



**AMREF INTERNATIONAL UNIVERSITY**  
**SCHOOL OF MEDICAL SCIENCES**  
**DEPARTMENT OF REHABILITATION MEDICINE**  
**BACHELOR OF SCIENCE IN PHYSIOTHERAPY**

**END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2025**

**UNIT CODE: PHT 212**

**UNIT NAME: General Pathology (Special exam)**

**DATE: 9th APRIL 2025**

**TIME: 6PM-8:30PM**

**INSTRUCTIONS**

1. All students will have two (2) hours to complete the examination
2. This is an online exam, 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 6 including the cover.
6. Read through the paper quickly before you start.
7. Upon finishing the exam paper, on submission, the message 'Your examination has been submitted' will appear.

**TOTAL: \_\_\_\_\_/70**

**PERCENT: \_\_\_\_\_/100%**

**POINTS EARNED TOWARDS FINAL GRADE \_\_\_\_\_/70**

**SECTION A: Multiple Choice Questions. Answer all the questions (30 Marks)**

1. The most characteristic feature of granulation tissue is the:-
  - a. Resemblance to a Granuloma
  - b. Growth of Fibroblasts and New Capillaries
  - c. Character of the Exudate
  - d. Presence of Monocytes and Fibroblasts
  
2. Chemical mediators predominantly responsible for pain in acute inflammation:-
  - a. Interleukin-1 and tumor necrosis factor
  - b. Histamine and Serotonin
  - c. Prostaglandin and Bradykinin
  - d. Leukotriene and E-selectin
  
3. Impairment of granulation tissue and collagen formation in wound healing is associated with deficiency of:-
  - a. Zinc
  - b. Carbohydrates
  - c. Proteins
  - d. Iron
  
4. Pigments that accumulates due to wear and tear:-
  - a. Lipofuscin
  - b. Melanin
  - c. Hemosiderin
  - d. Calcium
  
5. The cavity of an abscess contains:-
  - a. Hyaline
  - b. Giant cells
  - c. Pus
  - d. Granuloma tissue
  
6. Opsonization is the:-
  - a. Formation of free radicals
  - b. Coating of antigen by antibodies
  - c. Degradation of bacteria by lysozymes
  - d. Engulfment of antigen by leukocytes
  
7. The process of regeneration
  - a. Does not restore prior function
  - b. Refers to healing by proliferation of stromal elements
  - c. Occurs in tissues composed of labile and stable cells

- d. Invariability leads to scar formation
8. Increased vascular permeability is due to:-
- Widening gap between endothelial cells
  - Vascular obstruction
  - Vascular fibrosis
  - Endothelial stricture
9. Infarction of the spleen is usually due to:
- Hypersplenism
  - Congestion
  - Arterial embolism
  - Venous thrombosis
10. Fat embolism can be precipitated by:-
- Excessive fat intake
  - Rapture of an atheromatous plaque
  - Fracture of the femur
  - Changes in atmospheric pressure
11. Red infarcts develop in:-
- Spleen
  - Liver
  - kidney
  - Intestine
12. Asthma is an example of:
- Type I hypersensitivity reaction
  - Type II hypersensitivity reaction
  - Type III hypersensitivity reaction
  - Type IV hypersensitivity reaction
13. Histamine is thought to be the direct cause of:-
- Leukocytosis
  - Emigration
  - Phagocytosis
  - Increased Vascular Permeability
14. An Abscess is **best** defined as:-
- An abnormal intra-surface accumulation
  - Any area of tissue necrosis
  - A localized collection of pus

- d. An epithelium-lined sac filled with viscous fluid
15. A purulent exudate is generally characterized by the presence of:-
- Mucous
  - Macrophages and connective tissue
  - Neutrophils and necrotic debris
  - Precipitated Protein
16. Lipofuscin deposition is most likely to result from:-
- Nuclear pyknosis
  - Myocardial fiber hypertrophy
  - Coagulative necrosis
  - Autophagocytosis
17. An Anti-Oxidant enzyme:-
- Glutathione peroxidase
  - Catalase
  - NADPH oxidase
  - Myeloperoxidase
18. The presence of differentiated columnar epithelium with goblet cells in lower esophagus is consistent with:-
- Dysplasia
  - Hyperplasia
  - Carcinoma
  - Metaplasia
19. A pathological change considered irreversible:-
- Fatty change in the liver cells
  - Hydropic vacuolization or renal tubular epithelial cells
  - Karyolysis in myocardial cells
  - Glycogen deposition in hepatocyte nuclei
20. Selectin is expressed by:-
- Endothelia cells
  - Leukocytes
  - Mast cells
  - Macrophages
21. Nomenclature for malignant tumors arising from mesenchymal tissue
- Sarcoma
  - Carcinoma
  - Hematoma

d. Mesenoma

22. Staging of tumors is based on:-

- a. Degree of anaplasia
- b. Metastatic spread
- c. Rate of cell growth
- d. Degree of cell differentiation

23. Bacteremia means:-

- a. Transient presence of bacteria in the blood
- b. Circulation and multiplication of bacteria in the blood
- c. Presence of bacterial toxins in the blood
- d. Inflammation caused by bacteria in blood vessels

24. Complications of wound healing likely to be observed after abdominal surgery is:-

- a. Dehiscence
- b. Trophic ulcers
- c. Keloid formation
- d. Excessive scar

25. Reperfusion injury is due to:-

- a. Generation of oxygen free radicals
- b. Swelling of endoplasmic reticulum
- c. Recruitment of polymorphs by pancreatic cells
- d. Mitochondrial swelling

26. A tumor of inflammation is primarily due to:-

- a. Increase intracellular fluid
- b. Increased extracellular fluid
- c. Arteriolar dilation
- d. Venous dilation

27. The correct statement concerning initiation of apoptosis is:-

- a. Intrinsic pathway is triggered by lack of survival signals
- b. Extrinsic pathways is triggered by DNA damage
- c. Intrinsic pathway is triggered by cytotoxic T lymphocytes
- d. Death receptor pathway is triggered by misfolded proteins

28. The process by which malignant cells adjust to their environment to further their own growth is termed as:-

- a. Dissemination

- b. Cell inversion
- c. Proliferation
- d. Metastasis

29. Paroxysmal episodes of bilateral ischemia of digits is termed as:-

- a. Thromboangitis
- b. Saccular aneurysm
- c. Buerger disease
- d. Raynaud's disease

30. The following are X-linked disorders EXCEPT

- a. Sickle cell anemia
- b. Marfan's syndrome
- c. Down's syndrome
- d. Hemophilia

**SECTION B: Short Answer Questions. Answer all the questions (20 MARKS)**

1. Differentiate between dry gangrene and wet gangrene (6 marks)
2. State FOUR morphologic forms of reversible cell injury (4 marks)
3. Describe the mechanisms involved in type I hypersensitivity reaction (6 marks)
4. State FOUR aspects of a disease process (4 marks)

**SECTION C: Long Answer Questions. Answer any of the two questions (20 MARKS)**

1. Describe the pathologic changes in cells that can lead to irreversible cell injury (10 marks)
2. Describe the morphologic features of chronic inflammation (10 marks)
3. Describe the genetic polymorphisms that influence susceptibility to disease (10 marks)