



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES  
END OF SEMESTER AUGUST 2023 EXAMINATIONS**

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

**Date: 10<sup>TH</sup> AUGUST 2023**

**Time: 2 Hours**

**Start: 9:00 A.M**

**Finish: 11:00 A.M.**

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**Instructions**

- 1) This paper has three sections: Section I, Section II and Section III
- 2) Answer **ALL** questions in Section I and Section II and only **ONE** in Section III
- 3) Use the University examination booklets provided
- 4) Re-writing the questions on your answer sheet is unnecessary

**SECTION I: MULTIPLE CHOICE QUESTIONS**

**(20MARKS)**

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. Necrotizing inflammation
3. The TRUE statement regarding metaplasia is: -
  - 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. With regard to autosomal recessive disorders: -
  - A. At least one parent with the heterozygous mutation is sufficient for showing the phenotype in progeny
  - B. The affected individuals are always homozygous for the mutant allele
  - C. Often heterozygotes (individuals with one allele) are generally carriers.
  - D. None of the statements are correct
5. The infarct of which organ is invariably haemorrhagic is: -
  - A. Kidney infarct
  - B. Splenic infarct
  - C. Lung infarct
  - D. Heart infarct

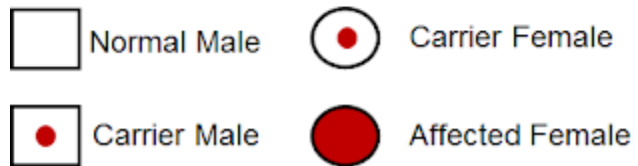
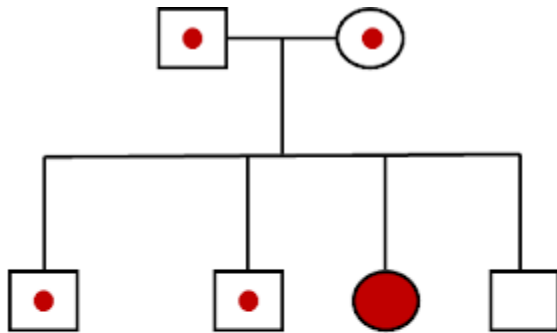
6. The first line of defense initiated immediately after a person sustains injury to prevent further injury is: -
- A. Walling off the injured area
  - B. Tissue macrophage invasion
  - C. Neutrophil invasion of the inflamed area
  - D. Increased production of granulocytes and monocytes
7. Enzymatic digestion is the predominant event in: -
- A. Coagulative necrosis
  - B. Liquefactive necrosis
  - C. Caseous necrosis
  - D. Fat necrosis
8. A 'keloid' is a type of: -
- A. Cancer
  - B. Cellular hyperplasia
  - C. Scar
  - D. Infarct
9. Hypertrophy: -
- A. Increases function of an organ exponentially
  - B. Occurs after partial hepatectomy
  - C. Is triggered by mechanical and trophic chemicals
  - D. Is usually pathological
10. Heat and swelling in acute inflammation is due to: -
- A. Increased vascular permeability
  - B. Spasm
  - C. Increased blood flow
  - D. Leukocytic migration

11. Regarding wound healing: -
- A. The inflammatory response in primary healing is more intense than in secondary healing
  - B. At 1 week , the wound strength is 20% of that of unwounded skin
  - C. Wound contraction is due in part to fibroblast contraction
  - D. In primary union, collagen fibres appear with granulation tissue
12. 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
13. The most common predisposing factor for developing thromboembolism is: -
- A. Immobility
  - B. Post-surgery status
  - C. Malignancy
  - D. Coronary artery disease
14. The factor which determines the severity of a pulmonary embolus is: -
- A. Type of embolism
  - B. Degree of obstruction
  - C. Speed of onset
  - D. General health of the patient
15. The set of observable characteristics which are the sum of the genetic and environmental effects is: -
- A. Karyotype
  - B. Genotype
  - C. Phenotype
  - D. Both phenotype and genotype

16. Hemophilia is inherited through: -

- A. X linked dominant gene
- B. X linked recessive gene
- C. Y linked dominant gene
- D. Y linked recessive gene

17. Identify the pattern of inheritance from the linkage: -



- A. Autosomal Dominant
- B. Autosomal Recessive
- C. X-linked Recessive
- D. X-linked Dominant

18. Oncogenes are the cancer causing cells by they do not express usually because of the presence of: -

- A. Proto oncogenes
- B. Tumor promoters
- C. Tumor suppressor genes
- D. Transposons or jumping genes

19. Cancer cells are rapidly destroyed by radiations due to: -
- A. Fast mutation
  - B. Rapid cell division
  - C. Lack of mutation
  - D. Lack of oxygen
20. The feature which is not potentially a sign of end organ involvement following chronic hypertension is: -
- A. Seizure
  - B. Irritability
  - C. Vomiting
  - D. Respiratory distress

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

1. Differentiate between pathologic and physiologic atrophy using appropriate examples (6 marks)
2. Explain the effects of tumors on the host (6 marks)
3. Describe the different types of gangrene (6 marks)
4. Explain the stages of hypovolemic shock (6 marks)
5. Discuss the differences between malignant and benign tumors (6 marks)

**SECTION III: LONG ANSWER QUESTIONS** **(20 MARKS)**

**Answer only ONE question**

1. Discuss the mediators of inflammation (20 marks)
2. Discuss wound healing (primary and secondary intention) (20 marks)