



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES
End of Semester August 2025 Examinations**

COURSE CODE: BSM 214 Human Pathology and Hematology

PHYSICAL

**UPGRADING
DATE:**

Duration: 2 HOURS Start: 9:00 AM Finish: 11:00 AM

INSTRUCTIONS

1. This exam is out of 70 marks
2. This Examination comprises THREE Sections. Section I: Multiple Choice Questions (20 marks) Section II: Short Answer Questions (30 marks) and Section III: Long Answer Questions (20 marks)
3. Answer ALL Questions.
4. Do Not write anything on the question paper -use the back of your booklet for rough work if need be.

SECTION I: MULTIPLE CHOICE QUESTIONS

[20 MARKS]

CHOOSE THE CORRECT ANSWER

- 1. An increase in the number of new cells in an organ or tissue is?**
 - a. Dysplasia
 - b. Hyperplasia
 - c. Metaplasia
 - d. Atrophy

- 2. The components of the inflammatory process are capable of?**
 - a. Destroying the tissue and aiding in rapid healing
 - b. Enlarging the injured tissue helps in healing
 - c. Injuring normal tissues and leading to a worse pathology
 - d. Injuring normal tissue and reducing the pathology

- 3. Cell atrophy refers to?**
 - a. An increase in the size of the cell
 - b. Decrease in the size of the cell
 - c. Replacement of one cell type by another
 - d. Increase in the number of cells in an organ

- 4. By which one of the following mechanisms are dead organelles removed from the cell?**
 - a. Autophagocytosis
 - b. Hetrophagy
 - c. Phagocytosis
 - d. Regurgitation

- 5. Which one of the following is not an adaptive cellular response?**
 - a. Atrophy
 - b. Hypertrophy
 - c. Necrosis
 - d. Metaplasia

6. Immediate and early response to tissue injury includes all EXCEPT?

- a. Vasodilation
- b. Lymphocyte, macrophage, plasma cell (mononuclear cell) infiltration
- c. Vascular leakage and edema
- d. Leukocyte emigration

7. Vasodilation;

- a. Accounts for warmth and redness
- b. Opens microvascular beds
- c. Causes an early exudate (protein-rich) into the interstitial
- d. Causes increased intravascular pressure

8. What are the most important blood cells in the coagulation process?

- a. Red blood cells
- b. Granulocytes
- c. Platelets
- d. Lymphocytes

9. Reduced plasma oncotic pressure is the most important mechanism of edema in?

- a. Congestive heart failure.
- b. Edema of the leg affected by venous thrombosis.
- c. Edema of the arm in breast cancer patients.
- d. Nephrotic syndrome.

10. Possible outcomes of acute inflammation include all EXCEPT?

- a. Complete resolution
- b. Scarring (fibrosis)
- c. Progression to chronic inflammation
- d. Chronic formation

11. Neoplasm can be classified as either benign or malignant. The following are characteristics of malignant tumors apart from?

- a. Metastasis
- b. Infiltrate surrounding tissues
- c. Encapsulated
- d. Poorly differentiated cells

12. Bile is synthesized by which type of cell?

- a. Enterocyte
- b. Hepatocyte
- c. Kupffer cell
- d. Acinar cell

13. What is the name of the phenomenon where WBCs marginate and become attached to the edge of the endothelium?

- a. Pavementing
- b. Margination
- c. Adhesion
- d. Rolling

14. Transfusion reactions and organ rejection is caused by which of the following?

- a. T-Cell mediated (Type 4) hypersensitivity
- b. Immediate (Type 1) hypersensitivity
- c. Immune complex mediated (Type 3) hypersensitivity
- d. Antibody mediated (Type 2) hypersensitivity

15. Generalized edema results from all the following EXCEPT:

- a. Systemic hypertension.
- b. Congestive heart failure.
- c. Liver cirrhosis.
- d. Nephrotic syndrome.

16. Disorders that predispose to thrombosis include all of the following EXCEPT:

- a. Pancreatic carcinoma.
- b. Pregnancy.
- c. Vitamin K deficiency.
- d. Sickle cell anemia.

17. Realizing that liver function declines with age, it is essential that the nurse closely monitor all elderly patients for?

- a. Hematuria
- b. Ascites
- c. Jaundice
- d. Drug Toxicity

18. TNM stands for?

- a. Time Nodules Metaplasia
- b. Tumor Nodules Metaplasia
- c. Tumor Nodes Metastasis
- d. Tumor Nodules Metastasis

19. In any discussion involving cancer with a patient, there are usually two terms - staging and grading. Which term determines the prognosis of the cancer?

- a. Staging
- b. Grading
- c. Anaplasia
- d. Dysplasia

20. As regards the process of inflammation, release of histamine is triggered when?

- a. Cells degranulate and antibody titre is low
- b. Platelets are activated and mast cells degranulate
- c. Mast cells degranulate and basophils depressed
- d. Binding of antibody to mast cells and basophils occur

SECTION 11: SHORT ANSWER QUESTIONS

[30 MARKS]

1. State the six (6) hematologic diagnostic procedures. (6 marks)
2. Differentiate between benign and malignant tumors. (6 marks).
3. Briefly describe the stages of blood clotting. (6 marks)
4. Enumerate six (6) mechanisms of carcinogenesis. (6 marks).
5. Briefly describe the pathophysiology of Trisomy 21. (6marks)

SECTION III: LONG ANSWER QUESTIONS

[20 MARKS]

1. Describe in detail the sequence of the inflammatory response as a defensive mechanism against injury. (20 marks)

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