



Attempt questions first; check the separate key afterward. Show all working. Draw accurate figures where required.

A. Very short answers - 1 mark each

1. What is biological classification?
2. Explain two reasons why organisms are classified.
3. Name the basic unit of classification.
4. Explain how a scientific name differs from a common name.
5. How many words normally form a binomial scientific name?
6. State conventions for writing genus and species names.
7. Is a whale classified as a fish?
8. Give features supporting its placement among mammals.

B. Short answers / practice - 2 marks each

9. Name the cell type of bacteria.
10. Compare prokaryotic and eukaryotic organisms as a classification feature.
11. Are fungi generally photosynthetic?
12. Distinguish fungi from green plants in nutrition and cell-wall composition.
13. Which plant group lacks vascular tissue: mosses or ferns?
14. Explain why vascular tissue matters for plant size and transport.
15. Do flowering plants produce seeds enclosed in fruits?
16. Compare angiosperms and gymnosperms.
17. Name the seed-leaf counts used to distinguish monocots and dicots.
18. Compare their typical leaf venation and root systems.
19. Which animal group has a backbone?

20. Distinguish vertebrates and invertebrates with examples.

C. Application / reasoning - 3 marks each

21. How many pairs of legs does a typical adult insect have?
22. Compare an insect and a spider using visible characters.
23. Are bats mammals?
24. Explain why flight alone cannot identify a bird.
25. Name the body covering characteristic of birds.
26. Compare fish, amphibians, reptiles, birds and mammals using two features each.
27. Name the genus in *Homo sapiens*.
28. Explain why a dolphin is classified with mammals rather than fish.
29. Do all seed-producing plants produce flowers?
30. Name the group of animals with jointed appendages and an external skeleton.
31. Build a dichotomous key for a moss, fern, pine and rose using reproductive features.

D. Extended practice - 5 marks per pair

32. What is a dichotomous key?
33. Construct a simple key to distinguish fish, frog, lizard, pigeon and cat.
34. Does similarity in habitat always imply close relationship?
35. Explain how multiple inherited characters make classification more reliable than a single superficial feature.

ANSWER KEY - Numerical / closed questions

- 3) Species. 5) Two. 7) No; mammal. 9) Prokaryotic. 11) No. 13) Mosses. 15) Yes. 17) One; two. 19) Vertebrates. 21) Three. 23) Yes. 25) Feathers. 27) *Homo*. 29) No; gymnosperms do not. 30) Arthropods. 34) No.