

Class..... Roll call no.....

NAME Adm no.....

GIDEONS ELITE BOYS CENTRE OF EXCELLENCE
DECEMBER SELF-ASSESSMENT EXAMINATIONS
FORM TWO
BIOLOGY
FORM TWO
Time: 2½ Hours

INSTRUCTIONS

- All Questions are Compulsory
- Write your Answers in the Spaces Provided
- Wrong Spelling of Technical Terms shall be Penalized

Max Score	Student's Score
80	

1. State **one** similarity between parasitic and predatory modes of feeding. (2marks)

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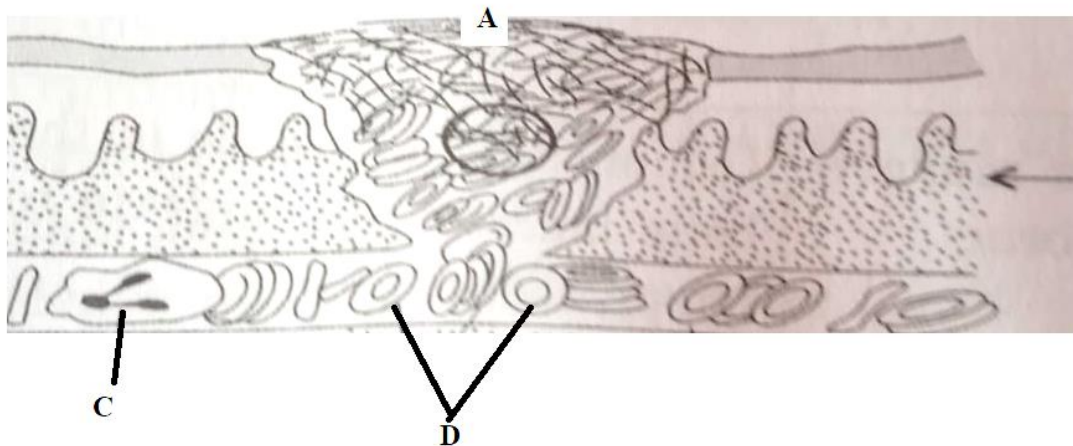
2. (a) Name the products formed during the light reaction of photosynthesis. (1 mark)

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(b) Where does light independent stage of photosynthesis take place? (1 mark)

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3. The diagram below represent a section of blood vessel in human circulatory system.



(i) Identify structure labeled **C** and **D**.

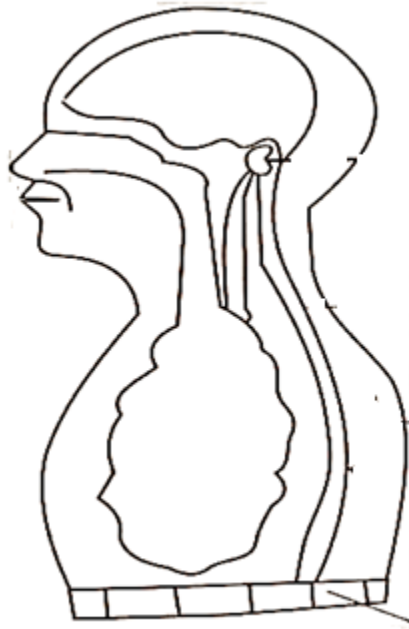
C: (1 mark)

D: (1 mark)

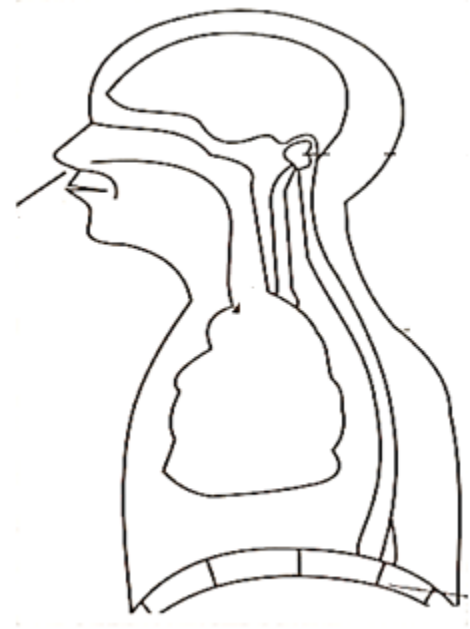
(ii) Give the name of the process that happens at part **A**. (1 mark)

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4. Study the image below and answer the questions that follow.



Process K



Process L

(a) Name the process represented by process **K** and **L**.

K:(1 mark)

L:(1 mark)

(b) Describe the events that leads to process **L** (2 marks)

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5. Define the following terms as used in biology.

(i) Binomial nomenclature. (1 mark)

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(ii) Taxonomy. (1 mark)

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6. Give reasons for the following:-

(a) Most leaves are thin with broad leaves. (2 marks)

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(b) A leaf cannot be tested for starch by adding iodine solution directly. (1mark)

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(c) Plants will not photosynthesize in the dark. (1 mark)

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7. Complete the table below so as to obtain the correct food type being broken down, the enzymes involved and the end products.

Food	Enzyme	Product
Starch		Maltose
	protease	Amino acids
lipid	Lipase	

(3marks)

8. The dental formula below was written by a student after observing a skull of an animal.

I 0 C 0 PM 3 M 3
 3 1 3 3

The dental formula above has mistakes, **rewrite** it correctly. (1 mark)

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(i) How many teeth does the animal have. (1 mark)

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(ii) State the mode of feeding of the animal. (1mark)

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(iii) Give a reason for your answer in (ii) above. (1mark)

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(iv) Name the cells that forms the following tissues.

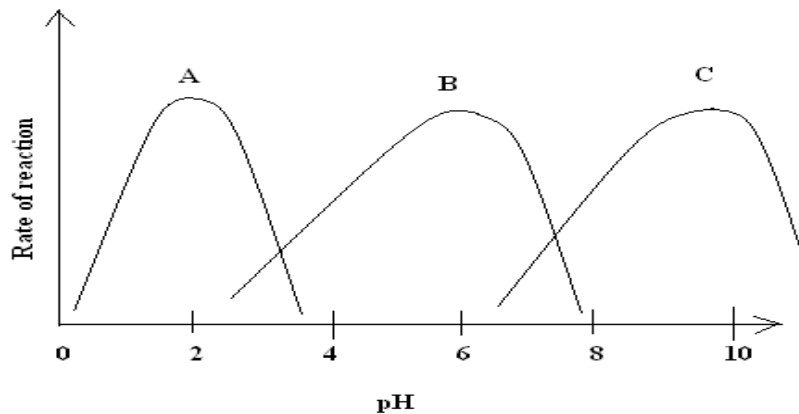
(a) Xylem (2 marks)

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(b) Phloem. (2 marks)

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9. The graphs below shows reactions of enzymes in different parts of the alimentary canal.



(i) Give appropriate examples of products of digestion that results from action of the enzymes represented by the following letters (2 marks)

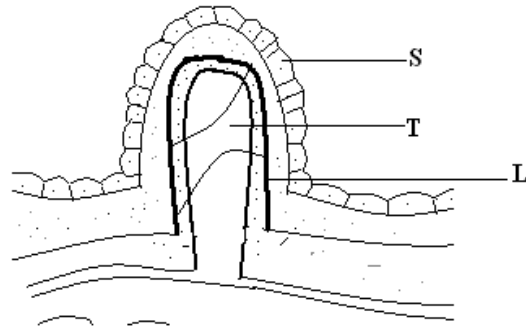
A:..... (1 mark)

B:(1 mark)

(ii) Identify the substance that activateds the enzyme represented by substance D. (1 mark)

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10. The diagram below represents part of the ileum lining.

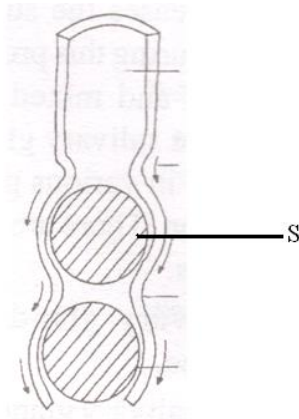


(a) Name the above structure. (1 mark)

(b) Name the parts labeled S and L. (2 marks)

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11. The diagram below represents a stage in the digestion of food along gastrointestinal track.



(a) By what mode does the represented organism feed? (1 mark)

(b) What is the name given to the:

(i) Wave of muscular contraction above. (1 mark)

(ii) The substance named S. (1 mark)

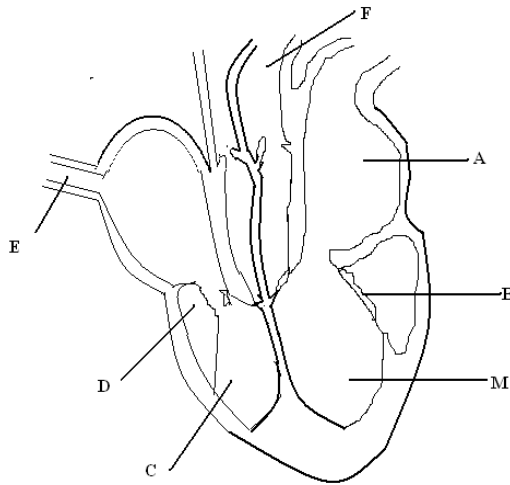
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(c) Name the part of alimentary canal represented above. (1 mark)

12. Explain **three** conditions necessary for aerobic respiration. (3 marks)

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12. The diagram below represents the structure of the mammalian heart. Study it and answer the questions that follow.



(a) What is the role of the part marked **B** in mammalian circulation (1mark)

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(b) State **two** structural difference between the blood vessels marked **E** and **F** (2 marks)

E	F

(c) Name the blood vessel that supplies the heart muscles with food and oxygen. (1mark)

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13. Briefly, explain the role of the following in the immune system of animals.

(a) Lymphocytes (1 mark)

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(b) Antibodies (1 mark)

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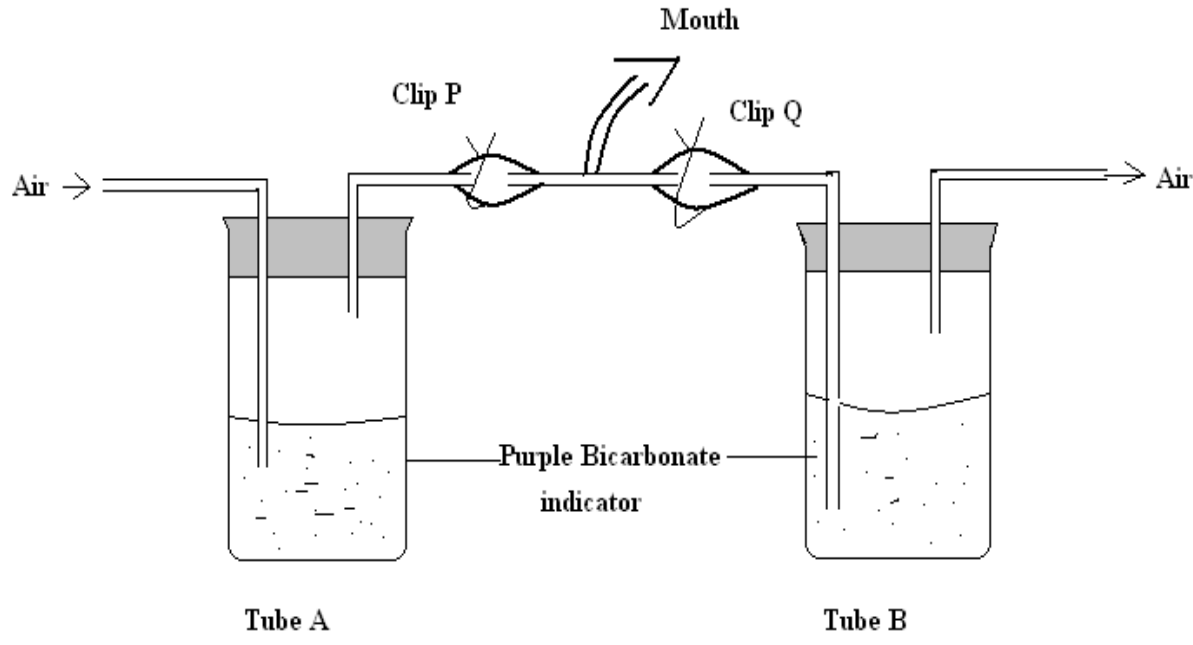
(d) Phagocytes (1 mark)

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14. List down the rules of binomial nomenclature. (2 marks)

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15. An experiment was set as shown below to compare the amount of carbon (IV) oxide in expired and inspired air.



(a) State the purpose of clip

(i) P (1mark)

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(ii) Q (1mark)

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(b) Compare observations in tube A and B after experiment. Give reasons for your answer. (4 marks)

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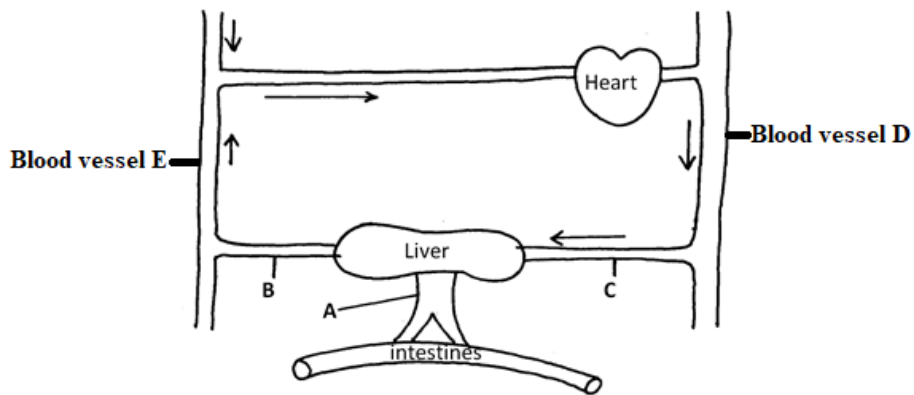
(c) State **one** advantages of breathing through the nostrils other than mouth. (1 mark)

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16. What do you understand by the term oxygen debt. (2 marks)

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17. The diagram below represents part of the mammalian blood circulatory system and some associated glands.



(a) Name the blood vessels **D** and **E**.

D: (1 mark)

E: (1 mark)

(b) Name the main components of the blood vessel labeled **A**. (1 mark)

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18. In a blood test, a drop of anti-A serum were added to two samples of blood. No agglutination occurred, what were the blood groups of the two samples? (2 marks)

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19. Give a reason why:

(a) The circulation fluid in insects lacks haemoglobin. (1 mark)

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(b) People living at high altitude have more red blood cells than those living at sea level. (2 marks)

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(c) Complete blood is only kept for about one month after it has been obtained from donor, but plasma may be kept much longer.

20. (i) A doctor working on a patient found that the patient had $\frac{120}{90}$ mmHg. What does the figure represent? (1 mark)

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(ii) Name **two** things that can led to increase of the value above. (2 marks)

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21. (i) Explain why proteins are absent in the urine of a healthy person. (2 marks)

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(ii) Give the term used to describe the presence of protein in urine and glucose.

Protein: (1 mark)

Glucose: (1 mark)

22. Name **two** chemical solutions used in the Biuret's test in the order of application. (2 marks)

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23. Why does the blood of insects lack of pigment equivalent to haemoglobin? (2 marks)

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