

**BIOLOGY GRADE 10**

**END TERM 1 EXAMINATION 2026**

**TIME 2 HOURS**

**NAME.....ADM NO.....**

**DATE.....SIGN.....**

**INSTRUCTIONS TO CANDIDATES**

1. This paper consists of two sections: Section A and Section B.
2. Answer all the questions in Section A in the spaces provided.
3. In Section B, answer any two questions. Each question is worth 20 marks.
4. Read all questions carefully before attempting to answer.

**SECTION A (60 MARKS)**

**Answer all questions in this section in the spaces provided.**

1. Define the term Biology. (2 marks)

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2. List the seven characteristic processes of life. (7 marks)

3. A student observed a cell under a microscope and noted the presence of a cell wall, a large central vacuole, and chloroplasts.

a) Is this a plant or an animal cell? (1 mark)

b) Give a reason for your answer based on the observations. (2 marks)

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4. a) What is the function of the mitochondria in a cell? (2 marks)

b) Name the process that takes place in the mitochondria to perform this function. (1 mark)

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5. Distinguish between diffusion and osmosis. (4 marks)

6. A red blood cell is placed in a beaker of distilled water.

a) Describe what will happen to the cell. (2 marks)

b) Explain why this happens (3 marks)

7. Name the two main types of nucleic acids. (2 marks)

8. Complete the following table on biological molecules: (8 marks)

| Biomolecule | Basic Building Block (Monomer) | Main Function in the Body | One Food Source |
|-------------|--------------------------------|---------------------------|-----------------|
|-------------|--------------------------------|---------------------------|-----------------|

|              |                      |  |  |
|--------------|----------------------|--|--|
| Carbohydrate | Provide quick energy |  |  |
|--------------|----------------------|--|--|

|         |             |  |  |
|---------|-------------|--|--|
| Protein | Meat, Beans |  |  |
|---------|-------------|--|--|

|       |                        |  |  |
|-------|------------------------|--|--|
| Lipid | Fatty Acids & Glycerol |  |  |
|-------|------------------------|--|--|

9. What is a tissue? Give one example from the human body. (3 marks)

10.. Explain the role of ribosomes in a cell. (2 marks)

11. Why is the nucleus often referred to as the control center of the cell? (3 marks)

12. A plant is not watered for two weeks. Its leaves begin to wilt.

a) Explain why the leaves are wilting, using your knowledge of water movement in plants. (4 marks)

13. Name the enzyme found in saliva and state what substance it breaks down. (2 marks)

14. What is the optimal pH for most human enzymes? (1 mark)

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15. List two factors that can affect the rate of an enzyme-controlled reaction. (2 marks)

16. Define the term homeostasis. (2 marks)

17. Give one example of how the body maintains a constant internal environment. (2 marks)

**SECTION B: (40 MARKS)**

**Answer any two questions from this section. Each question is worth 20 marks.**

18. Draw a well labeled diagram of a typical plant cell as seen under an electron microscope and label the following parts: Cell wall, cell membrane, nucleus, cytoplasm, chloroplast, mitochondria, large vacuole. (10 marks for the diagram and labels)

b) Describe the function of any four of the parts you have labeled. (8 marks)

c) Explain how the shape of a plant cell differs from that of an animal cell and why. (2 marks)

19. Define the term enzyme and describe its chemical nature. (4 marks)

b) Using a specific example, explain the 'lock and key' model of enzyme action. (You may use a diagram to support your answer.) (8 marks)

c) Design an experiment to investigate the effect of temperature on the activity of the enzyme catalase (found in potato or liver). Your answer should include: a hypothesis, a list of apparatus, a clear step-by-step method, and what you would measure to determine the rate of reaction. (8 marks)

20.a) List the main parts of the human alimentary canal in the correct order (5 marks)

b) Describe the process of digestion that takes place in the stomach. Include in your answer the type of food digested, the enzyme involved and the role of hydrochloric acid. (8 marks)

c) Explain how the small intestine is adapted to its function. (7 marks)

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