

Biodiversity and Conservation — CBSE Pattern Test 2

Class 12 Biology · 90 minutes · 40 marks · Sections A–D with answer key · Narayan Gurukul Academy

Test 2 — CBSE Pattern (90 minutes, 40 marks)

Class 12 Biology · Biodiversity and Conservation · Narayan Gurukul Academy (ClassApna)

General Instructions: (1) This paper has four sections — Section A (1×10), Section B (2×4), Section C (3×4) and Section D (5×2) — total 40 marks. Time allowed: 90 minutes.
(2) All questions are compulsory. No overall choice is given; internal choice, where allowed, is clearly marked.
(3) For MCQ questions choose the single correct option; for VSA answers write a single line.
(4) Take $g = 10 \text{ m/s}^2$. All symbols carry their usual meaning. Use of a calculator is not permitted.

Section A — MCQ & VSA ($10 \times 1 = 10$ marks)

- Genetic diversity refers to variation
 - within a species
 - between ecosystems
 - between species only
 - in climate
- The latitudinal gradient shows the highest diversity at the
 - equator
 - poles
 - tropics only
 - deserts
- The introduction of alien species can cause
 - decline of native species
 - increase in native species
 - no change
 - increased rainfall
- A biodiversity hotspot has high
 - endemism and threat
 - rainfall only
 - temperature only
 - altitude only
- Ex situ conservation includes
 - zoos and seed banks
 - national parks
 - sanctuaries
 - biosphere reserves
- The 'Rivet Popper Hypothesis' compares an ecosystem to
 - an aeroplane
 - a book
 - a machine
 - a river
- The Convention on Biological Diversity was held at
 - Rio de Janeiro

- (B) Paris
 - (C) Kyoto
 - (D) Geneva
8. Silent Valley is famous for
- (A) tropical rainforest
 - (B) desert
 - (C) grassland
 - (D) wetland
9. What is ecological diversity?
10. What is the 'Evil Quartet'?

Section B — Short Answer I ($4 \times 2 = 8$ marks)

11. What is genetic diversity?
12. What is a seed bank?
13. How does a national park differ from a sanctuary?
14. What is the Ramsar Convention?

Section C — Short Answer II ($4 \times 3 = 12$ marks)

15. Explain the latitudinal gradient and its causes.
16. Explain the Rivet Popper Hypothesis.
17. Explain biodiversity hotspots with examples.
18. Describe international efforts for biodiversity conservation.

Section D — Long Answers ($2 \times 5 = 10$ marks)

19. (a) Describe the importance of biodiversity. (b) Describe the causes of biodiversity loss.
20. (a) Describe the patterns of biodiversity. (b) Describe the conservation strategies with examples.

Answer Key (Marking Scheme)

- Q1 — (A) within a species. Q2 — (A) equator. Q3 — (A) decline of native species. Q4 — (A) endemism and threat. Q5 — (A) zoos and seed banks. Q6 — (A) an aeroplane. Q7 — (A) Rio de Janeiro. Q8 — (A) tropical rainforest.
- Q9 — Ecological diversity is the variety of ecosystems and habitats.
- Q10 — The 'Evil Quartet': habitat loss, over-exploitation, alien species invasion and co-extinction.
- Q11 — Genetic diversity is variation within a species.
- Q12 — A seed bank stores seeds of plants for future use.
- Q13 — A national park has no human activity; a sanctuary allows some regulated activity.
- Q14 — The Ramsar Convention deals with the conservation of wetlands.
- Q15 — Diversity is highest at the equator due to more evolutionary time, solar energy and stable climate.
- Q16 — It compares an ecosystem to an aeroplane; losing species (rivets) weakens it.
- Q17 — Regions of high endemism and threat; e.g. Western Ghats and Eastern Himalayas.
- Q18 — Ramsar Convention (wetlands) and the Convention on Biological Diversity (Rio).
- Q19 — (a) Ecological stability, economic and ethical value. (b) The 'Evil Quartet'.

Q20 — (a) Latitudinal gradient and species–area relationship. (b) In situ and ex situ conservation.