

(INTERNAL CANDIDATES)

Time: 2 hours

Marks: 60

An extra 10 minutes will be given to you so that you complete your particulars on the Answer Booklet before you start writing.

Instructions to Candidates

- 1 Pull out the Answer Booklet from the middle of the question paper.
- 2 Write your name, examination number and school / centre name on the Answer Booklet.
- 3 Write your answers in the spaces provided in the Answer Booklet.
- 4 Answer all the questions.

Information to Candidates

Cell phones are not allowed in the examination room.

Calculators are not allowed in the examination room.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.



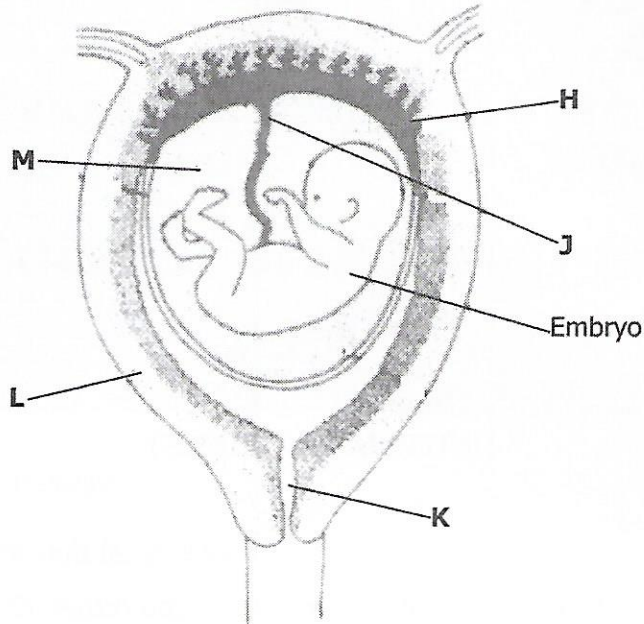
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1 THE HUMAN BODY

The diagram below shows a stage in the development of a human embryo.



- (a) Identify the parts labelled **H** and **J**. [2]
- (b) Explain the functions of the parts labelled **K** and **L**. [2]
- (c) What term is given to the period in months or days, from the time of fertilization up to the time of birth? [1]
- (d) Suggest **one** important function of the fluid labelled **M**. [1]

Total = 6 marks

2 HEALTH

The list below shows different types of foods .

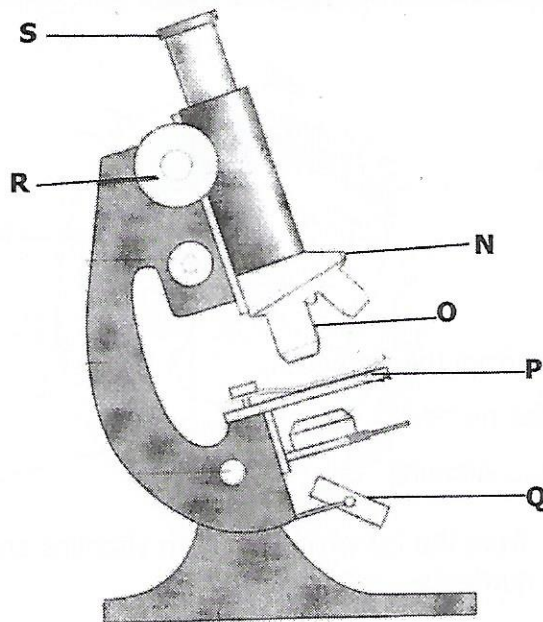
- 1** Banana
- 2** Orange
- 3** Chicken
- 4** Cassava

- (a)** Identify a food from the list which;
- (i)** Provides proteins
 - (ii)** Provides vitamins [2]
- (b)** Select a food, from the list which has both vitamins and carbohydrate nutrients. [1]
- (c)** From the list, identify **one** food which can be used to prevent.
- (i)** Kwashiorkor
 - (ii)** Scurvy. [2]
- (d)** Apart from a good balanced diet, what else should a mother do to ensure good growth of a child between the ages of 1 and 5 years? [1]

Total = 6 marks

3 PLANTS AND ANIMALS

The diagram below shows the components of a compound microscope.



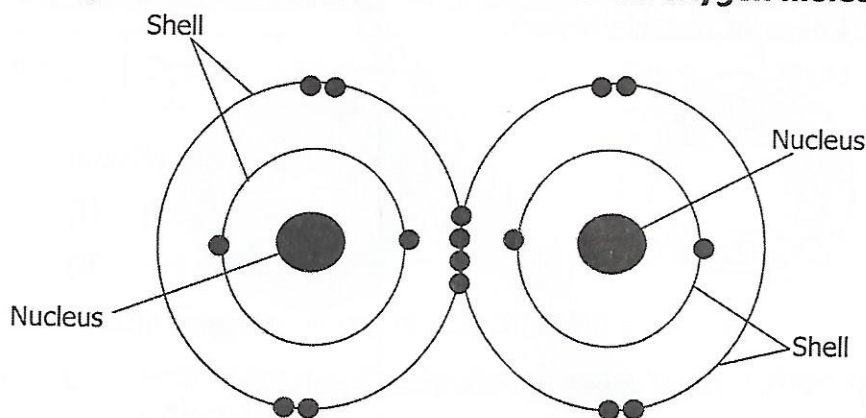
- (a) Identify the part labelled **P**. [1]
- (b) Which labelled part on the microscope;
- (i) magnifies the image of the specimen?
 - (ii) brings the image of the specimen into focus when turned? [2]
- (c) Give the function of the part labelled **Q**. [1]
- (d) Give **one** example of a specimen which is best seen under the microscope. [1]
- (e) Suggest **one** simple device used in place of a microscope. [1]

Total = 6 marks



4 MATERIALS AND ENERGY

The diagram below shows the structure of an oxygen molecule.



Oxygen molecule

- (a) State the particles found in the,
- (i) nucleus,
 - (ii) shells. [2]
- (b) From the molecular structure above, how many electrons are being shared in order for the atoms to combine and form a molecule. [1]
- (c) Using the same principle draw a molecule of nitrogen gas. **Note:** nitrogen atom has 7 electrons. [2]
- (d) Explain the difference between an atom and a molecule. [1]

Total = 6 marks

5 MATERIALS AND ENERGY

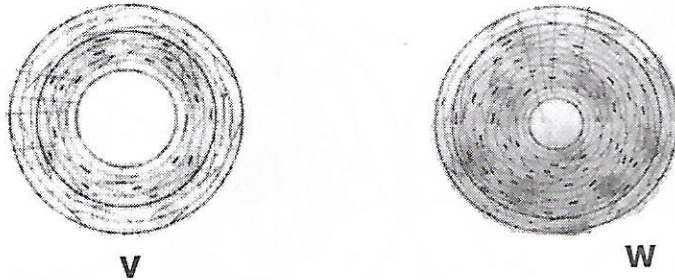
Two objects T and U with mass 30g were placed in mercury of density 13.6 kg/cm^3 . Object T displaced 2 cm^3 of mercury while object U displaced 1.5 cm^3 of mercury.

- (a) Calculate the density of object T. [2]
- (b) (i) Did object U sink or float in the mercury? [2]
(ii) Give a reason for your answer.
- (c) Explain why two objects having the same mass displaces different amounts of mercury. [1]
- (d) What makes vessels like ship float on water? [1]

Total = 6 marks

6 THE HUMAN BODY

The diagrams below show two blood vessels **V** and **W** cut open to show thickness of muscle layers.

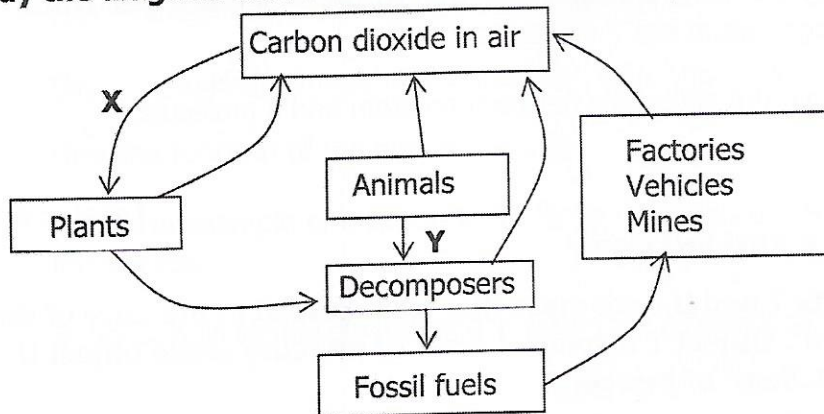


- (a) (i) Which blood vessel represents an artery? [2]
- (ii) Give a reason for your answer in (a) (i) above. [2]
- (b) Apart from the reason you have given in (a) (ii), what other characteristics make the two blood vessels different. [2]
- (c) Explain why blood vessel **W** has a thicker layer of muscles compared to blood vessel **V**. [1]
- (d) In the diagram, identify the blood vessel that may contain valves [1]

Total = 6 marks

7 THE ENVIRONMENT

Study the diagram below which shows carbon cycle in the biosphere.



- (a) From the diagram, name the process marked **X** and **Y**. [2]
- (b) Give **one** example of:
 - (i) Decomposers
 - (ii) Fossil fuels [2]
- (c) Name **one** activity **not** in the diagram which releases carbon dioxide to the air. [1]
- (d) In terms of oxygen cycle, explain why it is very important to plant a lot of trees. [1]

Total = 6 marks

8 PLANTS AND ANIMALS

The table below shows a list of animals.

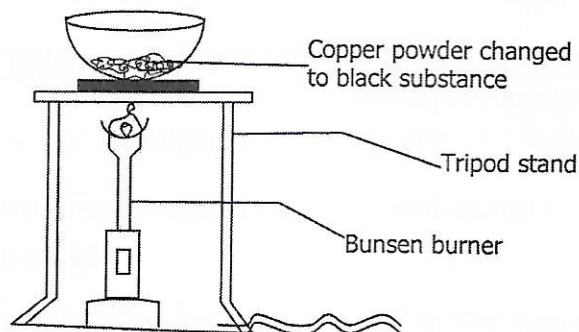
Rabbit	Giraffe	Donkey	Sheep	Zebra	Rhino
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- (a) Identify **one** animal which is:
- (i) domesticated,
- (ii) not domesticated. [2]
- (b) Explain **one** importance of domesticating animals. [1]
- (c) (i) From the table, identify **one** animal which is in danger of extinction.
- (ii) Give **one** reason for your answer in (c) (i) above. [2]
- (d) Explain how endangered animal species may be protected. [1]

Total = 6 marks

9 MATERIALS AND ENERGY

A pupil carried out an experiment by heating copper powder as shown below. A black substance was noticed after the experiment.

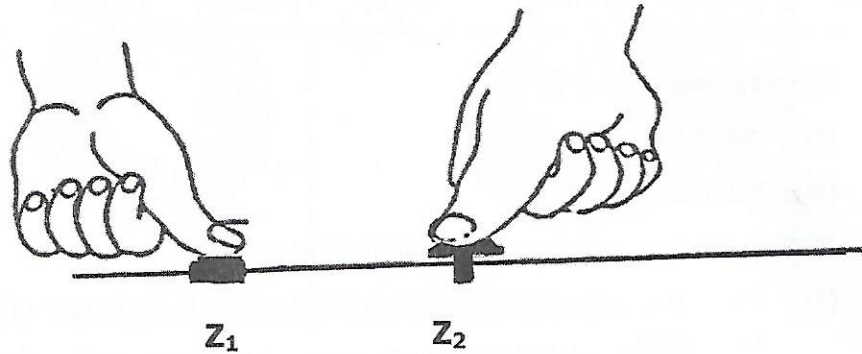


- (a) Would the mass of the product formed after heating copper be more, same or less after the experiment had been done. [1]
- (b) Give a reason for your answer in (a) above. [1]
- (c) Write a word equation for the reaction in the experiment above. [1]
- (d) (i) State the type of chemical reaction which took place in the experiment above.
- (ii) Give **one** other type of chemical reaction apart from the one named in (c) (i) above. [2]
- (e) State the law of conservation of matter. [1]

Total = 6 marks

10 MATERIALS AND ENERGY

The diagram shows equal force being applied on two different objects using a thumb.



- (a) Define pressure. [1]
- (b) State the unit for pressure. [1]
- (c) (i) On which object will the thumb exert more pressure on the wood? [2]
- (ii) Give a reason for your answer in (c) (i) above. [2]
- (d) What **two** factors other than the one demonstrated in the diagram, affects pressure in gases? [2]

Total = 6 marks

