GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

0565 Human Biology 2

JUNE 2023 **ORDINARY LEVEL**

Subject Title	**Human Biology**
Paper No.	**2**
Subject Code No.	**0565**

Two and a half hours

You are required to answer FIVE questions, choosing THREE from Section A and TWO from Section B. All the questions carry equal marks and marks allocated to parts of questions are indicated.

Extra questions answered from each section shall NOT be marked.

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

Turn Over

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SECTION A

Answer THREE questions from this Section

1. (a) Define the following terms giving an example in each case:
   (i) Cell (ii) Tissue. **(3, 3 marks)**
   (b) Describe the structure of the following muscular tissues;
   (i) Skeletal muscle (ii) Smooth muscle (iii) Cardiac muscle. **(3, 3, 3 marks)**
   (c) In tabular form, distinguish between mitosis and meiosis. **(5 marks)**

Total= (20 marks)

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2. (a) Define the following terms:
   (i) Ligament (ii) Tendon. **(2, 2 marks)**
   (b) Draw and label the hip joint. **(5 marks)**
   (c) Give six functions of the human skeleton. **(6 marks)**
   (d) State five factors that influence healthy bones and muscles development in humans. **(5 marks)**

Total= (20 marks)

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3. (a) Draw and label the transverse section of the human ear. **(8 marks)**
   (b) List two ear defects in humans and state a cause for each. **(4 marks)**
   (c) Describe the sequence of events that occur in the body when someone accidentally touches a hot iron **(8 marks)**

Total = (20 marks)

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4. (a) What are the characteristics of a good respiratory surface? **(4 marks)**
   (b) Describe the mechanism of gaseous exchange in humans. **(12 marks)**
   (c) State four differences between aerobic and anaerobic respiration. **(4 marks)**

Total= (20 marks)

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5. (a) Draw a large and neatly labelled diagram of the male gamete (sperm cell) **(6 marks)**
   (b) State four female secondary sexual characteristics. **(4 marks)**
   (c) Define the following terms as used in genetics, giving an example in each case;
   (i) Genotype (ii) Phenotype. **(2, 2 marks)**
   (d) A woman whose blood group was O married a man with blood group B.
   (i) Explain using appropriate genetic symbols and diagrams, how it is possible for the couple to have a child with blood group O.
   (ii) What is the probability or chance of their first child being blood group B? **(5 , 1 marks)**

Total = (20 marks)

SECTION B

Answer TWO questions from this Section

6. (a) What do you understand by the following terms:
   (i) Eutrophication
   (ii) Food web
   (iii) Commensalism? **(2, 2, 2 marks)**
   (b) State eight effects of bush burning on the environment. **(8 marks)**
   (c) In tabular form, distinguish between a food chain and a food web. **(6 marks)**

Total= (20 marks)

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7. (a) What is sewage? **(2 marks)**
   (b) State the qualities of a good pit latrine. **(6 marks)**
   (c) List the advantages of a continuous water supply service. **(5 marks)**
   (d) What measures can be used in a community to control air pollution? **(7 marks)**

Total= (20 marks)

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8. (a) What are the qualities of a good hospital? **(6 marks)**
   (b) State the benefits of the following to the community?
   (i) Playgrounds (ii) Religious organisations. **(6, 4 marks)**
   (c) How is prostitution harmful to the society? **(4 marks)**

Total= (20 marks)

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9. (a) Why do we preserve food? **(5 marks)**
   (b) How is food preserved by (i) Smoking (ii) Pasteurization? **(3, 2 marks)**
   (c) How can food be contaminated at home? **(4 marks)**
   (d) Name three examples of food-borne diseases and their respective causative agents. **(3, 3 marks)**

Total = (20 marks)

GO BACK AND CHECK YOUR WORK