nail pitting.
- Dactylitis.

What other organs are affected & other manifestations select 4.

- Eyes. - Glaucoma, ~~keratodystrophy~~.

~~Ears~~

Ears -

neglecters

Lungs - lower lung fibrosis.

Cardiac - Pericarditis.

Cardiac - Amyloidosis.

B. 2 typical laboratory findings in the condition above.

- Hypochromic Anaemia.
- pANCA (perinuclear Antineutrophil Cytoplasmic Antibodies).

Q10 38 yr old man c/o swelling of both legs noted 2 1/2 ago. Started @ the ankles but now his thighs, genitals are swollen. Puffy face in the morning. Weight has been gained by 10kgs. Frothy urine. O/E Anasarca, bruising on forearms & around the eyes. No signs of ~~CHF~~ chronic liver dz. PR 72

(12) BP 166/78, ↑JVP, Urinalysis ++ Proteins
Lab results Hb 10.7 g/dl, MCV 95 WCC 4.7 PLT 176 Sodium 138 mmol/L.
K⁺ 4.9 mmol/L Urea 7.4 Creatinine 112 μmol/L Cholesterol 15.

6. Supportive care.

- Elevate the head of the bed 4 feet.
- O₂ therapy if dyspnoeic
- Daily checking body weight.

1 Abnormalities.

- Proteinuria +++
- ~~Serum~~ Albumin is low. (Normal 33-55 g/L)
- Creatinine is raised by 6. (Normal 52-106 $\mu\text{mol/L}$)
- Cholesterol is high 15 mmol/L (Normal 5 mmol/L)

2 Dx: — Nephrotic Syndrome.

3 Histologic types of the dx

- Minimal change dz
- Glomerulosclerosis (Focal Segment Glomerulosclerosis)
- Membranous nephropathy.
- Amyloidosis

Added Prime: Lupus Nephritis

4. Additional Investigation.

- Kidney biopsy — Gold Standard for definitive histological changes and causative agents.
- Immunofluorescence. — Detect Immune complexes & antibodies in kidney tissue.
- Complement levels — Assess the complement system which helps fight infections.

5. Treatment modalities.

- Diet — High protein diet.
— low salt intake and fluid.
- Drugs. — Corticosteroids. — Prednisolone.
— Furosemide.
— ACE Inhibitors or ARBs. ~~frank~~
— Statins. e.g. Atorvastatin.
— ABX e.g. Penicillin V. ~~gang~~

SECTION D Essay choose ONLY one question

QUESTION ONE

A 45 year old man presents to Trauma centre with features of lower GI obstruction and severe dehydration. Discuss in point form intestinal obstruction based on the following discussion points

- a) anatomy
- b) definition
- c) signs and symptoms
- d) classification
 - a. clinical classification
 - b. functional classification
 - c. anatomical classification
- e) aetiology and its classification
- f) pathophysiology
- g) management (include resuscitation, investigations and treatment options)
- h) complications (both due to intestinal obstruction and its treatment)

QUESTION TWO

Discuss benign prostatic hyperplasia. Include in your discussion at least the anatomy, definition, aetiology, signs/symptom classification and treatment options (BPH). Be as brief as possible but to the point [20]

END OF EXAM

SECTION D – Essay type, answer all

QUESTION ONE

Advanced Trauma Life Support (ATLS) protocol is a system used to assess trauma patients in order to manage life threatening conditions. It uses the ABCDEs assessment. Describe the ABCDE based on the following discussion points

- a) Triage and the colour codes used [3]
- b) differentiate mass casualty and multiple casualty in triaging [1]
- c) primary survey [10]
- d) resuscitation [2]
- e) secondary survey [2]
- f) initial definitive treatment [2]

QUESTION TWO

Female 56 years old presents to the surgical OPD with a swelling on the anterior neck left side. The swelling has been there for two years now. Discuss the thyroid as below;

- a) brief history [2]
- b) classification of disease of the thyroid [3]
- c) signs and symptoms of hyperthyroidism and hypothyroidism (clearly state the signs and symptoms separately) [8]
- d) list the investigations you would request for in this patient be specific [2]
- e) how would you prepare the patient for OT if the thyroid function tests are normal [1]
- f) What post-operative complication would occur? [3]

END OF EXAM

- c) Name a non-invasive investigation that will look out for non-palpable lesions left breast and the "normal" right breast. [2]
- d) List four invasive procedures that you would do in order to secure a tissue for histopathological diagnosis in this lady. [4]
- e) What name describes the technique of evaluating non palpable axillary nodes for micro metastases? [3]
- f) List the five [5] favourite organs that breast cancer likes to spread to. [5]
- g) What investigations would you do to look for distant metastases to other organs? [2]

QUESTION FOUR

Emelia Blackwell is a 40 year old lady who presents to you with jaundice. She is a mother of five children and weighs 105 kg although she is only 1.4 metres tall.

- a) What one specific information, in the history, will help you distinguish between surgical [obstructive] jaundice and medical jaundice? [2]
- b) List four [4] risk factors [the "5Fs"] that would be highly suggestive of a likely diagnosis in this 40 year old lady described above. [5]
- c) What is that most likely diagnosis in this lady? [3]
- d) What finding on urinalysis would strengthen your diagnosis in (c) above? [2]
- e) What investigation would you request in order to confirm your diagnosis? [3]
- f) What abnormalities would you expect on the liver function tests? [3]
- g) What is ERCP? [2]