

**Time: 2 Hours**

**Instructions:**

- Write your name and index number.
  - Answer all questions in the spaces provided.
  - For each question, only one answer is required unless stated otherwise.
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**1. Define the term diffusion. (1 mark)**

**2. State two differences between arteries and veins. (2 marks)**

**3. Give two reasons why a virus is considered non-living. (2 marks)**

**4. Name the part of the microscope used to regulate the amount of light. (1 mark)**

**5. Explain why the trachea is supported by C-shaped cartilage rings. (2 marks)**

**6. The diagram below represents a transverse section of a dicot stem.**

Label parts A, B, and C. (3 marks)

*(Include a hand-drawn diagram or describe one if this is printed)*

**7. Distinguish between genotype and phenotype. (2 marks)**

**8. Explain how the alveoli are adapted for efficient gas exchange. (3 marks)**

**9. State the role of the following in photosynthesis:**

a) Chlorophyll

b) Light energy (2 marks)

**10. What is the function of the following structures in a mammalian heart?**

a) Tricuspid valve

b) Septum (2 marks)

**11. Name the hormone responsible for:**

a) Regulation of blood sugar

b) Maturation of Graafian follicle (2 marks)

**12. Describe the process of excretion in plants. (3 marks)**

**13. What is homeostasis? (1 mark)**

- 14. Name three characteristics of a wind-pollinated flower. (3 marks)**
- 15. State the role of the loop of Henle in the kidney. (1 mark)**
- 16. The diagram below represents a human tooth:**
- a) Identify the type of tooth.
  - b) State its function. (2 marks)
- 17. Name two components of the blood involved in clotting. (2 marks)**
- 18. Give two differences between aerobic and anaerobic respiration. (2 marks)**
- 19. Explain why green plants are referred to as autotrophs. (2 marks)**
- 20. What is meant by natural selection? (1 mark)**
- 21. List four abiotic factors that affect the distribution of organisms in an ecosystem. (2 marks)**
- 22. Explain why it is important to boil the leaf in alcohol during an experiment to test for starch. (2 marks)**
- 23. What is the role of saliva in digestion? (2 marks)**
- 24. State two ways in which white blood cells defend the body against pathogens. (2 marks)**
- 25. Name one inherited disorder in humans and state the gene mutation responsible. (2 marks)**
- 26. Define the term osmoregulation. (1 mark)**
- 27. Explain the significance of meiosis in organisms. (2 marks)**
- 28. State the function of the placenta in mammals. (2 marks)**
- 29. What is the role of auxins in plant shoots? (1 mark)**
- 30. Give two reasons why enzymes are specific in action. (2 marks)**