



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES  
BACHELOR OF SCIENCE IN NURSING (BSN)  
September-December 2024 TRIMESTER MAIN EXAMINATION**

**COURSE CODE AND TITLE: BSN 214- Human Pathology**

**DATE:**

**TIME: 2 HOURS**

**START: 9:00AM**

**END: 11:00AM**

---

**Instructions**

- 1) This exam is out of 70
- 2) This paper has three sections: Section I: Multiple choice Questions (MCQ) (20 marks), Section II: Short answer questions (SAQ) (30 marks) and Section III: Long answer question (LAQ) (20marks)
- 3) Answer **ALL** questions in Section I and Section II and III
- 4) Answer all the questions in the examination booklets provided
- 5) Any rough work to be done at the back of the answer booklet

**SECTION I: MULTIPLE CHOICE QUESTIONS (MCQs)**

**(20 MARKS):**

1. The change of columnar epithelium to squamous epithelium is an example of:
  - A. Metaplasia
  - B. Dysplasia
  - C. Hyperplasia
  - D. Neoplasia
2. In a 60-year-old male, gangrene of the toes is most likely associated with:
  - A. Heart failure
  - B. Diabetes mellitus
  - C. Blunt force trauma
  - D. Type I hypersensitivity
3. The cellular changes seen in irreversible cellular injury is:
  - A. Atrophy
  - B. Nuclear pyknosis
  - C. Epithelia dysplasia
  - D. Fatty metamorphosis
4. The action of putrefactive bacteria on necrotic tissue results in:
  - A. Coagulation
  - B. Infarction
  - C. Gangrene
  - D. Embolism
5. Apoptosis refers to:
  - A. Massive necrosis
  - B. Foreign body phagocytosis
  - C. Programmed cell death
  - D. Wet gangrene
6. Chronic inflammation is
  - A. Always preceded by acute inflammation
  - B. Characterized by hyperemia, edema and leukocyte infiltration
  - C. Most frequently results in resolution
  - D. The factors underlying monocyte infiltration are the same as for acute inflammation
7. The first cell to appear in the acute inflammation is
  - A. Mast cell

- B. Macrophage
  - C. Neutrophil
  - D. Basophils
8. The first cell to appear in acute inflammation is:
- A. Mast cells
  - B. Macrophages
  - C. Neutrophil
  - D. Basophils
9. Benign tumors:
- A. Grows much more slowly than malignant tumors
  - B. Are not comprised of cells
  - C. Occur only in the female reproductive tract
  - D. Are not considered cancerous but can cause health problems
10. Tumors that invade neighboring tissues are called:
- A. Malignant
  - B. Benign
  - C. Invasive
  - D. Carcinoma
11. Chemicals that induce cancer are called:
- A. Carcinogens that produce malignant tumors
  - B. Carcinogens that produce non-malignant tumors
  - C. Mutagenic agents that do not produce malignant tumors
  - D. Mutagenic agents that produce benign tumors
12. The multistage process of carcinogenesis occurs in the following sequence:
- A. A lag time, initiation, promotion, and tumor progression
  - B. A lag time, promotion, initiation, and tumor progression
  - C. Initiation, lag time, promotion, and tumor progression
  - D. Initiation, promotion, lag time, and tumor progression
13. A liposarcoma is:
- A. A malignant tumor of fatty tissue
  - B. A benign tumor of fatty tissue
  - C. A benign tumor of any tissue type
  - D. A tumor that only metabolizes fat
14. An abnormal narrowing in a blood vessel or other tubular organ or structure is:

- A. Atresia
  - B. Fistula
  - C. Stenosis
  - D. Varices
15. The alternate form of a gene is:
- A. Recessive character
  - B. Alternate type
  - C. Allele
  - D. Dominant character
16. A gene that has a mutated form of the gene involved in normal cell growth is known as:
- A. Tumor
  - B. Oncogene
  - C. Protooncogene
  - D. Neoplasm
17. The first vascular response to injury is:
- A. Slowing of the circulation
  - B. Venular dilatation
  - C. Capillary enlargement
  - D. Arteriolar vasoconstriction
18. Macrophages are derived from:
- A. T cells
  - B. B cells
  - C. Monocytes
  - D. Plasma cells
19. The mechanism of edema in patients with congestive cardiac failure is:
- A. Decreased plasma oncotic pressure
  - B. Endothelial damage
  - C. Increased hydrostatic pressure
  - D. Increased vascular permeability
20. Infarcts tend to be hemorrhagic when they occur in:
- A. Kidney
  - B. Lungs
  - C. Spleen
  - D. Heart

**SECTION II: SHORT ANSWER QUESTIONS –**

**(30 MARKS)**

1. Discuss chemical carcinogenesis under the following.
  - a. Initiation stage- (3 marks)
  - b. Promotion stage (3 marks)
2. Discuss ways in which cells and tissues adapt to a chronic irritating stimulus (8 marks)
3. Outline four (4) differences between malignant and benign tumors (4 marks)
4. Explain four (4) stages of hypovolemic shock (8 marks)
5. Outline four (4) differences between wound healing by primary and secondary intention (4 marks)

**SECTION III: LONG ANSWER QUESTIONS-**

**20 MARKS**

1. Inflammation is a key immune response to attack by pathogens.
  - a. Explain four (4) classical signs of inflammation (8marks)
  - b. Explain five (5) mediators of inflammation (10marks)
  - c. Outline two (2) roles of inflammation in the body (2marks)