

091905T4HRI
HEALTH RECORDS AND INFORMATION TECHNOLOGY LEVEL 5
HE/OS/HR/CC/01/5/A
APPLY HUMAN ANATOMY AND PHYSIOLOGY
NOV/DEC 2023



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

WRITTEN ASSESSMENT

Time: 3 hours

INSTRUCTIONS TO CANDIDATES

1. This paper has three sections **A**, **B** and **C**.
2. You are provided with a separate answer booklet.
3. Marks for each question are as indicated.
4. Do not write on the question paper.

This paper consists of 8 printed pages
Candidates should check the question paper to ascertain that all
pages are printed as indicated and that no questions are missing

SECTION A: (20 MARKS)

Answer ALL questions in this section.

Each question is 1 mark

1. Processing of light rays into light impulses occurs in the;
 - A. Uveal tract
 - B. Blind spot
 - C. Retina
 - D. Vitreous body
2. Pharyngotympanic tube connects;
 - A. Inner ear and nasopharynx
 - B. Middle ear and nasopharynx
 - C. Middle ear and laryngopharynx
 - D. Inner ear and laryngopharynx
3. The skull bone that articulates with temporal bone to form the only movable joint of the skull is;
 - A. Zygomatic bone
 - B. Mandible bone
 - C. Maxilla bone
 - D. Sphenoid bone
4. The muscles involved during weight lifting include;
 - A. Temporalis
 - B. Deltoid
 - C. Biceps
 - D. Psoas iliacus
5. The lowest level of structural organization of the human body is;
 - A. Chemical level
 - B. Cell level
 - C. Tissues level
 - D. Organ level
6. The structural and functional unit of life is;
 - A. A cell.
 - B. An organ.

- C. The organism.
 - D. A molecule
7. The ion reabsorbed in exchange for sodium is;
- A. Calcium
 - B. Chloride
 - C. Magnesium
 - D. Potassium
8. Which structure within the cell produces ATP (adenosine triphosphate)?
- A. The mitochondria
 - B. The nucleus
 - C. Peripheral proteins
 - D. The endoplasmic reticulum
9. The spinal cord terminates at;
- A. The lower boarder of the 1st lumbar vertebra
 - B. The lower boarder of the 2nd lumbar vertebra
 - C. The lower boarder of the 3rd lumbar vertebra
 - D. The lower boarder of the 4th lumbar vertebra
10. The volume of air that can be exhaled during forced breathing in addition to tidal volume is;
- A. Residual volume
 - B. Vital capacity
 - C. Expiratory reserve volume
 - D. Total lung capacity
11. The When structure and function is coordinated, the body gets a relative stability. This phenomenon is called;
- A. Anatomical integrity
 - B. Physiological stability
 - C. Homeostasis
 - D. Respiration
12. The outer layer of the heart is the;
- A. Myocardium
 - B. Endocardium

- C. Pericardium
 - D. Pleura
13. The maturation of the thymus and other lymphoid tissue is stimulated by;
- A. Thymosin
 - B. Erythropoietin
 - C. Thrombopoietin
 - D. Thromboxanes
14. Mucosa-associated lymphoid tissue (MALT) includes;
- A. Bone marrow
 - B. Spleen
 - C. Tonsils
 - D. lymph node
15. The abdominal cavity contains the;
- A. Heart and lung
 - B. Reproductive organs and urinary bladder
 - C. Liver, spleen and stomach
 - D. Urinary bladder and lungs
16. A group of similar cells that has a similar embryological origin and operates together to perform a specialized activity is called;
- A. Organ
 - B. Tissue
 - C. System
 - D. Organ system
17. The structure that closes and seals off the lower airway during swallowing is;
- A. Alveoli
 - B. Epiglottis
 - C. Larynx
 - D. Uvula

18. Which of the following is a structural, fibrous protein found in the dermis?

- A. Collagen
- B. Heparin
- C. Lipocyte
- D. Melanin

19. The number of chromosomes in the human cell is;

- A. 44
- B. 46
- C. 48
- D. 50

20. Proteins are made up of building blocks called;

- A. Genes
- B. Starch
- C. Amino acids
- D. Carbohydrates

SECTION B: (40 MARKS)

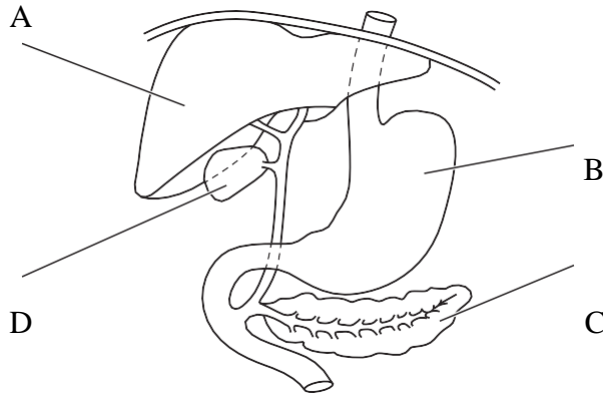
Answer ALL questions in this section.

21. Dr. Mark is preparing to do a presentation on the levels of human body organization.
Identify any FOUR levels of human body organization that Dr. Mark should talk about. (4 Marks)
22. Muscles help in producing movement. Name THREE types of muscles. (3 marks)
23. The skeletal system is divided into two.
- a) Give any TWO organs found in the axial region of the skeletal system. (2 Marks)
 - b) State any THREE functions of the skeletal system. (3 Marks)
24. Draw a well labeled diagram of the human cell. (4 Marks)
25. Distinguish between Vasoconstriction and Vasodilation. (4 Marks)
26. Lymphatic system plays a key role in human body. Identify any FOUR organs of the lymphatic system. (4 Marks)
27. A patient visits a hospital with the following symptoms-
- i. Joint pain
 - ii. Inflammation in and around the joints
 - iii. Restricted movement of the joints
- a) Suggest a probable diagnosis for the above-mentioned symptoms (2 Marks)
 - b) Under which body system can the above disorder be classified? (2 Marks)
28. Calcium is one of the electrolytes found in the human body. Outline any FOUR functions of calcium. (4 Marks)
29. State any FOUR functions of water in the body. (4 Marks)
30. Identify any FOUR parts of a male reproductive system (4 Marks)

SECTION C: (40 MARKS)

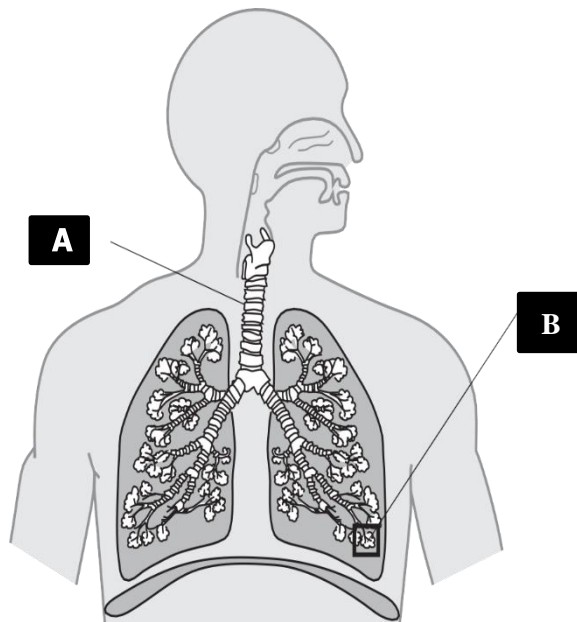
Answer any TWO questions in this section

31. The diagram below represents part of the human digestive system and associated organs.



- a) Name the parts labeled A, B, C and D (4 Marks)
- b) Explain the functions of the parts named in (a) above (8 Marks)
- c) Describe FOUR adaptations of the lumen (small intestines) to its function in the gastrointestinal tract (8 Marks)

32. The diagram below represents the human respiratory system.



- a) Name the structures labeled A and B (2 Marks)
 - b) Describe FOUR properties of structure B that enables it carry out its respiratory functions. (8 Marks)
 - c) Apart from A and B, name any other FOUR parts of a human respiratory system (4 Marks)
 - d) Describe the functions of the parts you have named in c above (6 Marks)
33. Circulatory system plays vital role in human body.
- a) Name any FIVE parts of the circulatory system (5 Marks)
 - b) Describe FIVE adaptations of the heart to its functions (10 Marks)
 - c) Identify any FIVE diseases of the circulatory system (5 Marks)

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