



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. Define taxonomy.
2. Name the basic unit of classification.
3. Who popularised binomial nomenclature?
4. Name the three domains of life.
5. Identify the genus in *Mangifera indica*.
6. Is a taxon identical in meaning to a rank?
7. Which is broader: family or genus?
8. Write the scientific name of humans.

B. Short answers / practice - 2 marks each

9. Distinguish taxonomy and systematics.
10. State two rules for writing printed scientific names.
11. How are handwritten scientific names distinguished?
12. Explain the need for a universal naming system.
13. Arrange species, order, genus, kingdom, family, class, phylum in ascending hierarchy.
14. Distinguish identification from nomenclature.
15. State the biological species concept and one limitation.
16. Do organisms in one genus necessarily belong to one family?
17. Do organisms in one family necessarily belong to one genus?
18. Why do species share fewer features when grouped at higher ranks?
19. Differentiate specific epithet from a complete species name.
20. Identify errors in the writing "homo Sapiens".

C. Application / reasoning - 3 marks each

21. Two plants share a genus but have different epithets. Are they necessarily the same species?

22. Explain why common names can create confusion across regions.

23. How can molecular evidence improve classification?

24. Compare classification based on one visible trait with multiple characters.

25. Does superficial resemblance always establish close evolutionary relationship?

26. Explain why biodiversity makes classification necessary.

27. Which pair is usually more closely related: same genus or same order?

28. Explain the use of division in plant classification.

29. Classify human beings from kingdom to species.

30. Why can a scientific classification change after new evidence?

31. Contrast artificial grouping with classification reflecting evolutionary relationships.

D. Extended practice - 5 marks each

32. Explain taxonomic hierarchy using a fully worked plant example.

33. Discuss three-domain classification and its distinction from five-kingdom classification.

34. A specimen has conflicting external and DNA-based evidence. Outline a reasoned classification approach.

35. Explain binomial nomenclature, its rules and advantages, with two correctly written examples.

ANSWER KEY - Numerical / closed questions

- 2) Species. 3) Linnaeus. 4) Bacteria, Archaea, Eukarya. 5) *Mangifera*. 6) No; taxon is a group at a rank. 7) Family. 8) *Homo sapiens*. 13) Species, genus, family, order, class, phylum, kingdom. 16) Yes. 17) No. 20) Genus must be *Homo*; epithet *sapiens*; both italicised in print. 21) No. 25) No. 27) Same genus. 29) Animalia, Chordata, Mammalia, Primates, Hominidae, *Homo*, *H.sapiens*.