



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES  
BACHELOR OF SCIENCE IN NURSING  
END OF SEMESTER DECEMBER 2022 EXAMINATIONS**

**COURSE CODE AND TITLE: BSN 214 HUMAN PATHOLOGY**

**DATE: 28<sup>th</sup> November 2022**

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  
Section II: Short Answer Questions and  
Section III: Long Answer Questions
3. Answer **ALL** Questions.
4. This online exam shall take 2 Hours
5. Late submission of the answers will not be accepted
6. Ensure your web-camera is on at all times during the examination period
7. No movement is allowed during the examination
8. Idling of your machine for 5 min or more will lead to lock out from the exam
9. The Learning Management System (LMS) has inbuilt integrity checks to detect cheating
10. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
11. In case you have any questions call the Head of Department on
12. For adverse incidences please write an email to: [amiu.examinations@amref.ac.ke](mailto:amiu.examinations@amref.ac.ke)

**SECTION I: MULTIPLE CHOICE QUESTIONS ( 20 MARKS)**

1. The major mechanism of damage to cell membrane in ischaemia is:-
  - A. Reduced intracellular PH
  - B. Increased intracellular accumulation of sodium
  - C. Increased calcium ions in the cytosol
  - D. Reduced aerobic respiration
2. Diabetic foot is an example of:-
  - A. Dry gangrene
  - B. Wet gangrene
  - C. Gas gangrene
  - D. Necrotising inflammation
3. The following is TRUE regarding metaplasia :-
  - A. It is a disordered growth
  - B. It affects only epithelial tissue
  - C. It is a reversible change
  - D. It is an irreversible and progressive change
4. In terms of content, transudate is similar to exudate in :-
  - A. Having no inflammatory cells
  - B. Low glucose content
  - C. Low protein content
  - D. Low specific gravity
5. The following organ infarct can only be of the haemorrhagic type:-
  - A. Kidney infarct
  - B. Splenic infarct
  - C. Lung infarct
  - D. Heart infarct

6. Graves disease is a type of:-
- A. Type I hypersensitivity reaction
  - B. Type II hypersensitivity reaction
  - C. Type III hypersensitivity reaction
  - D. Type IV hypersensitivity reaction
7. The type of oedema is characteristically dependent is:-
- A. Nephrotic oedema
  - B. Nephritic oedema
  - C. Pulmonary oedema
  - D. Cardiac oedema
8. The following are types of tissue macrophages EXCEPT:-
- A. Littoral cells
  - B. Hoffbauer cells
  - C. Osteoclasts
  - D. Osteoblasts
9. In atrophy the cells are:-
- A. Dead cells
  - B. Shrunken cells
  - C. Irreversibly injured cells
  - D. Reversibly injured cells
10. The following chronic disease is an autoimmune disorder:-
- A. Systemic Lupus Erythematosus
  - B. Myasthenia Gravis
  - C. Kaposi Sarcoma
  - D. Hay Fever

11. The following cytokines are NOT mediators of inflammation :-
- A. Interleukin 1 (IL-1)
  - B. Tumour Necrosis Factor  $\alpha$
  - C. Nitric Oxide
  - D. Interferon  $\gamma$
12. Tumor cells are not recognized as foreign by the immune system because they lack:-
- A. A specific antigen called tumor-associated antigen
  - B. Promoter signals on their cells
  - C. Signaling receptors
  - D. Cytokines within the cell
13. Apoptosis has the following features EXCEPT:-
- A. There is cell shrinkage in apoptosis
  - B. There are no acute inflammatory cells surrounding apoptosis
  - C. There may be single cell loss or may affect a cluster of cells
  - D. Apoptosis is seen in pathological processes only
14. In Ischaemia, reperfusion cell injury is characterised by:-
- A. Increased calcium ions in the extracellular fluid
  - B. Increased calcium ions in the cytosol
  - C. Calcium ions are equal in the cytosol and in the extracellular fluid
  - D. Calcium ion equilibrium is unaffected
15. The extent to which injurious agent can cause cell injury or death is determined by all EXCEPT
- A. Intensity of exposure
  - B. Duration of exposure
  - C. Type of cell involved
  - D. Pathogenicity of the cell

16. The first line of defense that is initiated immediately upon injury is:-
- A. Walling off the injured area
  - B. Tissue macrophage invasion
  - C. Neutrophil invasion of the inflamed area
  - D. Increased production of granulocytes and monocytes
17. The following processes occur when tissues heal by secondary intention EXCEPT
- A. Occurs in injuries with loss of significant tissue
  - B. The process is fast with no scar formation
  - C. Heals by granulation tissue proliferation and filling the injured area
  - D. Reepithelialization occurs beginning from the edges towards the centre
18. Enzymatic digestion is a characteristic of:-
- A. Coagulative necrosis
  - B. Liquefactive necrosis
  - C. Caseous necrosis
  - D. Fat necrosis
19. Necrosis is:-
- A. Reversible
  - B. Lack of oxygen to the tissue
  - C. Not reversible
  - D. Blebbing at the periphery
20. Cancer cells:-
- A. Do not undergo apoptosis
  - B. Play a part in mitosis
  - C. Undergo mitosis
  - D. Play a part in steroid-hormone production

**SECTION II : SHORT ANSWER QUESTIONS ( 30 MARKS)**

1. Regarding gangrene
  - a. Define gangrene (1 Marks)
  - b. State three ( 3) types of gangrene (3 Marks)
2. With the use of examples, describe three (3) types of intracellular accumulations ( 6 Marks)
3. Describe the four ( 4 ) stages of hypovolemic shock (8 Marks)
4. Outline four ( 4) effects of tumours on the host. (4 Marks)
5. Describe four ( 4) different types of exudates. (4 Marks)
6. Contrast benign and malignant tumors (4 Marks )

**SECTION III: ESSAY QUESTIONS ( 20 MARKS)**

1. Explain the various cellular adaptations. ( 20 Marks)