



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES  
BACHELOR OF SCIENCE IN NURSING (PRESERVICE AND UPGRADING)  
END OF TRIMESTER EXAMINATIONS AUGUST 2022**

**COURSE UNIT: BSN 214 COURSE CODE: HUMAN PATHOLOGY**

**DATE: 5<sup>TH</sup> AUGUST, 2022**

**TIME: 2 HOURS**

**START: 9 AM**

**FINISH:**

**11 AM**

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**Instructions**

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

## SECTION A: MULTIPLE CHOICE QUESTIONS-20 MARKS

1. Chronic hypertension requires that the heart pumps harder with each contraction. The left ventricle experiences more stretch than usual, resulting in;

- A. Metaplasia
- B. Dysplasia
- C. Atrophy
- D. Hypertrophy

2. The plasma membrane in cells is comprised of:

- A. A single layer of phospholipids and proteins
- B. A capsid made up of lipids and polysaccharides
- C. A phospholipid bilayer including cholesterol and proteins
- D. Cellulose

3. Mr. Pasteur had his arm in a cast for six weeks. After the cast was removed, his arm was noticeably smaller. This is an example of:

- A. Metaplasia
- B. Dysplasia
- C. Atrophy
- D. Hypertrophy

4. In acute inflammation, which events occur in the correct chronological order;

- A. Transient vasoconstriction, stasis of blood flow, increased permeability, vasodilation
- B. Transient vasoconstriction, increased permeability, vasodilation, stasis of blood flow
- C. Vasodilation, increased permeability, stasis of blood flow, neutrophil accumulation
- D. Neutrophil accumulation, vasodilation, increased permeability, stasis of blood flow

5. The initial vascular response to injury is

- A. slowing of the circulation
- B. C. Recruitment of the vascular beds
- C. Capillary enlargement
- D. Arteriolar vasoconstriction

6. Leukocytes move into the tissues from the vasculature;

- A. By the action of actin and myosin
- B. Predominantly as monocytes on the first day post injury
- C. In response to C3b
- D. Largely in the arterioles

7. Which of the following immune cell is unable to phagocytose

- (a) Neutrophils
- (b) Eosinophil
- (c) Macrophages
- (d) T-cells

8. Metaplasia

- (a) can be caused by vitamin B12 deficiency
- (b) preserves the mucus secretion in the respiratory tract
- (c) is typically irreversible
- (d) describes the underlying pathology of Barrett's esophagus

9. All the following are features of apoptosis except;

- (a) Cell swelling
- (b) Chromatin condensation
- (c) Formation of cytoplasmic blebs
- (d) Lack of inflammation

10. Dystrophic calcification

- (a) Is formed only in coagulative necrosis
- (b) Does not occur on heart valves
- (c) Rarely causes dysfunction
- (d) Is formed by crystalline calcium phosphate material

11. The nurse assesses a patient's surgical wound on the first postoperative day and notes redness and warmth around the incision. Which action by the nurse is most appropriate;

- (a) Obtain wound cultures.
- (b) Document the assessment.
- (c) Notify the health care provider.
- (d) Assess the wound every 2 hours.

12. A patient with an open leg wound has a white blood cell (WBC) count of 13, 500/ $\mu$ L and a  
What action should you take first;

- a. Obtain wound cultures.
- b. Start antibiotic therapy.
- c. Redress the wound with wet-to-dry dressings.
- d. Continue to monitor the wound for purulent drainage.

13. The nurse is aware that the following laboratory values support a diagnosis of pyelonephritis;

- a. Myoglobinuria
- b. Ketonuria
- c. Pyuria
- d. Low white blood cell (WBC) count

14. CGCATGTAGCGA

Which of the following sequences is complementary to the DNA strand shown above;

- a. AGCGATGTACGC
- b. AGCGATGTACGC
- c. GCGTACATCGCT
- d. GCGTACATCGCT

15. Which one of the following is an early sign of respiratory distress in a 2 month old;

- a. breathing slowly
- b. Tachypnea.
- c. Tachycardia.
- d. Bradycardia.

16. Which one of the following is a diagnostic test for epiglottitis;

- a. Blood test.
- b. Throat swab.
- c. Lateral neck x-ray of the soft tissue.
- d. Signs and symptoms.

17. During the exudative phase of acute respiratory distress syndrome (ARDS), the patient's lung cells that produce surfactant have become damaged. As the nurse you know this will lead to;

- a. bronchoconstriction
- b. atelectasis
- c. upper airway blockage
- d. Pulmonary edema

18. A primary prevention for reducing a female patient's risk of developing coronary heart disease is to:

- a. Avoid excessive weight gain.
- b. Enroll in a cardiac rehabilitation program
- c. Take 81 mg of aspirin daily
- d. Take nitroglycerin at the onset of chest pain.

19. The common derangement of body fluids includes:

- a. Bradycardia
- b. Dehydration
- c. Palpitation
- d. hypotension

20. The nurse is aware that the following findings would be further evidence of a urethral injury in a male client during rectal examination;

- a. A low-riding prostate
- b. The presence of a boggy mass
- c. Absent sphincter tone
- d. A positive Hemocult

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

1. Outline the subdivisions of human pathology (8 marks)
2. State the mechanisms involved in cell injury (6 marks)
3. State the phases of wound healing (6 marks)
4. Highlight the pathogenesis of pneumonia (6 marks)
5. Explain the two (2) types of Oedema (4 marks)

**SECTION C: LONG ANSWER QUESTION (20 MARKS)**

1. Inflammation is the reaction of vascularized tissues to injury, characterized by elaboration of inflammatory mediators, movement of fluid and leukocytes from the blood into the extravascular tissues.
  - a. State the types of inflammatory response (6 marks)
  - b. Discuss four (4) cells of inflammation including its functions (8 marks)
  - c. Outline three (3) inflammatory mediators (6 marks)

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