

May/June WASSCE (WAEC) Integrated Science past questions (Paper 2, 2013) -  
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S5172 WASSCE  
May/June 2013  
INTEGRATED  
SCIENCE 2  
Test of  
Practical Work  
2 hours

**2**

Name .....

Index Number .....

THE WEST AFRICAN EXAMINATIONS COUNCIL  
West African Senior School Certificate Examination  
INTEGRATED SCIENCE 2

May/June 2013

TEST OF PRACTICAL WORK

2 hours

[60 marks]

*Write your name and index number in ink in the spaces provided above.*

*Answer all the questions.*

*Write your answers in the answer booklet provided.*

*Credit will be given for clarity of expression, orderly presentation of material and for answers which show that you have had the required practical experience.*

1. Figure 1 is an illustration of a set-up for the preparation of a gas in the laboratory. Study the figure carefully and use it to answer the questions that follow.

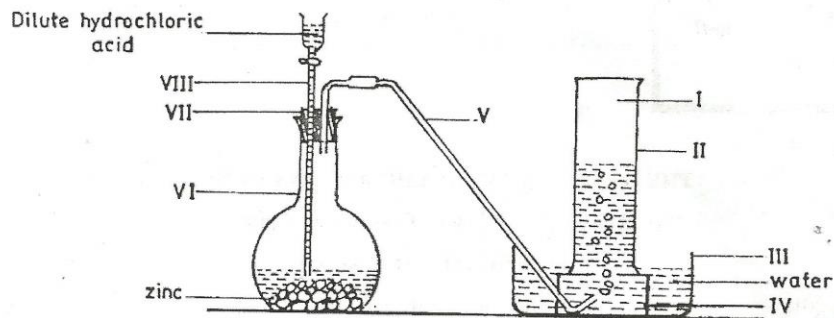
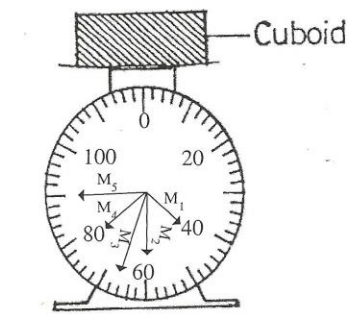


Figure 1

- (a) Name the parts labelled I, II, III, IV, V, VI, VII and VIII. [4 marks]
- (b) (i) Name the gas produced.  
 (ii) How could the gas produced be tested for?  
 (iii) State **two** uses of the gas named in (i) above. [5 marks]
- (c) Write a balanced chemical equation for the reaction that occurred. [2 marks]
- (d) Suggest **two** suitable metals which could be used instead of the zinc. [2 marks]
- (e) State **two** precautions that should be taken in this experiment. [2 marks]
2. In an experiment to investigate the relationship between the density of a cuboid and its mass, five cuboids of different masses  $M_1$ ,  $M_2$ ,  $M_3$ ,  $M_4$ , and  $M_5$  of equal dimensions were used. The mass of each of the cuboids was determined using a weighing balance. The volume,  $V$ , of one of the cuboids was determined by measuring the length ( $l$ ), breadth ( $b$ ) and height ( $h$ ). Figure 2a below represents the masses,  $M_1$ ,  $M_2$ ,  $M_3$ ,  $M_4$ , and  $M_5$  while Figure 2b represents the diagram of one of the cuboids.

Study the figures carefully and answer the questions that follow.



Readings showing masses,  $M$ , of cuboids in grammes

Figure 2a

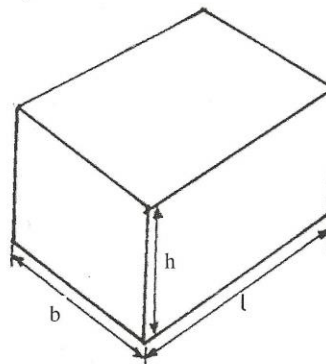


Figure 2b

- (a) (i) Read and record the mass  $M = M_1, M_2, M_3, M_4,$  and  $M_5$ .  
 (ii) Measure and record the length ( $l$ ), breadth ( $b$ ), and height ( $h$ ) of the cuboid in Figure 2b.  
 (iii) Calculate the volume ( $V$ ) of the cuboid in Figure 2b.  
 (iv) Determine the ratio  $\frac{M}{V}$  for **each** of the cuboids.  
 (v) Tabulate the results obtained in (i) and (iv) in your answer booklet using the table shown below.

$M/g$	$M_1 =$	$M_2 =$	$M_3 =$	$M_4 =$	$M_5 =$
$\frac{M}{V}$	$\frac{M_1}{V} =$	$\frac{M_2}{V} =$	$\frac{M_3}{V} =$	$\frac{M_4}{V} =$	$\frac{M_5}{V} =$

[7 marks]

- (b) Plot a graph with  $M$  on the vertical axis and  $\frac{M}{V}$  on the horizontal axis.

[5 marks]

- (c) (i) Determine the slope of the graph.  
 (ii) What does the slope determined in (i) represent?

[3 marks]

3. Figure 3 below is an illustration of a farm animal.  
 Study the figure carefully and answer the questions that follow.

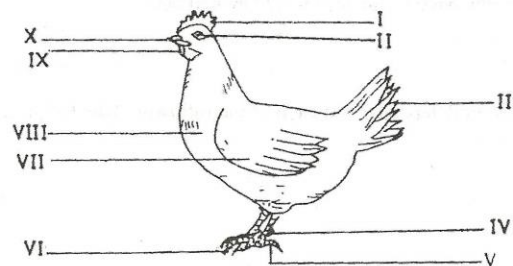


Figure 3

- (a) Identify the farm animal illustrated. [1 mark]
- (b) (i) Name the parts labelled I, II, III, IV, V, VI, VII, VIII, IX and X.  
 (ii) State **one** function **each** of the following labelled parts:  
 (α) VI;  
 (β) VII;  
 (γ) X. [8 marks]
- (c) (i) Name the management practice that could be carried out on the part labelled X.  
 (ii) State **two** advantages of the practice named in (i) above. [3 marks]
- (d) (i) Name **one** endoparasite that infests the farm animal illustrated.  
 (ii) State **one** way of controlling the parasite named in (i) above. [2 marks]
- (e) State **two** reasons why the illustrated farm animal is reared. [2 marks]

4. (a) Construct a food chain using the organisms listed below:  
hawk, grasshopper, frog, grass.

[3 marks]

- (b) Figure 4 illustrates a reflex arc in a human.  
Study the figure carefully and answer the questions that follow.

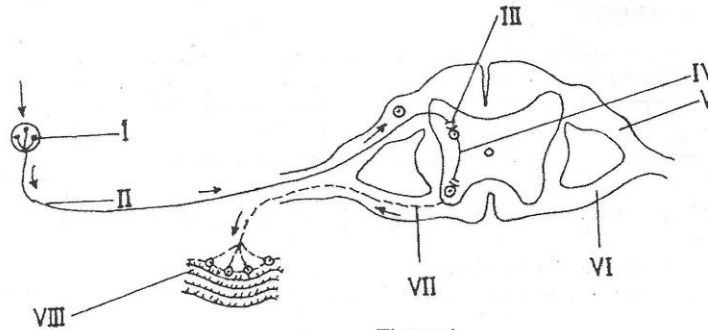


Figure 4

- (i) Name the parts labelled I, II, III, IV, V, VI, VII and VIII.  
 (ii) State **one** function **each** of the following labelled parts:  
 ( $\alpha$ ) I;  
 ( $\beta$ ) III;  
 ( $\gamma$ ) VIII.  
 (iii) Explain what would happen when **each** of the following labelled parts is damaged:  
 ( $\alpha$ ) V;  
 ( $\beta$ ) VI.

[9 marks]

**END OF PAPER**

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