Organisation and Digestion

GCSE Science • **Combined and Triple** • Grades 3–6

Name: _____ Class: _____ Total: _____ / 54

Show all your working. Marks are given for correct method as well as the final answer.

1. Put these in order of size, smallest first: organ, cell, organ system, tissue. **[2 marks]**

Answer: _____

2. Define a tissue. **[2 marks]**

Answer: _____

3. Name the biological molecules that enzymes are made from. **[1 mark]**

Answer: _____

4. Explain what is meant by the active site of an enzyme. **[2 marks]**

Answer: _____

5. Explain why an enzyme only works on one type of substrate. **[3 marks]**

Answer: _____

6. Describe what happens to an enzyme above its optimum temperature. **[3 marks]**

Answer: _____

7. Describe what happens to the rate of an enzyme reaction as temperature rises to the optimum. **[3 marks]**

Answer: _____

8. Explain why pepsin works in the stomach but not in the small intestine. **[3 marks]**

Answer: _____

9. Name the enzyme that breaks down starch and its product. **[2 marks]**

Answer: _____

10. Name the enzyme that breaks down protein and its products. **[2 marks]**

Answer: _____

11. Name the enzyme that breaks down lipids and its products. **[2 marks]**

Answer: _____

12. Describe two functions of bile. **[3 marks]**

Answer: _____

13. Explain why emulsifying fat speeds up digestion. **[3 marks]**

Answer: _____

14. Name where most absorption of digested food happens. **[1 mark]**

Answer: _____

15. Give two adaptations of a villus. **[2 marks]**

Answer: _____

16. Name the test for starch and the positive result. **[2 marks]**

Answer: _____

17. Name the test for glucose and the positive result. **[2 marks]**

Answer: _____

18. Name the test for protein and the positive result. **[2 marks]**

Answer: _____

19. A student investigates how pH affects amylase.

(a) Name the independent and dependent variables. **[2 marks]**

(b) Give two variables that must be controlled. **[2 marks]**

Answer: _____

20. The table shows how long amylase took to digest starch at different temperatures: 10°C took 120 s, 30°C took 60 s, 60°C did not finish.

(a) Work out how many times faster the reaction is at 30°C than at 10°C. **[2 marks]**

(b) Explain the result at 60°C. **[3 marks]**

Answer: _____

21. The heart pumps blood around two circuits.

(a) Name the vessel carrying blood from the heart to the lungs, and say whether it is oxygenated. **[2 marks]**

(b) Explain why the left ventricle wall is thicker than the right. **[3 marks]**

Answer: _____

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