



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES  
BACHELOR OF SCIENCE IN NURSING  
END OF SEMESTER DECEMBER 2023 EXAMINATIONS**

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

**DATE: 5-DECEMBER-2023**

**Duration: 2 HOURS**

**Start: 9:00AM**

**Finish: 11:00AM**

**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.**

**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. For metaplasia, the following is True: -
  - 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. Transudate differs from exudate in having the following EXCEPT: -
  - A. No inflammatory cells
  - B. Low glucose content
  - C. Low protein content
  - D. Low specific gravity
5. The infarct of which organ is invariably haemorrhagic: -
  - A. Kidney infarct
  - B. Splenic infarct
  - C. Lung infarct
  - D. Heart infarct
6. In atrophy the cells are: -
  - A. Dead cells
  - B. Shrunken cells
  - C. Irreversibly injured cells
  - D. Reversibly injured cells
7. The following chronic diseases is a autoimmune disorder: -
  - A. Systemic Lupus Erythematosus
  - B. Myasthenia Gravis
  - C. Kaposi Sarcoma
  - D. Hay Fever
8. The main cytokines acting as mediators of inflammation are as under EXCEPT: -
  - A. Interleukin 1 (IL-1)
  - B. Tumour Necrosis Factor  $\alpha$
  - C. Nitric Oxide
  - D. Interferon  $\gamma$
9. When a person sustains injury the first line of defense that is initiated immediately to prevent further 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
10. A 'keloid' is a type of: -
  - A. Cancer

- B. Cellular hyperplasia
  - C. Infarct
  - D. Scar
11. Cancer cells can readily be destroyed by radiation due to: -
- A. Fast mutation
  - B. Rapid cell division
  - C. Lack of mutation
  - D. Lack of oxygen
12. Cigarette smoke is considered a cancer-causing agent, which could also be referred to as: -
- A. Oncogene
  - B. Malignant
  - C. Carcinogen
  - D. Malignant
13. The spread of cancerous tissue from one location to another is called: -
- A. Migration
  - B. Metastasis
  - C. Angiogenesis
  - D. Malignant
14. The type of cancerous tumors that are characterized as being nonsolid is: -
- A. Sarcomas
  - B. Lymphomas
  - C. Leukemia
  - D. Carcinoma
15. The most important cause of delay of healing is: -
- A. Inadequate blood supply
  - B. Infection
  - C. Foreign body presence
  - D. Poor nutritional state of the patient
16. The following is true about formation of granulation tissue: -
- A. Granulation tissue forms around day 6 from proliferation of fibroblasts and vascular endothelial cells
  - B. Characteristic histological feature is presence of new small blood vessels (angiogenesis) and proliferation of fibroblasts
  - C. The new vessels in angiogenesis are tight and restrict passage of plasma proteins.
  - D. There is a similar amount of granulation tissue in wounds healing by both primary and secondary intention
17. The following genes is involved in the conversion of pro-oncogenes into oncogenes causing cancer: -
- A. Metastatic genes
  - B. Angiogenesis genes
  - C. Transposons
  - D. Tumor suppressor genes
18. The therapies which will involve only the cancerous cells not the normal cells in treatment is: -
- A. Immunotherapy

- B. Surgery
  - C. Aromatherapy
  - D. Chemotherapy
19. The following are endogenous antioxidants and/or free radical removers EXCEPT: -
- A. Ceruloplasmin
  - B. Glutathione
  - C. Hydrogen peroxide
  - D. Vitamin C and E
20. In the "ABCD" guidelines to melanoma the "D" stands for: -
- A. Dimension
  - B. Darkness
  - C. Diameter
  - D. Depth

**SECTION II: SHORT ANSWER QUESTIONS-**

**30 MARKS**

1. Differentiate between neoplasia and hyperplasia. (5 Marks)
2. Briefly describe granulomatous inflammation. (5 Marks)
3. Define gangrene and describe the different types. (5 Marks)
4. Briefly describe intracellular accumulations. (5 Marks)
5. Briefly describe the various types of necrosis. (5 Marks)
6. Describe the steps of wound healing by first intention (5 marks)

**SECTION III: LONG ANSWER QUESTIONS**

**20MARKS**

**Answer ONE question**

1. Describe the various stages of bone healing. (20 Marks)
2. Describe the mediators of inflammation. (20 marks)