



Attempt questions first; check the separate key afterward. Use labelled diagrams where asked. Give scientific reasons; answer key covers closed questions.

A. Very short answers - 1 mark each

1. Name the characteristic cells of Porifera.
2. Name the stinging cells of cnidarians.
3. Which phylum has a water vascular system?
4. Name the excretory organs of annelids.
5. Name the largest animal phylum by described species.
6. Are adult echinoderms generally bilaterally symmetrical?
7. Name the locomotory structures of ctenophores.
8. How many chambers occur in a typical fish heart?

B. Short answers / practice - 2 marks each

9. Compare cellular, tissue, organ and organ-system organisation.
10. Distinguish radial and bilateral symmetry with examples.
11. Compare diploblastic and triploblastic animals.
12. Distinguish acoelomate, pseudocoelomate and coelomate conditions.
13. Explain metamerism and give an example.
14. State three diagnostic features of chordates.
15. Compare notochord and vertebral column.
16. Explain the canal system in sponges.
17. Distinguish polyp and medusa forms.
18. Describe parasitic adaptations in flatworms.
19. Compare annelids and roundworms.
20. Explain the diagnostic features of Mollusca.

C. Application / reasoning - 3 marks each

21. Name the radula's usual function.
22. Why are echinoderm larvae important in understanding their affinities?
23. Distinguish urochordates and cephalochordates.
24. Compare cartilaginous and bony fishes.
25. State adaptations of amphibians for their dual mode of life.
26. Why are reptiles better suited than amphibians to reproduction on land?
27. Explain flight adaptations in birds.
28. Name two egg-laying mammals.
29. Are all mammals viviparous?
30. A worm is segmented with setae and nephridia. Identify its phylum.
31. An animal has jointed legs and a chitinous exoskeleton. Identify its phylum.

D. Extended practice - 5 marks each

32. Construct a diagnostic comparison of six non-chordate phyla with examples.
33. Compare fishes, amphibians, reptiles, birds and mammals using five features.
34. Explain how symmetry, germ layers, coelom and segmentation guide animal classification.
35. Classify shark, rohu, frog, lizard, pigeon and rabbit to class, justifying each placement.

ANSWER KEY - Numerical / closed questions

- 1) Choanocytes/collar cells. 2) Cnidocytes. 3) Echinodermata. 4) Nephridia. 5) Arthropoda. 6) No; typically radial. 7) Comb plates. 8) Two. 21) Feeding/scraping food. 28) Platypus and echidna. 29) No. 30) Annelida. 31) Arthropoda.