



AMREF INTERNATIONAL UNIVERSITY

SCHOOL OF MEDICAL SCIENCE

DEPARTMENT OF REHABILITATION MEDICINE

**BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF AUGUST 2026 TRIMESTER EXAMINATIONS**

UNIT CODE: PHT 226 UNIT NAME: General surgery (Main Exam)

DATE: 4th AUGUST 2026

TIME: TWO HOURS

START: 6PM STOP : 8PM

INSTRUCTIONS (physical exams)

- 1. Do not write on this question paper**

(Marks and questions distribution as per program curriculum.)

INSTRUCTIONS (Online examinations)

1. This exam is marked out of 70 marks
2. This Examination comprises 3 Sections
3. This online exam shall take 2 Hours
4. Late submission of the answers will not be accepted
5. Ensure your web-camera is on at all times during the examination period
6. No movement is allowed during the examination
7. Idling of your machine for 5 min or more will lead to lock out from the exam
8. The Learning Management System (LMS) has inbuilt integrity checks to detect cheating

9. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
10. In case you have any questions call the invigilator for this exam on Tel. 0705833434 and or the Head of Department on Tel 0720491032
11. For adverse incidences please write an email to: amiu.examinations@amref.ac.ke

SECTION A. Multiple choice questions. Answer all the questions (30 marks)

1. A patient with chronic multidrug resistant empyema has a persistent pleural cavity despite prolonged drainage and antibiotics. The surgeon recommends thoracoplasty. What of the following is the primary goal of thoracoplasty? (1 mark)
 - a. Remove the entire lung
 - b. Remove pleura only
 - c. Increase thoracic volume
 - d. None of the above
2. Which of the following is a major long-term disadvantage of thoracoplasty, (1 mark)
 - a. Cardiac tamponade
 - b. Tracheal stenosis
 - c. Pulmonary embolism
 - d. Permanent chest wall deformity
3. A patient with stage I malignant pleural mesothelioma undergoes pleurectomy and decortication instead of extrapleural pneumonectomy. Which of the following is the main advantage of this operation. (1 mark)
 - a. Remove both lungs
 - b. Removes diaphragm
 - c. Shorter operating time
 - d. Preserve lung function
4. A patient has recurrent malignant pleural effusions requiring repeated drainage. Which of the following procedures offers the best long-term control. (1 mark)
 - a. Wedge resection
 - b. Pleurodesis
 - c. Pneumonectomy
 - d. Thoracoplasty
5. Which agent is considered the most effective chemical sclerosant for pleurodesis.
 - a. Saline
 - b. Talc
 - c. Lidocaine
 - d. Heparin

6. One day post op, a 58 year old following thoracotomy is reluctant to cough because of severe pain along incision site. Which physiotherapy intervention is important to prevent postoperative pulmonary complications. (1 mark)
- a. Bed rest for 48 hours
 - b. Restrict movement till pain resolves
 - c. Continuous oxygen therapy
 - d. None of the above
7. during ambulation after lobectomy, a patient's oxygen saturation falls from 97% to 89%. The physiotherapist should: (1 mark)
- a. finish the 6 minutes timer
 - b. reduce walking distance
 - c. increase speed to reach patient's bed faster
 - d. stop exercise
8. Which of the following is not one of the four components of tetralogy of fallot. (1 mark)
- a. ventricular septal defect
 - b. pulmonary stenosis
 - c. right ventricular hypertrophy
 - d. none of the above
9. Which condition requires a patent ductus arteriosus for survival immediately after birth. (1 mark)
- a. VSD
 - b. Transposition of great arteries
 - c. Small VSD
 - d. Mild pulmonary stenosis
10. A child with an unrepaired large VSD now has cyanosis and pulmonary hypertension. What complication has the patient most likely developed, (1 mark)
- a. Infective endocarditis
 - b. Eisenmenger syndrome
 - c. Myocardial infarction
 - d. Pericarditis
11. Which congenital heart disease commonly causes differential blood pressure between the upper and the lower limbs. (1 mark)
- a. ASD
 - b. PDA
 - c. Coarctation of aorta
 - d. VSD

12. A 58 year old smoker has chest discomfort only during vigorous activity. Coronary angiography reveals a 70% narrowing of a coronary artery. What is the underlying pathological process. (1 mark)
- Vasculitis
 - Atherosclerotic plaque formation
 - Infective endocarditis
 - Congenital valve disease
13. A patient with severe mitral stenosis develops pulmonary hypertension. What is the primary mechanism. (1 mark)
- Increased pulmonary arterial blood flow
 - Backward transmission of elevated left atrial pressure
 - Pulmonary embolism
 - Reduced systemic vascular resistance
14. A chronic alcoholic presents with a putrid foul-smelling sputum. Chest x-ray shows a cavity with an air-fluid level. Which of the following is the most likely diagnosis. (1 mark)
- Bronchiectasis
 - Lung abscess
 - TB
 - Pneumonia
15. The pathological hallmark of bronchiectasis is: (1 mark)
- Fibrosis of pleura
 - Permanent bronchial dilation
 - Alveolar collapse
 - Pulmonary embolism
16. Which of the following physiotherapy techniques is most beneficial in bronchiectasis. (1 mark)
- Bed rest
 - Airway clearance technique
 - Immobilization
 - Cervical traction
17. A patient with chronic cough, weight loss, fever and night sweats most likely suffers from. (1 mark)
- Lung abscess
 - Tuberculosis
 - Asthma
 - COPD
18. A patient coughs approximately 700 ml of blood within 24 hours. This is classified as. (1 mark)

- a. Mild hemoptysis
 - b. Moderate hemoptysis
 - c. Massive hemoptysis
 - d. Hematemesis
19. The most common systemic arterial source of massive hemoptysis is. (1 mark)
- a. Bronchial artery
 - b. Aorta
 - c. Coronary artery
 - d. None of the above
20. The granuloma in TB is primarily formed to: (1 mark)
- a. Promote bacterial spread
 - b. Wall off infection and to limit dissemination
 - c. Increase oxygen delivery to bacilli
 - d. Prevent antibody production
21. A patient had latent TB infection 10 years ago. He now presents with upper lobe cavitory lesions. Which of the following is the most likely mechanism of disease. (1 mark)
- a. Primary progressive TB
 - b. Reactivation TB
 - c. Miliary TB
 - d. Extrapulmonary TB
22. A 28 year old woman receives a kidney donated by her identical twin sister. This transplant is classified as: (1 mark)
- a. Allograft
 - b. Xenograft
 - c. Isograft
 - d. Autograft
23. A kidney transplant becomes cyanotic and thrombosed within minutes after reperfusion. The most likely diagnosis is. (1 mark)
- a. Acute rejection
 - b. Chronic rejection
 - c. Hypoacute rejection
 - d. None of the above
24. The leading cause of death during the first year after transplantation is: (1 mark)
- a. Trauma
 - b. Infection
 - c. Malnutrition
 - d. Hypertension
25. Long-term immunosuppression post transplantation increases the risk of. (1 mark)

- a. Osteoarthritis
 - b. Asthma
 - c. Cataracts
 - d. Malignancy
26. Which of the following rejection is generally irreversible. (1 mark)
- a. Hyperacute
 - b. Acute
 - c. Chronic
 - d. None of the above
27. Pyothorax is defined as. (1 mark)
- a. Air in pleural space
 - b. Blood in pleural space
 - c. Pus in pleural space
 - d. Fluid in pericardium
28. A patient has T2N1M0 breast cancer. Which of the following statements is correct. (1 mark)
- a. No lymph node involvement
 - b. Distant metastasis present
 - c. Regional lymph node metastasis without distant spread
 - d. Stage IV disease
29. Which factor is not included in TNM staging. (1 mark)
- a. Primary tumor size
 - b. Lymph nodes
 - c. Histological differentiation
 - d. Distant metastasis
30. A woman presents with peau d'orange. This occurs due to. (1 mark)
- a. Fat necrosis
 - b. Obstruction of dermal lymphatics
 - c. Rib invasion
 - d. Pyothorax

SECTION B

31. State and briefly explain 5 hallmarks of cancer. (5 marks)
32. Outline 3 exogenous carcinogens. (3 marks)
33. Explain T2N1MX (3 marks)
34. State 3 characteristics of a cardiac sarcoma. (3 marks)
35. Expound on 4 general goals of radiotherapy (4 marks)

36. How does lactic acidosis develop in surgical patients. (2 marks)

SECTION C

37. A. Outline the pathophysiology of an atrial septal defect (8 marks)

b. which congenital cardiac disorder presents with extensive collateral circulation. (2 marks)

38. a. Explain surgical techniques that in breast cancer therapy. (5 marks)

b. How would a female with breast cancer present, (5 marks)

38. A. State 3 goals of performing a thoracoplasty. (3 marks)

b. Define thoracotomy, types and muscles transected in each approach. (7 marks)