



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL DIPLOMA

IN

ENVIRONMENTAL HEALTH

MODULE: Human Anatomy and Physiology

PAPER NO: 605/23/M02

DURATION: 3 Hours

JUNE 2026 EXAMINATION

REQUIREMENTS

Pencil

INSTRUCTIONS TO CANDIDATES

Answer any five (5) questions.

This paper consists of 3 printed pages.

QUESTION 1

- a) Define the following terms as used in human anatomy and physiology:
- i) Anatomy (2 marks)
 - ii) Physiology (2 marks)
 - iii) Mitosis (2 marks)
 - iv) Meiosis (2 marks)
- b) Briefly describe, with the aid of a large and clear diagram, the phases of the cell cycle. (6 marks)
- c) Explain three (3) ways in which cancer cells gain the ability to divide uncontrollably. (6 marks)

QUESTION 2

- a) Explain how the ABO blood typing influences the management of patients undergoing surgeries that require blood transfusions. (4 marks)
- b) Describe, with the aid of a fully labelled graph, the main phases of the cardiac action potential. (16 marks)

QUESTION 3

- a) State and describe the five (5) types of bones in the human body. (10 marks)
- b) Discuss the theoretical mechanisms through which acupuncture is believed to alleviate pain and promote healing. (10 marks)

QUESTION 4

- a) The pancreas is both an endocrine and an exocrine gland. Briefly explain how it plays these roles. (6 marks)
- b) Discuss the functions of hormones (8 marks)
- c) Briefly describe the three (3) general properties of muscles. (6 marks)

QUESTION 5

- a) Explain the functions of the lymphatic system. (14 marks)
- b) Differentiate between endocytosis and exocytosis (6 marks)

QUESTION 6

- a) Illustrate with a large, clear and well labelled diagram, the anatomy of the human skin. (8 marks)
- b) State and explain four (4) physiological aspects of the human skin. (8 marks)
- c) Explain how gaseous exchange occurs between the alveoli and the blood capillaries. (4 marks)

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