



**AMREF INTERNATIONAL UNIVERSITY**

**SCHOOL OF MEDICAL SCIENCES**

**DEPARTMENT OF REHABILITATION MEDICINE**

**BACHELOR OF SCIENCE IN PHYSIOTHERAPY**

**END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2024**

**UNIT CODE: PHT 227**

**UNIT NAME: GENERAL SURGERY 2**

**DATE: 8<sup>TH</sup> APRIL 2024**

**TIME: 9AM-11AM**

**INSTRUCTIONS**

1. All students will have two (2) hours to complete the examination
2. Attempt all questions as per the instruction
3. It is the student's responsibility to report any page and number missing in this paper.
4. Check that the paper is complete
5. Total number of pages is 7 including the cover.

SECTION A (30 Marks)

1. Extraction of a small piece of the diseased organ is called? (1 mark)
  - A) Biopsy
  - B) Surgery
  - C) Chemotherapy
  - D) Replacement
2. Prolonged intubation is associated with tracheal injury. (1 Mark).
  - A) True
  - B) False
3. With regard to types graft rejection, which answer is incorrect. (1 Mark)
  - A) Hypoacute
  - B) Acute
  - C) Chronic
  - D) Hyperacute
4. The following electrolytes dominate the extracellular compartment. Which one doesn't? (1 mark)
  - A) Sodium
  - B) Chloride
  - C) Bicarbonate
  - D) Magnesium
5. Which statement is true regarding hypercalcemia signs and symptoms (1 marks)
  - A) Positive trousseau sign
  - B) Positive Chvostek sign
  - C) Kidney stone formation
  - D) None of the above
6. Which statement is true regarding hypophosphatemia signs and symptoms (1 marks)
  - A) Positive trousseau sign
  - B) Positive Chvostek sign
  - C) polyuria
  - D) Kidney stone formation

7. Which of the following complications is not a related of parenteral nutrition (1 mark)
- A) Technical Complications. sepsis secondary to contamination of the central venous catheter
  - B) Metabolic Complications.
  - C) Intestinal atrophy
  - D) NG tube mispositioning
8. An 89 years old patient presented to the hospital with pulmonary aspiration. Which is not a likely risk factor that might have led to the pulmonary aspiration (1 mark)
- A) Laryngopharyngeal reflux disease
  - B) Suppressed cough reflex
  - C) Advanced age
  - D) Thoracic duct leak
9. The following statements are true about pleural effusion. Which one is not (1 mark)
- A) Transudate effusions are as a result of increased plasma oncotic pressure.
  - B) Exudates are protein-rich pleural fluid collections.
  - C) Transudate effusions are as a result of increased hydrostatic pressure.
  - D) Exudate effusions Can be turbid, bloody, or purulent.
10. Which of the following is not a classification of atrial septal defect (1 mark)
- A) Ostium secundum type
  - B) Ostium primum type
  - C) Sinus venous type
  - D) Trabecular septum type
11. The following are secondary prevention recommendations for an illness with regard to risk factors:
- smoking cessation and avoidance of environmental tobacco exposure
  - blood pressure control to under 140/90 mmHg
  - LDL cholesterol levels less than 100 mg/dL
  - aspirin therapy in all patients without contraindications
  - diabetes management
- Which disease is it? (1 mark)
- A) Lung cancer
  - B) Atherosclerosis
  - C) Pulmonary hypertension
  - D) None of the above

12. Which factor does not justify the role of pre-operative chemotherapy (1 mark)
- A) The primary tumor may be down staged enhancing resectability.
  - B) Patients are better able to tolerate chemotherapy before surgery and are more likely to complete the prescribed regimen than after surgery.
  - C) Systemic micro metastases are treated.
  - D) Reprogramming of energy metabolism.
13. Which statement is not true about cardiac tumors. (1 Mark)
- A) Delayed enhancement cMRI is the best modality to distinguish cardiac tumors from intracardiac thrombus.
  - B) Anticoagulation can potentially increase the risk of peripheral embolization in patients with cardiac tumors.
  - C) About 75% of myxomas develop in the left atrium.
  - D) Malignant cardiac tumors have a 3:1 female preference.
14. A nervous student studying for an exam is breathing rapidly. What do you expect out of the following. (1Mark)
- A) Respiratory acidosis
  - B) Respiratory alkalosis
  - C) Metabolic acidosis
  - D) Metabolic alkalosis
15. Which of the following symptoms is a sign of central nervous system toxicity in a patient administered large quantities of local anaesthesia in a short space of time. (1 Mark)
- A) Seizures
  - B) Conduction abnormalities leading to heart block
  - C) Arrhythmias
  - D) None of the above
16. What is the meaning of cancer in situ? (1 Mark)
- A) Abnormal cells are present but have not spread to nearby tissue.
  - B) There is not enough information to figure out the stage
  - C) Cancer has spread to distant parts of the body.
  - D) Cancer has spread to nearby lymph nodes, tissues, or organs.
17. Syngeneic transplant is a form of allotransplant. (1 Mark)
- A) True
  - B) False

18. The water seal is an important element of the drainage system because: (1 Mark)
- A) It allows air to exit the pleural space but and prevent it from re-entering the pleural space via the chest tube.
  - B) It allows air to move freely in and out of the pleural space through the chest tube.
  - C) It allows air to enter the pleural space but prevents it from leaving the pleural space.
  - D) All of the above.
19. Thoracoscopy is a procedure a doctor uses to look inside the lungs. (1 Mark)
- A) True
  - B) False
20. Determine which statement is true and which one is false. (4 Marks)
- A) Empyema is also referred to as pyothorax.
  - B) Malignant effusions are exudative and often tinged with blood.
  - C) Catamenial pneumothorax is a possible cause of spontaneous pneumothorax in women.
  - D) Chylothorax is the accumulation of chyle inside the lungs.
21. Chronic wounds have a decrease in oxygen supply to the wound, which contributes to delayed healing; oxygen therapy might aid in the healing of certain types of wounds. (1 Mark)
- A) True
  - B) False
22. Pleurectomy can be achieved via mechanical abrasion or chemical application of talc. (1 Mark)
- A) True
  - B) False
23. Orthotopic heart transplant involves implanting the donor's heart beside the recipient's heart. (1 Mark)
- A) True
  - B) False

24. Regarding thoracotomy: (1 Mark)

- A) Both median and inframammary anterolateral thoracotomy incising through the sternum.
- B) Post thoracotomy pain syndrome begins as soon as anaesthesia wears off the patient's system.
- C) Ribs with intercostal musculature and parietal pleura are resected en bloc.
- D) None of the above is true.

25. Regarding anaesthesia: (1 Mark)

- A) Pharmacodynamics is the study of what the body does to a drug.
- B) The two categories of neuromuscular blockers are amides and esters.
- C) Cardiac tamponade is a sign of cardiovascular toxicity from anaesthesia.
- D) None of the above.

26. Mitral valve area of less than 1 cm<sup>2</sup> is considered to be: (1 Mark)

- A) Mild mitral stenosis
- B) Moderate mitral stenosis
- C) Severe mitral stenosis
- D) Normal

27. Which of the following is not a compartment of the mediastinum. (1 Mark)

- A) Superior compartment
- B) Anterior inferior compartment
- C) Posterior inferior compartment
- D) Lateral compartment

28. Acute mediastinitis can be as a result of infections originating from esophageal perforations, sternal infections and oropharyngeal or neck infections. (1 Mark)

- A) True
- B) false

29. Regarding TNM staging of cancer, which choice correctly explains T1-T4, N1-N3, M1. (1 Mark)

- A) Metastatic cancer.
- B) Locally advanced cancer, early stages.
- C) Localized cancer.
- D) Indicates carcinoma in situ.

30. During wound maturation and remodelling, Granulation tissue is largely comprised of collagen I, which is partially replaced by the stronger collagen III. (1 Mark)

A) True

B) false

**SECTION B (20 Marks)**

31. List 2 factors that contribute to the closure of the ductus arteriosus after birth (2 marks)

32. What are the components of TNM staging in cancer (3 marks)

33. State 2 types of anesthesia (2 marks)

34. List 2 differences between transudate and exudate effusions (3 marks)

35. What Factors contribute to the formation of tetralogy of fallot (4 marks)

36. State and define the two types of parenteral nutrition (2 marks)

37. Give 1 indication for replacement of blood and its components (1 marks)

38. List 2 features of malignant cardiac tumors. (3 Marks)

**SECTION C (20 Marks)**

39 a. Outline the pathophysiology of coronary artery disease (8 marks)

b. State and explain the stages of Mitral stenosis (4 marks)

40 State and define four types of lung surgeries (8 marks)