

0565/2/2022
H. BIO O/L

SOUTH WEST REGIONAL MOCK EXAMINATION

GENERAL EDUCATION

**THE TEACHERS' RESOURCE UNIT (TRU)
IN COLLABORATION WITH**

THE REGIONAL INSPECTORATES OF PEDAGOGY AND

THE SUBJECT TEACHERS' ASSOCIATIONS (STA)

TUESDAY 29/03/2022 (Afternoon)

ORDINARY LEVEL

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| Subject Title | HUMAN BIOLOGY |
| Paper Number | Paper 2 |
| Subject Code Number | 0565 |

TWO HOURS

INSTRUCTIONS TO CANDIDATES:

Answer THREE questions from Section A and TWO questions from Section B

All questions carry 20 marks each. For your guidance, the approximate mark for each part of a question is indicated in brackets.

You are reminded of the necessity for good English and orderly presentation in your answers.

In calculations, you are advised to show all the steps in your working, giving your answer at each stage.

Calculators are NOT allowed

SECTION A

- 1) a) Briefly describe the levels of organization within the human body and give an example of each. (8 marks)
- b) Draw a large and neatly labelled diagram of a typical animal cell as seen under the electron microscope. (8 marks)
- c) In which four ways do humans differ from other primates? (4marks)
- 2) a) State the functions of the human skeletal system. (5 marks)
- b) Describe how movement is brought about at the elbow joint. (8 marks)
- c) In tabular form distinguish between
- i) Cartilage and bone. (5 marks)
 - ii) Tendon and ligaments. (2 mark)
- 3) a) Draw a large and neatly labelled diagram to show the transverse section through the human eye. (8 marks)
- a) State the causes and corrective measures for the following eye defects:
- i) Myopia. (3 marks)
 - ii) Presbyopia. (2 marks)
 - iii) Astigmatism. (2 marks)
- b) In tabular form differentiate between nervous and endocrine (hormonal) control mechanisms. (5 marks)
- 4) a) Define each of the following terms
- i) Excretion
 - ii) Osmoregulation
 - iii) Homeostasis (2,2,2 marks)
- b) Draw a large and neatly labelled diagram of the longitudinal section through the human kidney. (6 marks)
- c) Describe the process of urine formation in the kidney nephron. (8 marks)
- 5) a) Define each of the following terms as used in genetics:
- i) Phenotype. (2 marks)
 - ii) Co-dominance. (2 marks)
 - iii) Mutation. (2 marks)
- b) In humans red-green colour-blindness is inherited as an X-linked recessive trait. A woman with normal vision but whose father is colourblind marries a man with normal vision. Determine the genotypes, phenotypes and probabilities of their offspring. (8 marks)
- c) Describe how a human female carries out birth. (6 marks)

SECTION B

- 6)
- a) Define the term immunity. (2 marks)
 - b) In tabular form distinguish between active immunity and passive immunity (4 marks)
 - c) State six physical or chemical barriers that prevent the entry of pathogenic micro-organisms into the human body (6 marks)
 - d) State the causative agent, a mode of transmission and two control measures of
 - i) Malaria, (4 marks)
 - ii) COVID-19 Pandemic. (4 marks)
- 7) a) State the importance of a house to humans. (4 marks)
- a) In designing and constructing a house, what measures would you put in place in order to:
 - i) Prevent the entry of rats? (5 marks)
 - ii) Provide adequate ventilation? (7 marks)
 - b) State the undesirable effects of dumping untreated sewage into a water body(4 marks)
- 8) a) Define the term pollution. (2 marks)
- b) State the source and two harmful effects of the following pollutants
 - i) Chlorofluorocarbons. (3 marks)
 - ii) Sulphur dioxide. (3 marks)
 - iii) Crude oil, (3 marks)
 - iv) Carbon monoxide . (3 marks)
 - c) With an illustrated diagram only, show how carbon circulates in an ecosystem. (6marks)
- 9) a) State FIVE long-term effects of excessive alcohol consumption to the human body. (5 marks)
- a) What roles do the following institutions play in a community:
 - i) Antenatal clinics (5 marks)
 - ii) Psychiatrics (3 marks)
 - iii) Leprosaria (3 marks)
 - b) State FOUR qualities of a good hospital (4 marks)

THE END