



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS**

**2021 / 2022 ACADEMIC YEAR**

**FOURTH YEAR FIRST TRIMESTER EXAMINATIONS**

**FOR THE DEGREE**

**OF**

**BACHELOR OF SCIENCE IN NURSING**

**COURSE CODE: NCD 212**

**COURSE TITLE: PATHOLOGY**

**DATE: 21<sup>st</sup> Thursday, 2022**

**TIME: 3:00 – 6:00PM**

**INSTRUCTIONS TO CANDIDATES**

This paper consists of three sections:

- i. Section A – Multiple Choice Questions
- ii. Section B – Short Answer Question
- iii. Section C – Long Answer Question.

Answer all questions

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over



## Section A: Multiple Choice Questions (20 marks)

*Choose the most suitable choice, only one choice is correct*

1. Caspases are involved in?
  - a. Necrosis
  - b. Apoptosis
  - c. Atherosclerosis
  - d. Inflammation
2. The following are True about apoptosis are all Except?
  - a. Inflammation in present
  - b. Chromosomal breakage
  - c. Clumping of chromatin
  - d. Cell shrinkage
3. Irreversible cell injury in cell is?
  - a. Deposition of  $Ca^{++}$  in mitochondria
  - b. Swelling
  - c. Mitotic figure
  - d. Ribosomal detachment
4. Vasodilation and increases in vascular permeability is caused by which of the following chemical mediators?
  - a. histamine
  - b. LTB<sub>4</sub>
  - c. TNF
  - d. C5a
5. Which of the following in not a part of the granulation tissue?
  - a. Fibroblast.
  - b. Blood vessels.
  - c. Eosinophils.
  - d. Macrophages.
6. Which of the following is not a function of inflammation?
  - a. Delivery of leucocytes
  - b. Concentration of toxins
  - c. Initiate repair processes
  - d. Vasodilation
7. What typifies chronic inflammation?
  - a. immediate defensive reaction
  - b. vascular and exudative processes predominate
  - c. transient inflammation
  - d. scar tissue formation
8. Cytotoxic T lymphocyte infiltrate of tissue is a sign of?
  - a. acute inflammation
  - b. chronic inflammation
  - c. ischaemic foci
  - d. caseous necrosis
9. What is an embolus?
  - a. An intravascular mass that forms in one anatomic site
  - b. A freely movable, intravascular mass that is carried from one anatomic site to another by the blood
  - c. An intravascular mass that forms in the legs
  - d. An intravascular mass that forms in the brain

10. Which of the following is not a possible fate of an arterial embolism?
  - a. Brain
  - b. Mesentary
  - c. Kidney
  - d. Pulmonary vein
11. Where do most arterial emboli originate?
  - a. In the deep veins of the leg
  - b. In the jugular veins of the neck
  - c. In the right atrium, inferior vena cava, and major veins
  - d. Left atrium or ventricle, aorta, and major arteries
12. The commonest chromosomal syndrome is
  - a. Trisomy 13
  - b. Trisomy 17
  - c. Trisomy 21
  - d. Fragile X syndrom
13. Klinefelter's syndrome is characterized by
  - a. Short Stature
  - b. Cardiac defects
  - c. Webbed hands
  - d. Subnormal intelligence
14. The chromosomal analysis reveals 47, XYY karyotype. Which of the following descriptions best fits this abnormality
  - a. Autosomal trisomy
  - b. A male with Klinefelter's syndrome
  - c. Sex chromosomal aneuploidy
  - d. A female with Turner's syndrome
15. Down's syndrome is caused by
  - a. Maternal nondisjunction
  - b. Paternal nondisjunction
  - c. Translocation
  - d. Mosaicism
16. What is a benign neoplasm originating from adipose tissue called?
  - a. Adenoma
  - b. Lipoma
  - c. Fibrosarcoma
  - d. Adenocarcinoma
17. What are malignant neoplasms arising from connective tissue cells called?
  - a. Carcinomas
  - b. Sarcomas
  - c. Melanomas
  - d. Fibromas
18. What does paraneoplastic syndrome refer to?
  - a. The effects of substances such as hormones secreted by the tumor cells
  - b. Severe weight loss and cachexia associated with advanced cancer
  - c. The decreased resistance to infection resulting from malignant tumors
  - d. The effects of multiple metastatic tumors
19. Acquired, symmetric hyper pigmentation of the sun exposed skin of the face & neck which is strongly associated with pregnancy & use of oral contraceptives is called as \_\_\_\_\_?
  - a. Melanoma
  - b. Cafe-au-lait-spots

- c. Freckle
- d. Melasma

20. Melanin pigmentation in pregnancy is known as \_\_\_\_\_?

- a. Melasma
- b. Melanoma
- c. Epulis
- d. Melanosis

**Section B Short Answer Questions (40marks)**

1. Explain different types of congestion in Hemodynamic disorders (8marks)
2. Describe techniques used in pathology (8marks)
3. Explain the mechanisms of cell injury (8 marks)
4. Describe the Mechanisms of autoimmune diseases (8marks)
5. Explain the cellular basis of aging process (8marks)

**Section C Long Answer Questions (40marks)**

1. Discuss the pathogenesis of apoptosis (20 marks)
2. Using appropriate example explain the concept of Genomic Imprinting (20marks)