

10



PAPER A

**MASINDE MULIRO UNIVERSITY OF SCIENCE
AND TECHNOLOGY**

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

FIRST YEAR, SECOND TRIMESTER EXAMINATIONS

FOR THE DEGREE

OF

BACHELOR OF SCIENCE IN PHYSIOTHERAPY

COURSE CODE: BSP 123/HPT 222

**COURSE TITLE: GENERAL PATHOLOGY/HUMAN
PATHOPHYSIOLOGY**

DATE: TUESDAY 11TH APRIL 2023

TIME 2:00-4:00 PM

INSTRUCTIONS TO CANDIDATES

Answer all Questions

Sec A: Multiple Choice Questions (MCQ) 20 Marks

Sec B: Short Answer Questions (SAQ) (40 marks)

Sec C: Long Answer Questions (LAQ) (40 marks)

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over. 

SECTION A: MULTIPLE CHOICE QUESTIONS(MCQs) (20 Marks)

1. If the following features of the acute inflammatory reaction were placed in chronological order which would come fourth?
 - A. Arteriolar contraction.
 - B. Blood flow slows.
 - C. Dilatation of arterioles.
 - D. Emigration of leucocytes from blood vessels
2. Which ONE of the following is an example of acyanotic congenital heart disease?
 - A. Coarctation of the aorta.
 - B. Fallot's tetralogy.
 - C. Tricuspid atresia.
 - D. Truncus arteriosus
3. Which ONE of the following is not a histological feature of chronic bronchitis?
 - A. Goblet cell metaplasia.
 - B. Hypertrophy of smooth muscle.
 - C. Mucous gland hyperplasia.
 - D. Squamous metaplasia of respiratory epithelium
4. Which ONE of the following examples of non-Hodgkin's lymphoma commonly occurs in children?
 - A. Diffuse centrocytic.
 - B. Follicular lymphoma.
 - C. Intestinal histiocytic lymphoma.
 - D. Lymphoblastic lymphoma in the thymus.
5. Which of the following genes is involved in the conversion of proto-oncogenes into oncogenes causing cancer?
 - A. Metastasis genes
 - B. Angiogenesis genes
 - C. Transposons
 - D. Tumor suppressor gene
6. Which is incorrect regarding Guillain Barre Syndrome?
 - A. CSF will show low protein, high glucose and often a pleocytosis up to 100.
 - B. High dose immune globulin and plasmapheresis have been shown to be equally efficacious in reducing length of illness.
 - C. Severe cases will not only involve demyelination but also axonal degeneration.
 - D. 85% will recover to their previous normal functioning in one year.
7. A 68-year-old woman with a history of heavy tobacco use is found to have a solitary lung nodule on chest computed tomography. Pathology from a recent bronchoscopy reveals adenocarcinoma. What further staging work-up is necessary for this patient before surgical resection?
 - A. Brain magnetic resonance imaging
 - B. Positron emission tomography (PET) scan

- C. Mediastinoscopy
 - D. CT scan
8. Which of the following convey the longest lasting immunity to an infectious agent?
- A. Naturally acquired passive immunity
 - B. Artificially acquired passive immunity
 - C. Naturally acquired active immunity
 - D. Vaccination.
9. Metaplasia is
- A. Reversible change from one cell type to another
 - B. Irreversible change from one cell type to another
 - C. Increase in the number of cells
 - D. Increase in the size and function of cell
10. Cell adaptation where there is increased cell proliferation and decreased differentiation is?
- A. Metaplasia
 - B. Neoplasia
 - C. Dysplasia
 - D. Hypoplasia
11. Which of the following immune cells/molecules are most effective at destroying intracellular pathogens?
- A. T helper cells
 - B. B cells
 - C. Antibodies
 - D. Complement
12. A process whereby specialized tissue are repaired by the formation of mature fibrovascular connective tissue is?
- A. Organisation
 - B. Granulation
 - C. Regeneration
 - D. Restitution
13. In addition to magnetic resonance imaging (MRI), which test may help establish the diagnosis of multiple sclerosis (MS)?
- A. Electromyography
 - B. Myelogram
 - C. Sedimentation rate
 - D. Cerebrospinal fluid analysis
14. Which of the following changes is associated with irreversible cell damage?
- A. Glycogen depletion

- B. Flocculent densities in mitochondria
 - C. Cellular swelling.
 - D. Loss of microvilli
15. Apoptosis results in
- A. recruitment of neutrophils.
 - B. swelling and lysis of cells.
 - C. phagocytosis of apoptotic cells by surrounding healthy cells.
 - D. release of free radicals.
16. Histamine exerts its effect during inflammation by
- A. vasoconstriction of post capillary sphincters.
 - B. constriction of large arteries.
 - C. acting on H₂ receptors on mast cells.
 - D. causing venular endothelial contraction
17. Which is not a feature of myasthenia gravis?
- A. Motor weakness is usually of proximal extremities and bulbar
 - B. There is usually no sensory loss
 - C. Symptoms are often worse as the day progresses
 - D. It is due to antibodies formed against acetylcholinesterase
18. Liquefaction characteristically occurs following infarction of the
- A. heart.
 - B. kidney.
 - C. liver.
 - D. brain.
19. Which of the following is NOT a complication of long term diabetes mellitus?
- A. accelerated arteriosclerosis.
 - B. diffuse glomerulosclerosis.
 - C. increased synthesis of type IV collagen.
 - D. increased myoinositol in nerves.
20. The pathogenesis of rheumatoid arthritis may involve all EXCEPT
- A. infective agents with cross-reactive epitopes in common with collagen.
 - B. the HLA DR4 gene.
 - C. antibodies to autologous IgM.
 - D. cartilage destruction by neutrophils.

SECTION B: SHORT ANSWER QUESTIONS(SAQs) (40 Marks)

1. The steps of the inflammatory response can be remembered as the five Rs: describe them (5Marks)
2. Describe the mechanisms of invasion and spread of neoplasms (5 Marks)
3. Compare and contrast apoptosis and necrosis. (5 Marks)
4. Describe four (2) irreversible cell injury (5 Marks)
5. Describe the grading of cancer (5 Marks)
6. Describe the clinical manifestations of peptic ulcer (5 Marks)
7. Describe the risk factors and the pathogenesis of endometrial cancer (5Marks)
8. Describe the two major classifications of Addison's disease (5Marks)

SECTION C: LONG ANSWER QUESTIONS(LAQs) (40 Marks)

1. Discuss the four types of cell adaptations (20 Marks)
2. Explain the pathophysiology of acute renal failure. Include pre-renal, intra-renal, and post renal causes (20 Marks)