



**TECHNICAL UNIVERSITY OF MOMBASA**  
**FACULTY OF APPLIED AND HEALTH SCIENCES**

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**DEPARTMENT OF MEDICAL SCIENCES**

**UNIVERSITY EXAMINATION FOR:**

**BMLS**

**AML 4212: CLINICAL CHEMISTRY II.**

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE:** Pick Date Select Month Pick Year

**Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose Nochoose Sect/Quest. Attempt Choose instruction.

**Circle the correct answer in section A.**

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Section A

1. Which one of the following are liver cells?
  - A. Islets of Langerhans
  - B. Leucocytes
  - C. Hepatocytes
  - D. Livercytes
  - E. Leucocytes
  
2. Which of the following is not a clinical manifestation of liver disorder?
  - A. Icterus
  - B. Jaundice
  - C. Portal hypertension
  - D. Odema
  - E. Hepatitis

3. Which one of the following enzymes will be elevated due to skeletal muscle injury?
  - A. AST
  - B. ALT
  - C. ALP
  - D. GGT
  - E. ACP
  
4. Which of the following is the best parameter for investigating alcoholic liver disease?
  - A. AST
  - B. ALT
  - C. ALP
  - D. GGT
  - E. ACP
  
5. Which of the following statements is true about lipids?
  - A. Are soluble in body water and insoluble in alcohol
  - B. Are transported to the heart by chylomicrons
  - C. A person undertaking the lipid profile test should fast overnight
  - D. Are transported in the blood stream by total protein.
  - E. Are analyzed in the laboratory by Biuret method
  
6. Which of the following cells are known to contribute in the formation of plaque?
  - A. Hepatocytes
  - B. Thrombocytes
  - C. Erythrocytes
  - D. Scavenger
  - E. Leucocytes
  
7. Which one of the following cardiovascular diseases is directly related to lipid disorder?
  - A. Stroke
  - B. Hypertension
  - C. Rheumatic heart disease
  - D. Coronary heart disease
  - E. Cardiomegally
  
8. What name refers to the pain that result from a reduction in the supply of oxygen to heart muscles?
  - A. Artherosclerosis
  - B. Plaque
  - C. Angina pectoris
  - D. Myocardial infarction
  - E. Stroke

9. Which one is a significant step in reducing the risk of death from coronary heart disease?
- A. Reducing serum total cholesterol levels
  - B. Consuming a lot of carbohydrates
  - C. Visiting cardiac clinic regularly
  - D. Consuming a lot of fat rich foods
  - E. Frequent blood checkes
10. In therapeutic drug management, drug dosage.
- A. Must be planned to achieve therapeutic concentration
  - B. Raised within the period of treatment
  - C. Decreased within the period of treatment
  - D. Given with minimal drug analysis
  - E. Given three times a day.
11. Which of the following best describes LDL-C?
- A. High levels causes myocardial infraction.
  - B. Related to a reduction in heart diseases
  - C. Transports cholesterol from the blood stream to the liver
  - D. Referred to as “GOOD CHOLESTEROL”.
  - E. Transported freely in the body
12. Which of the following is a hormonal regulator of calcium and phosphate homeostasis?
- A. Thyroxin
  - B. Estradiol
  - C. Parathyroid
  - D. Testosterone
  - E. Pancreas
13. What is the end product of catecholamine’s metabolism?
- A. Creatinine
  - B. Epinephrine
  - C. Norepinephrine
  - D. Vanylmandelic acid (VMA)
  - E. Urea
14. Which one is a characteristic of conjugated bilirubin?
- A. Protein bound
  - B. Soluble in water
  - C. Found free in plasma
  - D. Indirect bilirubin
  - E. Coagulates on heating

15. Which method can be used for qualification of serum protein?
- A. Electrophoresis
  - B. Benedict alkaline reduction test
  - C. Gremlin's nitric acid ring test
  - D. Biuret's test
  - E. Jeffs reaction
16. Which one of the following is a product of bilirubin coupled to diazosulphuric acid?
- A. Biliverdin
  - B. Azobilirubin
  - C. Stercobilin
  - D. Urobilin
  - E. All of the above
17. Most of plasma thyroxin (T4) is:
- A. Free
  - B. Bound to globulin
  - C. Bound to albumin
  - D. Bound to cholesterol
  - E. Incomplete
18. Which one of the following is not secreted by the anterior pituitary gland?
- A. ACTH
  - B. TSH
  - C. VMA
  - D. FSH
  - E. None of the above
19. Which of the following areas of the body produce calcitonin hormone in human?
- A. Thyroid
  - B. Parathyroid
  - C. Anterior pituitary
  - D. Posterior pituitary
  - E. Pancreas
20. Which of the following is the most potent of the biologically active androgens?
- A. Testosterone
  - B. Progesterone
  - C. Aldosterone
  - D. Oestrogen
  - E. FSH

21. Which of the following areas of the body results to pheochromocytoma when in hyper function state.
- A. Islets of Langerhans
  - B. Adrenal cortex
  - C. Adrenal medulla
  - D. Pituitary
  - E. Pancreas
22. In which group of hormones does adrenocorticotropic (ACTH) fall?
- A. Glycoprotein
  - B. Steroid
  - C. Polypeptide
  - D. Polysaccharide
  - E. Amines
23. One method of measurement of trypsin activity involves:
- A. Phosphatase analysis
  - B. Occult blood detection
  - C. Faecal fat analysis
  - D. Liquefaction of gelatin
  - E. None of the above
24. Which one of the following refers to free acidity in gastric analysis?
- A. Hydrochloric acid
  - B. Lactic acid
  - C. Butyric acid
  - D. Acetic acid
  - E. Nitric acid
25. What may be the cause of “coffee grounds” appearance which is a description of digested blood in the gastric juice.
- A. Hunger
  - B. Thalassaemia
  - C. Inter-gastric bleeding
  - D. Extreme thirst
  - E. Fever
26. What is a result of conversion of pepsinogen in the presence of HCL?
- A. Pepsin
  - B. Rennin
  - C. Lipase
  - D. Weak acid
  - E. Insulin

27. Which one of the following is not a normal content of gastric juice?
- A. Enzymes
  - B. Mucus
  - C. Intrinsic factor
  - D. Blood
  - E. All of the above
28. Which one of the following is a parenteral structure of the gastric mucosa?
- A. Insulin
  - B. Oxytocin
  - C. Coffee
  - D. Histamine
  - E. Hormone
29. Which one of the following is not a disorder of amino acid metabolism?
- A. Maple syrup urine disease
  - B. Multiple myeloma
  - C. Homocystinuria
  - D. Nonketotic hyperglycinemia
  - E. Phenylketonuria
30. Which one of the following is not an essential amino acid?
- A. Leucine
  - B. Cysteine
  - C. Lysine
  - D. Valine
  - E. Histidine

## Section B

31.

(A) Describe two male infertile and 3 female infertile conditions. **(10marks)**

(B) Briefly explain the cardiovascular disease. **(10marks)**

32.

(A) Briefly describe the Liver Function Tests **(10marks)**

(B) List functions of five amino acids **(5marks)**

(C) Define the following terminologies **(5marks)**

- (i) Drug
- (ii) Monitoring
- (iii) Peak level
- (iv) Toxicology
- (v) Toxidromes