



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCE
DEPARTMENT OF REHABILITATION MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF SEPT-DECEMBER 2024 TRIMESTER EXAMINATIONS
SPECIAL EXAM**

UNIT CODE: PHT 226

UNIT NAME: GENERAL SURGERY

DATE: FRIDAY 6TH DECEMBER 2024

TIME: TWO HOURS

START: 11:15

STOP : 1:15

INSTRUCTIONS

1. Do not write on this question paper

1. This exam is marked out of 70 marks
2. This Examination comprises 3 Sections
3. This will take 2 Hours

Section A (30 marks)

1. Upon assessment of a patient with a chest tube, continuous bubbling is observed. Which would be the appropriate intervention?
 - a. Increase suction to the drainage system until the bubbling stops
 - b. Check the tubing for kinking
 - c. Add more water until the 20cm mark is reached
 - d. Assess for air leakages
2. In which chamber in the above-mentioned patient was the continuous bubbling observed:
 - a. Suction control chamber of a wet suction system
 - b. Collection chamber
 - c. Water seal chamber
 - d. Bubble oxygenator
3. Why would a surgeon not prefer to use a suture with high memory to tie tissues together
 - a. Irritating
 - b. They are used for blood vessels
 - c. They easily cause inflammation
 - d. None of the above
4. What would be a sign not experienced by a patient with surgical infection
 - a. Elevated temperature
 - b. Elevated white blood cells
 - c. Dolor
 - d. Skin turgor
5. What would be the most appropriate management of an infected surgical wound
 - a. Tranexamic acid injection
 - b. Tertiary intention
 - c. surgical excision combined with intralesional corticosteroid injection
 - d. angioplasty
6. A patient being managed traditionally for a coronary artery bypass graft is to undergo open heart surgery. How would the surgeon access the heart.
 - a. Wedge resection
 - b. balloon commissurotomy
 - c. median sternotomy
 - d. posterolateral thoracotomy
7. which is not a characteristic of a malignant cancer
 - a. Self-sufficiency of growth signals
 - b. Insensitivity to growth-inhibitory signals
 - c. Prone to apoptosis
 - d. Angiogenesis
8. Which of the following statements is not true about PET scans
 - a. FDG PET assesses the rate of glycolysis
 - b. PET/CT combines a PET scanner and an X-ray CT scanner in a single gantry
 - c. Glucose uptake is reduced in malignancy likewise to FDG uptake
 - d. A PET scan can be useful in staging a cancer that potentially can be treated radically

9. Which of the following stages show a regional cancer
 - a. Tis, N0, M0.
 - b. T1-T2, N0, M0
 - c. T2-T4, N0, M0
 - d. T1-T4, N2, M0
10. A woman in her second decade of life during her menstrual cycle presented to a clinic with chest pain, dyspnea, dry cough. What would be the likely hypothesis the physician notes down after the subjective assessment.
 - a. Tuberculosis
 - b. Hemothorax
 - c. Catamenial pneumothorax
 - d. benign cardiac tumor
11. which is not a characteristic of a benign cardiac tumor
 - a. Are typically unifocal in the left atrium
 - b. Have a 3:1 female preference
 - c. Occur in younger patients.
 - d. Tend to present after the fourth decade of life
12. A nervous student during the final year examination is seen hyperventilating due to nervousness. What is she likely to develop in the process
 - a. Pneumothorax
 - b. Dyspnea
 - c. Respiratory alkalosis
 - d. Respiratory acidosis
13. Which of the following is not a non-pulmonary symptoms of primary lung cancer.
 - a. Hemoptysis
 - b. Dyspnea
 - c. Cough
 - d. Pancoast's syndrome
14. chemotherapy before anatomic surgical resection has the following benefits, except:
 - a. patients are likely to tolerate chemotherapy before and after surgery the same way
 - b. downstaging primary tumor to enable resectability
 - c. vivo test of the primary tumor's sensitivity to chemotherapy
 - d. Systemic micro metastases are treated
15. Which anatomical structure forms the anterior border of the mediastinum
 - a. Anterior margin of pericardium
 - b. Sternum
 - c. Manubrium
 - d. Diaphragm
16. A nurse attending to a patient seropositive for HIV accidentally knicked himself with the same blade he was using on the patient. which normal biological response by the body as a result of the cut comes first.
 - a. Going for post exposure prophylaxis
 - b. secretion of adenosine diphosphate and thromboxane a2
 - c. conversion of plasminogen to plasmin
 - d. platelets sequestration

17. Defects associated with tetralogy of fallot include:
- A large peri membranous VSD adjacent to the tricuspid valve-abnormal opening in the ventricular septum.
 - Narrowing distal to the left subclavian artery
 - Prolonged patency
 - None of the above
18. Deoxygenated blood flows from the right ventricle to the left ventricle. Which choice best describes this statement?
- Tetralogy of fallot
 - Aortic coarctation
 - Transposition of great arteries
 - Normal functioning heart
19. What function does a ductus arteriosus serve in a fetal heart?
- To facilitate gaseous exchange in the lungs.
 - Diverts right ventricular output to the umbilical-placental circulation
 - To facilitate nutrition of the fetus from the placenta
 - Facilitate movement of oxygenated blood from the lungs into the left ventricle
20. Which of the following is not a classification of atrial septal defect
- peri membranous
 - ostium secundum
 - ostium primum
 - sinus venosus
21. A patient in the neonatal intensive care unit is presenting with significant upper and lower limb blood pressure difference i.e., High pressure zones characterized by bounding, hard pulses, headaches, irritability, nose bleeds and Low-pressure zones e.g., diminished peripheral pulses. What is the pressure likely suffering from?
- Coronary artery disease
 - Myocardial infarction
 - Aortic coarctation
 - Transposition of great arteries
22. The following cations and anions are dominant in the extracellular compartment. Which one is not?
- Sodium
 - calcium
 - Bicarbonate
 - Phosphate
23. Which of the following symptoms are not associated with fluid loss in the body?
- Bowel edema
 - Oliguria
 - Azotemia
 - Ileus

24. A hyperparathyroidism patient is rushed to an emergency department with distal femoral fracture that had been acquired from a fall in the bathroom. What could be the possible reason for the fracture?
- Increased bone resorption
 - Hypercalcemia
 - A and B
 - Lack of rails to hold onto in the bath room
25. Trousseau sign, Chvostek sign and Arrhythmias are signs that will be observed in patients with?
- Hypercalcemia
 - Hypocalcemia
 - Hypophosphatemia
 - A and C
26. An incision made horizontally across the sternum is called?
- Median sternotomy
 - Clamshell sternotomy
 - Thoracoplasty
 - Pericardial window
27. Which is not a complication arising from pleurodesis.
- Inadequate inflammatory response.
 - Systemic inflammation
 - Pulmonary embolism
 - None of the above
28. The process of removal and replacement of damaged tissue organs with healthy ones is called?
- Replacement therapy
 - Repair and replacement
 - Transplantation
 - Implantation
29. A patient undergoing coronary artery bypass graft has his part of his mammary artery taken in the process. What is this graft referred to as?
- Autograft
 - Xenograft
 - Syngeneic graft
 - Allograft
30. The following statements are incorrect about heart. Which one is not.
- Orthotopic heart transplant is a process by which the recipient's heart is not excised and the donor's heart is implanted into the recipient's chest
 - Heterotopic heart transplant is a process that involves excision of the recipient's heart and implantation of a donor's heart in the chest of the recipient
 - Accelerated coronary artery disease is a cause of death posttransplant
 - Paradoxical breathing is a common complication post heart transplant

Section B (20 marks)

31. State four hallmarks of cancer. (4marks)
32. In a patient undergoing coronary artery bypass graft, which two arteries and veins are likely to be used as grafts? (2 marks)
33. If a patient undergoing organ transplantation develops signs of rejection post operatively, name and give the timelines of graft rejection he is likely to encounter. (3 marks)
34. List four indications for surgical drainage in lung abscess. (4 marks)
35. Define hypernatremia. (1 mark)
36. List three ways hyponatremia can be managed. (3 marks)
37. What is the rationale for parenteral nutrition. (2 marks)
38. A patient is said to have collection of gas in the space between the lungs and the chest wall. What is the diagnosis? (1 mark)

Section C (20 Marks)

39. A patient being managed for electrolyte imbalance is believed to have undergone excessive loss of free water through excretion e.g., kidney or ADH related issues, Inadequate water intake or Gained sodium in excess of water.
 - a. Which disorder is the patient likely to be experiencing. (1 mark)
 - b. State and define three types of the possible disorder. (6 marks)
 - c. What would be the signs and symptoms. (3 marks)
40. Outline the pathophysiology of mitral stenosis. (8 marks)
 - b. State two ways coronary artery disorder would manifest clinically. (2 marks)
41. State and explain four non-pulmonary thoracic symptoms of primary lung cancer. (8 marks)
 - b. Define carcinoma in situ. (1 mark)
 - c. Define a regional carcinoma. (1 mark)