

091205T4PTT

PERIOPERATIVE THEATRE TECHNOLOGY

HE/OS/TT/CC/01/5/A

DEMONSTRATE KNOWLEDGE OF HUMAN ANATOMY AND PHYSIOLOGY

July/ August 2024



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

WRITTEN ASSESSMENT

3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of two sections; A and B
2. Answer **ALL** the question as guided in each section
3. Marks for each question are as indicated in the brackets
4. You are provided with a separate answer booklet to answer the questions
5. Do not write in this question paper

This paper consists of THREE (3) 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: (40 MARKS)

Answer ALL questions from this section.

1. Anterior pituitary gland is responsible for producing various hormones. Briefly outline any THREE hormones produced by the anterior pituitary gland. (3 Marks)
2. Digestive salts have several functions. Outline any FOUR functions of the digestive salts. (4 Marks)
3. The presence of various types of cartilages on the larynx is very important. State THREE cartilages that are found on the larynx and their functions. (3 Marks)
4. Surfactants from the lungs play a very crucial role in human live. Briefly outline FOUR functions of the surfactants produced by the lungs. (4 Marks)
5. The vestibule makes up the middle portion of the internal ear that contacts the stapes. Highlight the THREE components of the vestibule. (3 Marks)
6. Parasympathetic stimulation affects the eyes in several ways. Outline THREE effects of the parasympathetic stimulation on the eyes. (3 Marks)
7. An action potential propagates along the cell membrane of an axon until it reaches the terminal button. State TWO types of action potential transmission along a neuron. (2 Marks)
8. Lymph is a clear to slightly yellowish fluid that circulates through the lymphatic system. Identify THREE components lymph. (3 Marks)
9. There are three types of muscle tissue within the human body. Outline the THREE types of muscle tissues. (3 Marks)
10. Nucleotide is a molecule that is the basic building block of the nucleic acids DNA and RNA. State the TWO components of nucleotides. (2 Marks)
11. Fats play several vital roles in the human body, contributing to overall health and functionality. Outline THREE functions of fats in the human body. (3 Marks)
12. The penis serves several crucial functions in the male reproductive and urinary systems. State TWO primary function of the penis. (2 Marks)
13. The three main types of joints are fibrous joints, cartilaginous joints, and synovial joints. Highlight TWO main functions of the synovial fluid in synovial joints. (2 Marks)
14. The abdominal cavity contains several vital organs and structures. Name THREE digestive organs in the abdominal cavity. (3 Marks)

SECTION B: (40 Marks)

*Answer any **THREE** questions in this section.*

15. The control centers in the brain play a very important role in the regulation of the physiological parameters and keeping them within the normal range.
- a) Giving examples describe the TWO feedback mechanisms. (10 Marks)
 - b) Explain FIVE levels of organization in the human body. (10 Marks)
16. The function of the respiratory system is exchange of gases between the body and the environment.
- a) Explain FIVE structures which are involved in the respiratory system and their functions. (10 Marks)
 - b) Describe the process of inhalation. (10 Marks)
17. The cardiovascular system, also known as the circulatory system, is a complex network of organs and vessels responsible for circulating blood throughout the body.
- a) Draw a well labeled cross sectional diagram of the heart. (4 Marks)
 - b) Explain the THREE main types of blood cells in the human body. (6 Marks)
 - c) Describe the blood flow through the heart. (10 Marks)
18. The human kidney is a very important organ in the urine formation process.
- a) Draw a well labeled diagram of the functional unit of the kidney. (4 Marks)
 - b) Explain the urine formation process. (12 Marks)
 - c) Outline the composition of urine. (4 Marks)

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