



JUNE XXXX

INTERMEDIATE LEVEL

Subject Title	NATURAL SCIENCE 2
Subject Code No.	5050
Paper No.	TWO

Duration: 2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions. Answer any FIVE questions. All questions carry equal marks. Start each question on a new page. Number your work clearly. You are reminded of the necessity for good English and orderly presentation in your answers.

Turn Over

- 1) (a) Give the functions of the under mentioned organs in the reproductive system of mammals
- | | |
|---------------------|----------|
| i) Uterus | (2marks) |
| ii) Placenta | (2marks) |
| iii) Testes | (2marks) |
| iv) Cowper's gland. | (2marks) |
- (b) Differentiate between identical and fraternal twins. (3marks)
- (c) List **FIVE** female reproductive hormones. (5 marks)
- (d) List **TWO** contraceptive methods in males and **TWO** contraceptive methods in females. (4 marks)
- Total (20 marks)**
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- 2) (a) Define the term **DIGESTION** (2 marks)
- (b) Make a large labelled diagram of the human digestive system (9 marks)
- (c) How is the ileum adapted to carry out its functions? (5 marks)
- (d) Give **FOUR** types of teeth in mammals. (4 marks)
- Total (20 marks)**
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- 3) (a) What do you understand by the term double circulation ? (4 marks)
- (b) Draw a large labelled diagram of the human heart. (4 marks)
- (c) Give **FOUR** functions of blood. (4 marks)
- (d) Give **TWO** differences between arteries and veins. (4 marks)
- (e) State **TWO** conditions necessary for effective blood transfusion. (2 marks)
- Total (20 marks)**
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- 4) (a) Define the following terms :
- | | |
|-----------------------------|-----------|
| (i) Breathing | (2 marks) |
| (ii) Aerobic respiration | (2 marks) |
| (iii) Anaerobic respiration | (2 marks) |
- (b) Describe the mechanism by which air is taken in and out of the lungs of a mammal. (8 marks)
- (c) Give the differences between respiration and photosynthesis. (4 marks)
- (d) How are both processes beneficial to man? (2 marks)
- TOTAL (20 marks)**
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- 5) (a) (i) What is matter? (2 marks)
- (ii) List the **THREE** states of matter. (3 marks)
- (iii) What is the main difference between the **THREE** states of matter? (1 mark)
- (iv) Classify the following under the three states of matter; stream, common salt, paper, oxygen, palm oil and glycerine. (3 marks)
- (v) Which method of separation is best used to separate a mixture of chalk particles and water? (1 mark)
- (b) (i) Define and state the S.I units of
- | | |
|-------------|-----------|
| (A) Density | (2 marks) |
| - (B) Speed | (2 marks) |

- (ii) 200cm² of kerosene is found to have a mass of 160g.
Calculate the density of the kerosene (2 marks)
- (iii) Distinguish between a physical change and chemical change. (2 marks)
- (iv) List **TWO** effects of heat on material. (2 marks)

TOTAL (20 marks)

- 6) a) List **TWO** tissues that form the structure of the skeleton (2 marks)
- b) Explain the importance of cartilage on the backbone and the S-shaped structure of the backbone. (4 marks)
- c) State the functions of the skeleton. (6 marks)
- d) Why is the bone considered a living tissue? (4 marks)
- e) Write short notes on Tendons and Ligaments. (4 marks)

TOTAL (20 marks)

- 7) a) What is immunity? (2 marks)
- b) Define the following:
- i) Immunization (2 marks)
 - ii) Vaccination. (2 marks)
 - iii) Vaccine. (2 marks)
 - iv) Antigen. (2 marks)
- c) Differentiate between:
- i) Natural Passive Immunity and Artificial Passive Immunity. (5 marks)
 - ii) Natural Active Immunity and Artificial Active Immunity. (5 marks)

TOTAL (20 marks)
