



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR**

**SECOND YEAR, FIRST TRIMESTER EXAMINATIONS**

**FOR THE DEGREE  
OF  
BACHELOR OF SCIENCE IN PHYSIOTHERAPY  
MAIN EXAM**

**COURSE CODE: BSP 215**

**COURSE TITLE: GENERAL SURGERY I**

**DATE: MONDAY 4<sup>TH</sup> DEC 2023**

**TIME: 2:00-4:00 PM**

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**INSTRUCTIONS TO CANDIDATES**

**ANSWER ALL QUESTIONS**

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over.

**SECTION A: MULTIPLE CHOICE QUESTIONS**

**20 MARKS**

1. Which *ONE* of the following ultrastructural features is believed to allow for the increased permeability of the vascular endothelium in acutely inflamed tissue?
  - A. Cytoplasmic micropinocytotic vesicles.
  - B. Gaps in endothelial tight junctions.
  - C. Gaps in the basement membrane.
  - D. Increase in number of phagolysosomes.
2. Which *ONE* of the following is *not* an endogenous mediator of increased vascular permeability?
  - A. Angiotensin.
  - B. C3a and C5a.
  - C. 5-hydroxytryptamine.
  - D. Prostaglandin E2.
3. Which *ONE* of the following is *not* an acceptable characteristic of a granuloma.
  - A. Composed of altered macrophages.
  - B. Composed of fused macrophages (giant cells).
  - C. Composed of epithelioid cells.
  - D. Composed of polymorphonuclear leucocytes, cellular debris and fibrin.
4. Which *ONE* of the following does *not* impair healing of a wound?
  - A. Deficiency of galactosamine.
  - B. Deficiency of vitamin C.
  - C. Excess of adrenal glucocorticoid hormones.
  - D. Good vascular supply.
5. The first thing to occur in acute inflammation is
  - A. Vasodilation
  - B. Increase permeability
  - C. Diapedesis
  - D. Vasoconstriction
6. Regarding chronic inflammation which is false
  - A. It can be caused by persistent infection
  - B. It can be caused by prolonged exposure to toxic agents
  - C. It may contribute to the formation of atherosclerosis
  - D. It primarily involves tissue destruction
7. Which of the following factors can contribute to delayed wound healing as a post-operative complication?
  - A. Sterile surgical technique
  - B. Adequate blood supply
  - C. Smoking
  - D. Early removal of sutures
8. A patient who develops a deep vein thrombosis (DVT) post-operatively is at risk for which serious complication?
  - A. Urinary tract infection
  - B. Pulmonary embolism

- C. Wound infection
  - D. Hypertension
9. A patient who develops a deep vein thrombosis (DVT) post-operatively is at risk for which serious complication?
    - A. Urinary tract infection
    - B. Pulmonary embolism
    - C. Wound infection
    - D. Hypertension
  10. Which of the following is a pre-operative complication associated with anesthesia?
    - A. Surgical site infection
    - B. Hypoxia
    - C. Deep vein thrombosis
    - D. Wound dehiscence
  11. What is the primary goal of pre-operative assessment?
    - A. Diagnose post-operative complications
    - B. Prevent pre-operative complications
    - C. Monitor vital signs during surgery
    - D. Administer anesthesia
  12. What is the primary goal of pre-operative physiotherapy?
    - A. Pain management
    - B. Reducing complications
    - C. Improving surgical precision
    - D. Enhancing patient comfort
  13. In post-operative physiotherapy, what is the purpose of using assistive devices such as crutches or walkers?
    - A. To keep patients from moving at all
    - B. To make patients dependent on others
    - C. To facilitate safe mobility and support during recovery
    - D. To keep patients entertained
  14. Which of the following heart disorders is often associated with a "click-murmur" sound on auscultation due to a valve not closing properly?
    - A. Aortic dissection
    - B. Mitral valve prolapse
    - C. Aortic stenosis
    - D. Rheumatic heart disease
  15. Which of the following conditions is characterized by elevated blood pressure within the arteries of the lungs?
    - A. Pulmonary embolism
    - B. Pulmonary hypertension
    - C. Hypertrophic cardiomyopathy
    - D. Myocardial infarction
  16. What is the condition in which a tear occurs in the inner layer of the aorta, the large blood vessel branching off the heart?

- A. Aortic dissection
  - B. Angina pectoris
  - C. Myocarditis
  - D. Mitral valve prolapse
17. Which of the following is a condition in which the heart's electrical system is disrupted, leading to an irregular heartbeat?
- A. Atherosclerosis
  - B. Heart murmur
  - C. Arrhythmia
  - D. Hypertension
18. How does emphysema affect lung function?
- A. It improves lung function.
  - B. It has no effect on lung function.
  - C. It reduces lung function.
  - D. It only affects the upper respiratory tract
19. Which of the following vitamins is necessary for the synthesis of several clotting factors in the liver?
- A. Vitamin A
  - B. Vitamin C
  - C. Vitamin D
  - D. Vitamin K
20. What is the primary function of vasoconstriction in hemostasis?
- A. To increase blood flow to the injured area
  - B. To seal the damaged blood vessel
  - C. To promote platelet aggregation
  - D. To release clotting factors

**SECTION B: SHORT ANSWER QUESTIONS 40 MARKS**

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| 1. Discuss signs and symptoms of emphysema                                 | 5 Marks |
| 2. Explain the characteristics of exudative effusion                       | 5 Marks |
| 3. Explain the role of physiotherapy in pneumothorax management            | 5 Marks |
| 4. Discuss the clinical manifestations in bronchiectasis                   | 5 Marks |
| 5. Discuss factors that affect bleeding during surgery                     | 5 Marks |
| 6. Explain the roles of Physiotherapy following lung surgery               | 5 Marks |
| 7. Discuss the clinical presentation and signs of a patient with DVT       | 5 Marks |
| 8. Explain the physiotherapy management of the patient post breast surgery | 5 Marks |

**SECTION C: LONG ANSWER QUESTIONS 40 MARKS**

1. Cardiorespiratory physiological changes post-surgery plays a key role in stepwise progressive rehabilitation plan. Discuss 20 Marks
2. Explaining in detail discuss the post-operative complications and the physiotherapy goals