



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATIVE MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF JAN-APRIL 2025 SEMESTER EXAMINATIONS

UNIT CODE: PHT 226

UNIT NAME: GENERAL SURGERY (Main Exam)

DATE: 15th April 2025

TIME: TWO HOURS

START: 2:00 PM STOP: 4:00PM

INSTRUCTIONS

- 1. Attempt all questions as per the instructions in each section**
- 2. This exam is marked out of 70 marks**
- 3. This Examination comprises of Sections A, B and C**
- 4. It is the student's responsibility to report any page and number missing in this paper.**
- 5. Total number of pages are 6 including the cover page.**
- 6. Read through the instructions carefully before starting.**
- 7. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam.**
- 8. Do not write on this question paper, use the provided booklet to write your answers**

Section A: MCQs. Answer all the questions (30 marks)

1. A doctor was conducting a one hour procedure on a patient's knee, what type of anaesthesia would be the most appropriate in this case?
 - A. Epidural anaesthesia
 - B. Local anaesthesia
 - C. Regional anaesthesia
 - D. General anaesthesia
2. Which of the following statement is correct about the incision location for surgery
 - A. The incision should be done at any location where the Doctor is comfortable with
 - B. The muscles should be split during surgery
 - C. The muscles should be cut during surgery
 - D. The patient should advice where he feels comfortable for the incision to be done
3. A patient reported that he feels like he has a lump at the stomach and requested you to advice on how it can be investigated. What could be your response?
 - A. To do a chest X- ray
 - B. To do a CT scan
 - C. To do an endoscopy
 - D. To do an MRI
4. Doctors prefer endoscopy for radiological diagnostic procedures when conducting assessment of GIT as compared to CT scan or MRI. What could be the reason?
 - A. Endoscopy is easy to conduct
 - B. Endoscopy is cheap
 - C. Endoscopy can diagnose and treat at the same time
 - D. Endoscopy is ideal way of GIT examination
5. A female patient presented with a chronic abdominal pain and she was booked for an abdominal procedure. Which procedure would be appropriate?
 - A. Hysteroscopy
 - B. Colonoscopy
 - C. Uteroscopy
 - D. Laparoscopy
6. Cancer is appropriately diagnosed through;
 - A. Biopsy
 - B. CT scan
 - C. MRI
 - D. X-rays
7. A patient with a swollen knee was advised to do a biopsy to determine the cause of the swelling. What could be an appropriate type of biopsy for this patient?
 - A. Fine needle aspiration
 - B. Surgical biopsy
 - C. Incisional biopsy
 - D. Endoscopic biopsy
8. The mechanism of underwater seal drainage is?
 - A. Positive pressure during expiration pushes air and fluid out of the pleural space

- B. Negative pressure during inspiration pushes air and fluid out of the pleural space
 - C. Air moves from lower a to higher pressure along a pressure gradient
 - D. The bottle is always kept above the level of the patient's chest
9. A patient was under water seal drainage for two days then suddenly the oscillation of the ball stopped. This could suggest?
- A. Lung re-expansion
 - B. Drainage dsyfunction
 - C. A lung collapse
 - D. Respiratory distress
10. When is clamping of underwater seal drainage advised?
- A. Post pneumonectomy
 - B. During mobilization
 - C. Tension pneumothorax
 - D. If still bubbling
11. A doctor was about to do an open appendectomy, which could be the most appropriate incision to use?
- A. A midline incision
 - B. Transverse incision
 - C. Vertical incision
 - D. An oblique incision
12. The Doctor was about to suture a patient with deep tissues, what type of sutures would the nurse use?
- A. Absorbable sutures
 - B. Non-absorbable sutures
 - C. Natural sutures
 - D. Monofilament sutures
13. In wound healing, correct tension of the sutures is achieved through;
- A. Tight sutures with small size thread
 - B. Loose sutures with a big size thead
 - C. Very tight sutures with a small size thread
 - D. Tight sutures with a big size thread
14. Immediate after an injury, white blood cells migrate to the injury site with an aim of;
- A. Causing a blood clot
 - B. Removing debris
 - C. Causing vasoconstriction
 - D. Causing redness
15. Angiogenesis is
- A. Formation of new blood vessels
 - B. Formation of the red blood cells
 - C. Formation of new body tissues
 - D. Formation of new nerves
16. Which of the following factors affecting wound healing are wound related factors?
- A. Age of the patient

- B. Hemostasis and debridement
 - C. Timing of closure
 - D. Nature of injury
17. Wound toileting involves;
- A. Clean skin with antiseptics and irrigating the wound with saline
 - B. Irrigating the skin with antiseptics and cleaning the wound with saline
 - C. Debriding all dead tissue and foreign matter.
 - D. Control of residual bleeding with compression, ligation
18. In haemostasis mechanism, what is the immediate occurrence when the wall of a vessel is damaged?
- A. The blood vessel contracts dramatically
 - B. The platelets clump together
 - C. Activation of the coagulation cascade
 - D. Formation of “fibrin plug
19. The primary aim of physiotherapy treatment before surgery is to:
- A. Strengthen a patient’s fitness to undergo surgery
 - B. Reduce pain,
 - C. Improve range of motion
 - D. Enhance the surgery’s outcome.
20. Hypernatremia is?
- A. Caused by low intake of potassium
 - B. Caused by high intake of potassium
 - C. Caused by low intake of sodium
 - D. Caused by high intake of sodium
21. The doctor wanted to know the levels of carbon dioxide and oxygen in the blood. Which is the appropriate diagnostic test should he consider?
- A. arterial blood gas test
 - B. metabolic panel
 - C. pulmonary function test
 - D. chest X-ray
22. A patient was diagnosed of cancer and the investigations revealed that the tumor had grown more deeply into nearby tissue and spread to lymph nodes. How will stage this cancer?
- A. Stage 1
 - B. Stage 2
 - C. Stage 3
 - D. Stage 4
23. A patient presented to the clinic for further management due to neck veins that were bulging and low blood pressure. Which condition was this patient suffering from?
- A. Heart failure
 - B. Angina
 - C. Cardiac tamponade
 - D. Cardiac arrest

24. A patient presented with lab reports of accumulation of proteins in the lungs. Which is the most appropriate procedure in removing the proteins?
- Pleurodesis
 - Decortication
 - Debridement
 - Chemotherapy
25. Left ventricular assist device (LVAD) is a total artificial heart placement to treat?
- Heart failure
 - Cardiac arrest
 - Heart attack
 - Coronary heart disease
26. What is the goal of physiotherapy in acute open-heart surgery?
- Enhance lung expansion
 - Patient mobilization
 - Prevent accumulation of fluids in the chest
 - All of the above
27. Removal of one lung and part of the diaphragm, pericardium, and parietal pleura is referred to as?
- Pneumonectomy
 - Lobectomy
 - Segmentectomy
 - Extrapleural pneumonectomy
28. A disease where blood contains enough oxygen but it's pumped abnormally around the body is referred to as?
- Cyanotic heart disease
 - Acyanotic heart disease
 - Patent ductus arteriosus
 - Heart failure
29. Fibroblast migration and collagen production to build a matrix for new tissue occurs at what stage of wound healing?
- Haemostasis
 - Inflammation
 - Proliferation
 - Remodelling
30. The appropriate surgical procedure for diaphragmatic injuries is?
- Laparotomy
 - Laparoscopy
 - Colonoscopy
 - All of the above

Section B. Short answer questions. Answer all the question (20 marks)

1. State five side effects of anesthetic medications
2. Differentiate between primary and secondary wound healing. 5 marks
3. Outline the effects of Poor nutrition post-surgery 5 marks
4. Outline the indications of a lobectomy in an adult patient. 5 marks

Section C: Long essay question. Answer two of the following question (20 marks)

1. Discuss the indications of open heart surgery 10 marks
2. Formulate physiotherapy treatment for an acute heamothoracotomy patient in underwater seal drainage. 10 marks
3. Describe the stages of wound healing 10 marks

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