STUDENT NAME_____FORM 3

HAVARD PRIVATE SECONDARY SCHOOL

END OF TERM TWO EXAMINATIONS

BIOLOGY

1. Define

(i) Enzyme **(2 marks)**

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(ii) Peristalsis **(2 marks)**

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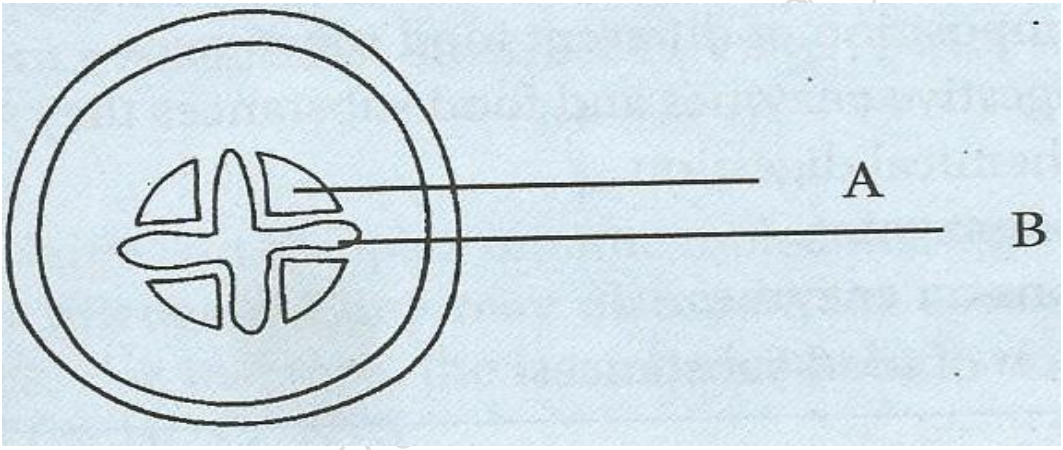
2. Figure 1 shows a cross section of a certain part of a flowering plant. Use it to answer questions that follow.



(i) Identify the part of the plant from which the cross section was obtained. **(1 mark)**

_____

_____

(ii) Name the part marked **A** and **B.** **(2 marks)**

A _____

B _____

(iii) Identify the type of the plant from which the cross section was obtained . **(1 mark)**

_____

_____

(iv) State three process through which food substances moves in plants**.** **(3 marks)**

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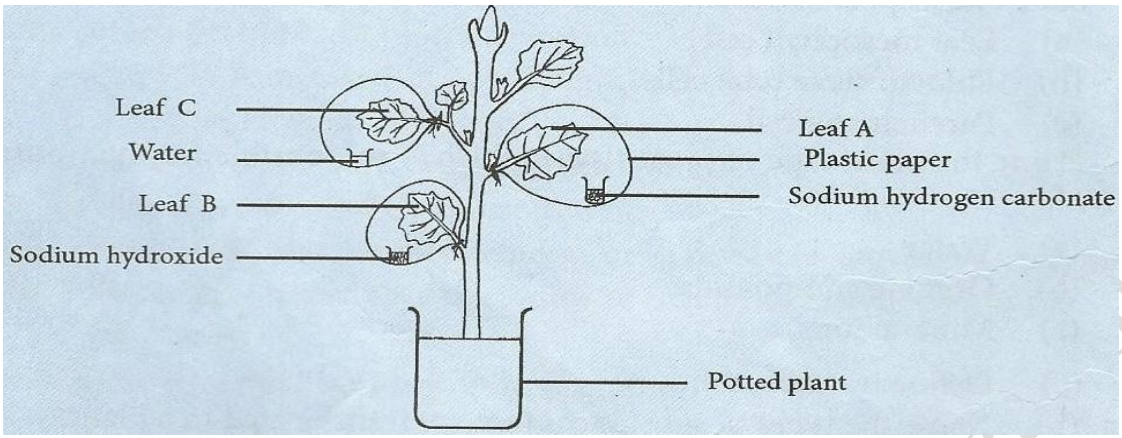
3.The **figure 2** below shows an experiment conducted by **Form 3** students to investigate the conditions necessary for the process of photosynthesis to take place. Use it to answer questions that follow.



a. What was the aim of the experiment above? **(1 mark)**

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_____

b. If the plant was first put in the dark for **24** hours, why was it necessary? **(1 mark)**

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_____

c. What is the role of the following substances in this experiment:

i. Sodium hydrogen carbonate. **(1 mark)**

_____

_____

ii. Sodium hydroxide. **(1 mark)**

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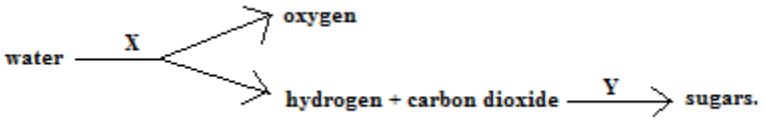
_____

4. Below is a diagram representing the process of photosynthesis in a green leaf. Study it and answer the questions that follow.



a. Write down a balanced chemical equation for the process**.** **(2 marks)**

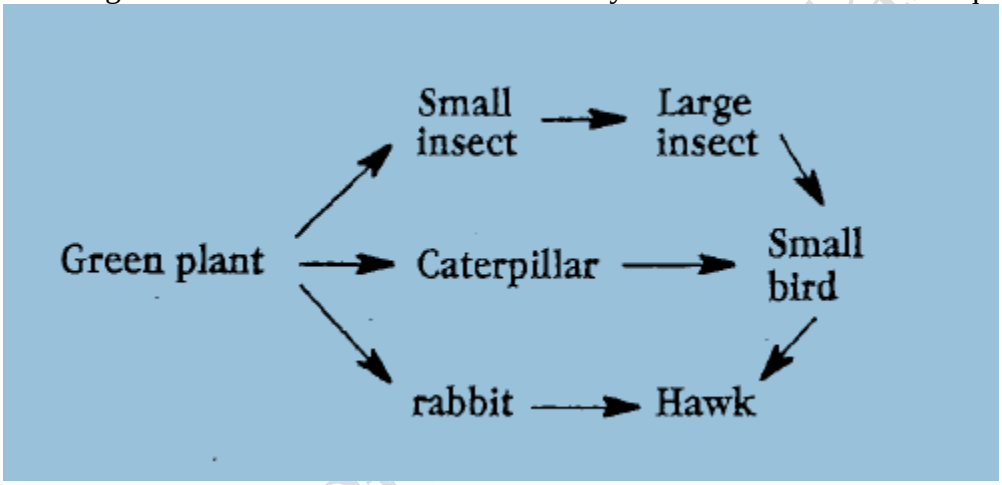
b. Name two chemical processes that take place at X**.** **(2 marks)**

c. Where does the process represented by **Y** occur in the chloroplast? **(1 mark)**

d. Explain why sugar production may fail if a plant lacks magnesium. **(2 marks)**

e. Describe any two detrimental human practices on photosynthesis**.** **(4 marks)**

5. A diagram below shows food web in an ecosystem. Use it to answer the questions that follow.



a. State any three components of ecosystem. **(3 marks)**

b. Which organism is the producer in the food web above**.** **(1 mark)**

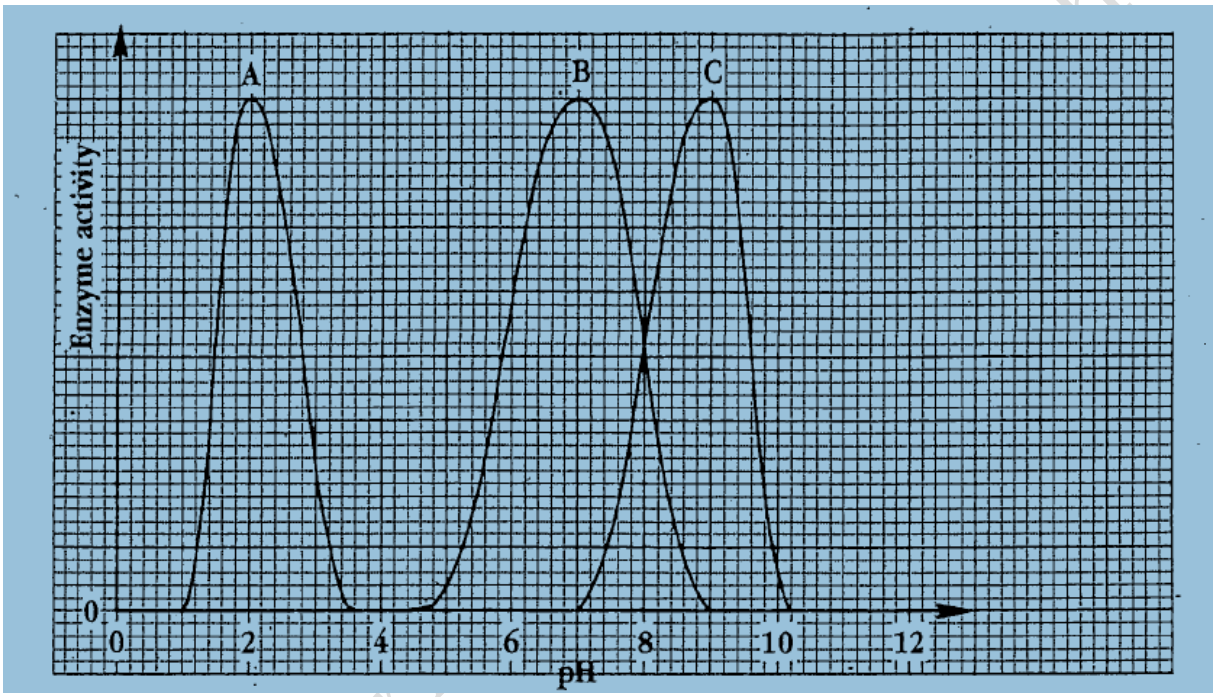
c. Give an example of a tertiary consumer in the food web. **(1 mark)**

d.If all small birds died, what effect would this have on the small insects.
Effect on small insects **(1 mark)**

Reason **(2 marks)**

e. Outline any three methods that are used to calculate the population of organisms in the ecosystem**.** **(3 marks)**

6.Below is a graph showing properties of enzymes. Use it to answer the questions that follow.



i.What property of enzymes is being investigated in the graphs above**.** **(1 mark)**

ii. What is the optimum **ph.** for enzyme A**.** **(1 mark)**

iii. Under what **ph.** range does enzyme B work**.** **(1 mark)**

iv. Which enzyme is likely to be secreted in the stomach**?** **(1 mark)**

Give a reason for your answer**.** **(2 marks)**

vi.Apart from digestion, name 2 processes in the body that are controlled by enzymes**.(2 marks)**

SECTION C Essays (30 Marks)

7.In an essay form, describe five functions of the liver in a mammalian body. **(10 marks)**

8.In an essay form describe five general causes of deficiency diseases. **(10 marks)**

9. In an essay form, describe five functions of the human skeleton **(10 marks)**

END OF QUESTION PAPER