

Biology paper 2 revision list (FOUNDATION)

1. Know the events that take place in the carbon cycle.
2. State the definition of a decomposer.
3. Outline the stages in water purification and explain how each is carried out (and why).
4. Describe the components of blood and outline the function of each.
5. Convert between units (mm, μm , nm, pm).
6. Know the equation linking actual size, magnification and image size.
7. What is the definition for homeostasis?
8. Explain the events that occur during thermoregulation. You must refer to vasoconstriction and vasodilation in your answer.
9. Know the structures (organelles) present in animal and plant cells.
10. Outline the function of each organelle.
11. Outline the steps you would take to view a sample under a microscope.
12. Explain why specimens have to be thin and stained when using light microscopy.
13. Define osmosis.
14. Explain what happens to plant and animal cells when placed in:
 - a) Hypertonic solutions
 - b) Isotonic solutions
 - c) Hypotonic solutions
15. State what is meant by the term decomposition.
16. Be able to calculate the rate of decay using the equation: $\text{rate of decomposition} = \frac{\text{change in mass}}{\text{time taken}}$
17. Outline the factors which influence the rate of decomposition.
18. State the word and symbol equation for photosynthesis.
19. Outline the factors which influence the rate of photosynthesis.
20. Describe how each factor effects the rate of photosynthesis (refer to graph sketches in your answers).
21. Describe the steps in eutrophication.
22. Be able to label the urinary system and describe how urea is formed.
23. Understand the events that take place in the kidney (ultrafiltration and selective reabsorption).
24. Explain how someone with kidney failure could be treated.
25. Draw a labelled diagram of a root hair cell and describe how it is adapted to its function.
26. What substance is carried by the xylem?
27. What substance is carried by the phloem?
28. Describe the structural adaptations of the xylem.
29. Describe the structural adaptations of the phloem.
30. Describe what is meant by transpiration.
31. Explain how the rate of water uptake (transpiration) can be measured using a potometer.
32. Be able to calculate rate of water uptake = $\frac{\text{volume of water taken up}}{\text{time taken}}$
33. Compare and contrast the structure of arteries, veins and capillaries.
34. Describe the physiological response to exercise.
35. Label a diagram of the heart and explain how this helps it to carry out its function.
36. Be able to construct simple food chains.
37. Be able to calculate efficiency of energy transfer between trophic levels.

38. Draw a pyramid of biomass and explain how energy transfer and biomass transfers change along a food chain.