



(University of Choice)

# MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS  
2021/2022 ACADEMIC YEAR

SECOND YEAR SECOND TRIMESTER EXAMINATIONS

FOR THE DEGREE  
OF  
BACHELOR OF NURSING  
UPGRADING  
MAIN EXAM

**COURSE CODE:** NCN 227

**COURSE TITLE:** PATHOLOGY II

**DATE:** 19/04/2022

**TIME:** 11.30AM -1.30 PM

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## INSTRUCTIONS TO CANDIDATES

This paper is divided into three sections, **A B** and **C**, carrying respectively: Multiple Choice Questions (**MCQs**), Short Answer Questions (**SAQs**) and Long Answer Questions (**LAQs**).

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

**SECTION A**

**Answer All Questions (20 Marks).**

1. The following are epithelial tumours **EXCEPT**?
  - A) Adenoma
  - B) Squamous cell papilloma
  - C) Transitional cell papilloma
  - D) Lipoma
  
2. The following are benign tumours **EXCEPT**?
  - A) Haemangioma
  - B) Fibrosarcoma
  - C) Chondroma
  - D) Osteoma
  
3. The following is true about epithelioid cells
  - A. Transformed macrophages
  - B. Epithelial cells in the lungs
  - C. A superficial cell
  - D. Derived from nervous tissue
  
4. Barrett's oesophagus is a type of metaplastic change described as:
  - A. Connective tissue to columnar
  - B. Squamous to columnar
  - C. Columnar to squamous
  - D. Stomach to oesophagus
  
5. Which is NOT evidence of irreversible cell injury?
  - A. acute cell swelling ("cellular edema")
  - B. calcifications in the mitochondria
  - C. nuclear pyknosis
  - D. rupture of the lysosomes
  
6. We remember Rudolf Virchow for:
  - A. being the founder of modern-day cellular pathology
  - B. anatomic dissection of the human body
  - C. his idea that all disease is disease of cells
  - D. his idea that politics is a major cause of human disease
  
7. Condyloma acuminatum is a benign cauliflower-like HPV lesion of all of the following **EXCEPT**;
  - A. Penis
  - B. Vulva
  - C. Anal-rectal mucosa
  - D. Breast
  
8. The following is a free-radicals
  - A. hydrogen peroxide
  - B. glutathione
  - C. albumin
  - D. water
  
9. Which is NOT a feature of apoptotic cell death?
  - A. cutting of the DNA at regular intervals

- B. cross-linking of proteins in the cytoplasm
  - C. destruction of the cytoskeleton
  - D. liquefaction of the apoptotic remnant
10. You have been admitted in a psychiatric ward due to depression. You hear the clinician say; "this condition is idiopathic". This means;
- A. you will progress to pure madness by next semester
  - B. your condition was physician induced
  - C. you have very high chance of recovery
  - D. your depressive state is of unknown etiology
11. "Hypoxia" is differentiated from 'ischemia' in that the former refers to:
- A. bleeding to death
  - B. oxygen deficiency or deprivation
  - C. loss of blood supply
  - D. a failing heart
12. Gorbachev's birthmark is an example of:
- A. metaplasia
  - B. hamartoma
  - C. choristoma
  - D. metaplasia
11. Which of the following is blamed for "fatty change" in the liver?
- A. triglycerides
  - B. magnesium
  - C. phosphate
  - D. potassium
12. You're most likely to see caseous necrosis in
- A. calcified fat around a wounded pancreas
  - B. gangrenous diabetic foot
  - C. pus in a boil
  - D. tuberculosis lung
13. The first cell to arrive at the site of acute inflammation is the:
- A. Macrophage
  - B. Neutrophil
  - C. Kupffer cell
  - D. red cell
14. What's the characteristic cell in tissue inflammation caused by Helminth infestation?
- A. eosinophil
  - B. lymphocyte
  - C. macrophage
  - D. neutrophil
15. The main cells involved in healing by 2<sup>nd</sup> intention are:
- A. Myofibroblasts
  - B. activated neutrophils
  - C. fibroblasts
  - D. granulomas

16. Which of the following is NOT an endogenous pigments
- Bilirubin
  - Haemosiderin
  - Carbon
  - Lipofuscin
17. Cellular senescence results from all of the following **EXCEPT**:
- progressive shortening of chromosomal telomeres lengths
  - increasing accumulation of free radicals),
  - decreasing amounts of telomerase enzyme
  - excellent DNA repair mechanism
18. A clinician described a tumor as T2N2M1. The following is most probably true about the tumor?
- Metastatic by blood
  - Benign
  - Invasive via lymphatics
  - Carcinoma in situ if it is of epithelial origin
19. Oedema characterized by high total protein content and high Specimen Gravity is known as:
- Epyema
  - Exudates
  - Transudate
  - Tumor
20. The following is a primary tumor of the heart is
- Myocardial infaction
  - Myxoma
  - Squamous cell carcinoma
  - Myocarditis

## SECTION B

### Answer All Questions (40 Marks).

- Briefly discuss the characteristics of tumours (8 Marks).
- Describe the effects of tumor on a host (8 Marks).
  - Outline the methods of tumor spread (4 Marks).
- Outline characteristic features of benign and malignant breast tumors. (5 Marks)
- Nomenclature of certain malignant tumors is not consistent with the conventional names. Name four examples of such. (4 Marks)
  - Describe 2 examples tumors ending with the suffix -oma that are non-neoplastic. (2 Marks)
- Describe prognostic markers of metastasis. (5 Marks)
  - Define the following:
    - Lymphatic permeation
    - Lymphatic emboli (4 Marks)

## SECTION C

### Answer All Questions (40 Marks).

- Discuss viral carcinogenesis. (20 Marks).
- Discuss methods used in the pathological diagnosis of cancer. (20 Marks).