Patterns in Life: Diversity and Classification

Standard difficulty · 20 questions · 40 marks · Time: 37 minutes

Name: _____ Date: _____ Score: ____ / 40

Show your working for Sections B and C. Answers are on the last page — try every question first!

Section A — Choose the correct answer — 8 × 1 = 8 marks

1. Anabaena (a cyanobacterium) belongs to the kingdom:
(a) Monera **(b)** Protista **(c)** Animalia **(d)** Plantae

2. Neem belongs to the plant group:
(a) Thallophyta **(b)** Gymnosperms **(c)** Pteridophyta **(d)** Angiosperms

3. The basic unit of classification is the:
(a) genus **(b)** family **(c)** kingdom **(d)** species

4. A pigeon belongs to the group:
(a) Aves **(b)** Reptilia **(c)** Arthropoda **(d)** Echinodermata

5. Which group of animals have jointed legs and a hard outer skeleton?
(a) Amphibia **(b)** Mollusca **(c)** Echinodermata **(d)** Arthropoda

6. In the hierarchy of classification, the level just above phylum is:
(a) kingdom **(b)** family **(c)** species **(d)** order

7. The scientific name of humans is Homo sapiens. Its species name is:
(a) sapiens **(b)** Humans **(c)** Homo **(d)** Homo sapiens

8. Assertion (A): Scientific names are written the same way all over the world.
Reason (R): One agreed two-part name avoids confusion between local names.
(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

Section B — Short answer — 8 × 2 = 16 marks

9. To which kingdom does a mushroom belong? Give one feature of that kingdom.

10. Give two differences between Platyhelminthes and Nematoda.

11. Why do we classify living things?

12. Name the plant group of each: neem, wheat, Ulva, fern.

13. A student writes the scientific name of the potato plant as 'tuberosum solanum'. Write it correctly and give the rules.

14. A dichotomous key uses questions with two answers each. At least how many questions does a well-made key need to tell apart 56 different organisms?

15. Name the group to which a bat belongs, and give one feature of that group.

16. Arrange from the largest group to the smallest: genus, family, species, order.

Section C — Word problems — 4 × 4 = 16 marks

17. Describe the five kingdoms with one example each.

18. On a nature walk, students find an animal. Animals of its kind have moist skin and lay eggs in water. To which group does it belong? Name two animals of this group.

19. Plants that have a simple body with no tissue for carrying water: to which group do they belong? Which one of Riccia, Chara, neem belongs to it, and to which groups do the other two belong?

20. Explain: (a) Mosses grow only in damp, shady places. (b) A whale is classed as a mammal.

Want another sheet on this chapter? In the Ambiful Worksheets app every sheet is new, with its answer key, and your child never gets the same question twice.
Scan the code to get the free app, or open **worksheets.ambiful.com/get**

Answer key

Patterns in Life: Diversity and Classification · AW-9S-DIV-2026-V1 · For parents — fold back or tear off before handing the sheet to your child.

Q	Answer	Working
1	**(a) Monera**	—
2	**(d) Angiosperms**	have flowers and seeds enclosed in fruits
3	**(d) species**	—
4	**(a) Aves**	members have feathers, a beak and hollow bones
5	**(d) Arthropoda**	—
6	**(a) kingdom**	kingdom → phylum → class → order → family → genus → species
7	**(a) sapiens**	the first word is the genus, the second the species
8	**(a) Both A and R are true, and R is the correct explanation of A.**	A is true: yes: they follow binomial nomenclature. R is true and explains A.
9	**Fungi: its members have cell walls of chitin and feed on dead and decaying matter.**	—
10	**Platyhelminthes have a flat body (tapeworm, Planaria); Nematoda have a round, cylindrical body (Ascaris). Both have bilateral symmetry.**	—
11	**It makes the huge variety easier to study, shows how organisms are related, and helps scientists everywhere name and identify them the same way.**	—
12	**neem: Angiosperms; wheat: Angiosperms; Ulva: Thallophyta; fern: Pteridophyta**	—
13	**Solanum tuberosum**	genus first with a capital letter, species second with a small letter; printed in italics (underlined separately when handwritten)
14	**6**	each question can halve the group: $2^5 = 32 < 56 \leq 2^6 = 64$
15	**Mammalia: its members have hair and feed their young on milk.**	—
16	**order → family → genus → species**	—

Q	Answer	Working
17	**Monera: prokaryotes, unicellular (bacteria). Protista: unicellular eukaryotes (Amoeba). Fungi: heterotrophs with chitin cell walls, saprophytes (mushroom). Plantae: multicellular autotrophs with cellulose cell walls (mango). Animalia: multicellular heterotrophs without cell walls (frog).**	—
18	**Amphibia; e.g. a frog and a salamander**	—
19	**Bryophyta; Riccia. neem: Angiosperms; Chara: Thallophyta.**	—
20	**(a) Bryophytes need water for their gametes to reach each other, and have no vascular tissue. (Mosses are bryophytes.) (b) Mammals have mammary glands and breathe with lungs. (It breathes air with lungs and feeds its young on milk.)**	—