



(University of Choice)

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

MAIN CAMPUS

**SPECIAL/SUPPLEMENTARY EXAMINATIONS
2019/2020 ACADEMIC YEAR**

FOURTH YEAR SEMESTER TWO EXAMINATIONS

**FOR THE DEGREE OF
BACHELOR OF MEDICAL LABORATORY SCIENCES**

COURSE CODE: BML 422

COURSE TITLE: SYSTEMIC PATHOLOGY

DATE: 19th October 2020

TIME: 8.00 -10.00 AM

INSTRUCTIONS TO CANDIDATES

This examination paper consists of three sections, **A** (Single Best Answer Questions), **B** (Short Answer Questions), and **C** (Long Answer Questions). Answer all questions in ALL the sections.

MMUST observes ZERO tolerance to examination cheating

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

SECTION A: CHOOSE SINGLE BEST ANSWER (20 MARKS)

- Q1. Which of the following is **not true** of arteriosclerosis?
- a) Affects large-to-medium vessels
 - b) Occurs in diabetes, hypertension and aging
 - c) Hyperplastic arteriosclerosis is due to smooth muscle proliferation into concentric (onion skin) wall thickening and luminal narrowing
 - d) Hyaline arteriosclerosis appears pink with glassy wall thickening and luminal narrowing
- Q2. Which of the following is **not true** of Berry aneurysms?
- a) Congenital aneurysm of the circle of Willis
 - b) Associated with adult polycystic disease
 - c) Can burst into subarachnoid haemorrhage
 - d) Presents with mild headache
- Q3. Which of the following is **not true** of varicose veins?
- a) Aggravated by long standing in superficial veins of lower extremities
 - b) Dilated tortuous veins are more common in males than females
 - c) Esophageal varices usually result from portal hypertension
 - d) Haemorrhoids can bleed and stain hard stools with red blood
- Q4. A low grade malignant tumour of endothelial cells that is associated with human herpes virus-8.
- a) Haemangioma
 - b) Kaposi's sarcoma
 - c) Glomus tumour
 - d) Angiosarcoma
- Q5. Which of the following is **not true** of infectious bacterial endocarditis?
- a) Bacterial infection of cardiac valves with vegetations on valve leaflets
 - b) Acute endocarditis is mainly caused by *Staphylococcus aureus*
 - c) High virulence aetiology produce small non-destructive vegetations
 - d) Sub-acute endocarditis is caused by streptococcus viridans group
- Q6. Which of the following is **not true** of cardiomyopathies?
- a) Dilated cardiomyopathy is the most common form
 - b) Hypertrophic cardiomyopathy is also called asymmetrical septal hypertrophy
 - c) Restrictive cardiomyopathy is the uncommon form
 - d) Hypertrophic cardiomyopathy can occur secondary to Chagas disease

- Q7. Which of the following is **not true** of obstructive lung diseases?
- a) Increased resistance to airflow secondary to airway obstruction
 - b) Pulmonary fibrosis
 - c) Asthma
 - d) Empysema
- Q8. Which of the following **is not** a malignant tumour of the liver?
- a) Metastatic tumour to the liver
 - b) Hepatic adenoma
 - c) Hepatocellular carcinoma
 - d) Cholangiocarcinoma
- Q9. Which of the following **is not** a risk factor for cervical carcinoma?
- a) Human papilloma virus-16 and -18
 - b) Human papilloma virus-31 and -33
 - c) Human papilloma virus-6 and -11
 - d) Viral oncogenes-E6 and -E7
- Q10. Which of the following **is not** true about clinical presentation of fibroids?
- a) Amenorrhoea
 - b) Pelvic and back pain
 - c) Abdominal mass
 - d) Infertility
- Q11. Which of the following **is not** a penis pathology?
- a) Balanitis
 - b) Condyloma acuminatum
 - c) Varicocele
 - d) Squamous cell carcinoma
- Q12. Which of the following **is not** a benign neoplasm of the breast?
- a) Fibroadenoma
 - b) Phyllodes tumour
 - c) Carcinoma of the breast
 - d) Intraductal papilloma
- Q13. Which of the following is **not true** regarding prostate cancer?
- a) Incidence increases with age
 - b) It is an adenocarcinoma
 - c) Characterized by glandular and stromal hyperplasia
 - d) Arise frequently in posterior prostate peripheral zone

- Q14. Which of the following **is not** a clinical feature of hyperthyroidism?
a) Weight loss
b) Fatigue and lethargy
c) Diarrhoea
d) Heat intolerance
- Q15. Which of the following **is not** a cause of primary hyperparathyroidism?
a) Parathyroid adenoma
b) Parathyroid hyperplasia
c) Parathyroid carcinoma
d) Malabsorption
- Q16. Which of the following **is not true** of rheumatoid arthritis?
a) Aging or wear and tear of articular cartilage
b) Diffuse proliferative synovitis
c) Hand, wrist, knee and ankle joints mostly involved
d) Occurs more in females than males
- Q17. Which of the following **is not** a cause of chronic viral hepatitis?
a) Hepatitis-E virus
b) Hepatitis-C virus
c) Hepatitis-B virus
d) Hepatitis-D virus
- Q18. Which of the following is **not true** of liver cirrhosis?
a) Hepatic stellate (Ito) cells cause fibrosis
b) Cause hypoalbuminemia
c) Can result from biliary tract disease
d) Acute stage liver disease
- Q19. Which of the following is **not true** of cholesterol stones?
a) Can lead to pancreatitis
b) Incidence increase with age
c) Calcium salts and unconjugated bilirubin are the main components
d) Cholesterol monohydrate is the main component
- Q20. Which of the following islet cell tumors cause hyperinsulinaemia?
a) Insulinoma
b) Gastrinoma
c) Glucagonoma
d) VIPoma

SECTION B: SHORT ANSWER QUESTIONS (40 MARKS)

- List the vasculitis of:
 - Large vessels (2 marks)
 - Medium vessels (3 marks)
 - Small vessels (3 marks)
- State the differences between nephritic syndrome and nephrotic syndrome (8 marks).
- State the aetiologies, gross and microscopic pathology of acute pancreatitis (3, 2, 3 marks).
- Describe hypertension under the following:
 - Classification (2 marks)
 - Pathogenesis of renovascular hypertension (3 marks)

- c) Morphology (3 marks)
- 5. Classify congenital heart diseases as:
 - a) Cyanotic (4 marks)
 - b) Acyanotic (4 marks)

SECTION C: LONG-ANSWER QUESTIONS (60 MARKS)

1. Discuss covid-19 disease as follows:
 - a) Definition (1 mark)
 - b) Aetiology (1 mark)
 - c) Pathogenesis (8 marks)
 - d) Pathology (5 marks)
 - e) Complications (5 marks)
2. Discuss atherosclerosis under the following:
 - a) Modifiable risk factors (5 mark)
 - b) Pathogenesis (10 marks)
 - c) Complicated lesions (5 marks)
3. Compare and contrast the pathology and clinical features of ulcerative colitis and Crohn's disease (20 marks).