



# TECHNICAL UNIVERSITY OF MOMBASA

*Faculty of Applied and Health Sciences*

**DEPARTMENT OF MEDICAL SCIENCES**

CERTIFICATE IN MEDICAL LABORATORY SCIENCES  
(CMLS 13M)

## **AML 1140 : HUMAN ANATOMY AND PHYSIOLOGY**

**SPECIAL/SUPPLEMENTARY: EXAMINATIONS**

**SERIES: OCTOBER 2013**

**TIME: 2 HOURS**

### **INSTRUCTIONS:**

You should have the following for this examination

- *Answer booklet*

This paper consists of **TWO** sections.

Answer all questions in **Section A** and **B**.  $\frac{1}{2}$  marks deducted for any wrong answer in **Section A**.

*This paper consists of 7 PRINTED pages*  
**SECTION A (40MARKS)**

1. Ciliated epithelial cells are mostly found in
  - a) Skin
  - b) Lungs
  - c) Mucus membrane
  - d) None of the above
  
2. Which of these is an organ
  - a) Blood
  - b) Mitochondrion
  - c) Liver
  - d) Epithelial
  
3. When you move your arm to pick a pen which muscles are involved
  - a) General muscles
  - b) Cardiac muscles
  - c) Skeletal muscles
  - d) Smooth muscles
  
4. Which of the following is/are visceral organ(s) ?
  - a) Skin
  - b) Eye
  - c) Spleen
  - d) Ear
  
5. The primary layers of the skin are
  - a) Hypodermis
  - b) Epidermis
  - c) Corneum
  - d) Dermis
  
6. The following cells are mostly found on epidermis layer of the skin except
  - a) Keratinocytes
  - b) Hepatocytes
  - c) Merkel cells
  - d) Melanocytes
  
7. Which of these hormones is/are not pancreatic hormones
  - a) Renin
  - b) Erythropoietin
  - c) Glucagon
  - d) Insulin
  
8. Which of these hormones are not produced by hypothalamus
  - a) Antidiuretic hormone
  - b) Progesterone
  - c) Triiodothyronine
  - d) Thyrotrophic Releasing hormone

9. The following are function of prolactin hormones
- Inhibit lactation during pregnancy
  - Stimulates milk production from mammary glands
  - Mediates sexual gratification
  - Suppress immune towards the human embryo
10. Upper respiratory tract include the following organs except.
- Nasal cavity
  - Tracheae
  - Nostril
  - Larynx
11. Digestion involves the following phases except
- Oral phase
  - Intestinal phases
  - Gastric phase
  - Cephalic phase
12. The following organs is/are not involved in food digestion
- Spleen
  - Pancreas
  - Gastric
  - Liver
13. Which of the following enzymes is produced by pancreases
- Amylase
  - Maltase
  - Trypsin
  - Pepsin
14. Digestion of the following feeds starts in the mouth
- Protein
  - Carbohydrates
  - Fats
  - None of the above
15. Human cardiovascular circulation has been classified into
- Lymph circulation
  - Pulmonary circulation
  - Blood
  - Systemic circulation
16. Which of the following fluids moves through circulatory system
- Urine
  - Blood
  - Sweat
  - Lymph

17. Components of nervous tissue include
- Tendons
  - Brain
  - Spinal cord
  - Muscles
18. Which of the following is/are not cell organelles
- Cell membrane
  - Cytoplasm
  - Mitochondrion
  - Ribosome
19. Bone tissues include the following except
- Endosteum
  - Corneum
  - Marrow
  - Periosteum
20. Dentists are found in
- Alia cells
  - Neuron
  - Osteocytes
  - Erythrocytes
21. Appendicular skeleton of adult human has bones
- 80 bones
  - 126 bones
  - 206 bones
  - 270 bones
22. Which of the following is NOT an axial skeleton bone
- Skull
  - Ribs
  - Pelvic girdle
  - Sternum
23. Which of the following systems give the body its basic structure
- Circulatory system
  - Respiratory system
  - Musculoskeletal system
  - Nervous system
24. Glands are mostly found in \_\_\_\_\_
- Circulatory system
  - Reproductive system
  - Endocrine system
  - Immune system

25. Protein synthesis in the cell is mostly carried out by
- Mitochondrion
  - Smooth endoplasmic Reticulum
  - Ribosomes
  - Golgi bodies
26. Microscopic study of tissue organisation is called
- Physiology
  - Cross anatomy
  - Histology
  - Cytology
27. All animals have \_\_\_\_\_ basic types of tissues
- 2
  - 3
  - 5
  - 4
28. Tight joints are found on
- Nerve tissue
  - Epithelial tissue
  - Muscle tissues
  - Bone tissues
29. Which organ of the respiratory system contains the vocal cords
- Pharynx
  - Larynx
  - Trachea
  - Bronchus
30. A group of organs performing the same function is known as
- System
  - Tissue
  - Vessels
  - None of the above

## **SECTION B**

1. (a) Differentiate between heart and liver **(6marks)**
- (b) State FOUR functions of the liver **(4marks)**
- (c) Name FIVE organelles and state their function **(10marks)**
  
2. Write short notes on
- (i) Nervous system **(5marks)**
- (ii) Muscles **(5marks)**
- (iii) Appendicular skeleton **(5marks)**
- (iv) Axial skeleton **(5marks)**
  
3. Explain in details processes involved in digestion of food. **(20marks)**