

Q.1. From the statements given below, choose the correct option regarding definition and Levels of biodiversity

- A. Biodiversity refers to the totality of genes, species and ecosystems of a region.
- B. Genetic diversity refers to variations at the level of individual genes and alleles in a species.
- C. Species diversity refers to the number and relative abundance of species present in a given area.
- D. Ecosystem diversity describes variations in habitats, ecological processes and landscapes within a region.
- E. Biodiversity is only studied at species level as genetic and ecosystem diversities are insignificant.

Options:

- (1) B, C, D, E are true
- (2) A, C, D, E are true
- (3) A, B, E are true
- (4) A, B, C, D are true

Q.2. From the statements given below, choose the correct option wrt global biodiversity

- A. Slightly more than 1.5 million species have been described so far globally.
- B. Robert May places the global species diversity at about 7 million
- C. India, with more than 45,000 plant and 90,000 animal species, contributes about 8.1% of the global biodiversity.
- D. The majority of species discovered are microorganisms, as they are easily studied.
- E. The greatest diversity on Earth is shown by animals, particularly insects.

Options:

- (1) A, B, D are true
- (2) A, B, D, E are true
- (3) B, C, D, E are true
- (4) A, B, C, E are true

Q.3. From the statements given below, choose the correct option wrt patterns of biodiversity – latitudinal gradients

- A. Species diversity generally decreases as we move from the equator towards the poles.
- B. Tropics (23.5° N to 23.5° S) harbour more species than temperate or polar regions.
- C. High productivity, stable climate, and long evolutionary time contribute to high tropical diversity.
- D. The Amazon rainforest harbours over 40,000 plant species and 427 of amphibians.
- E. Polar ecosystems are highly diverse due to extreme adaptations of species.

Options:

- (1) A, B, C, D are true
- (2) C and D are true only
- (3) D and E are true only
- (4) A and B are true only

Q.4. From the statements given below, choose the correct option regarding species–area relationships

- A. Alexander von Humboldt studied species–area relationships in North American jungles.
- B. He observed that species richness increases with area but only up to a certain limit.
- C. The relationship is described by $S = C^Z A$, where Z is slope of the regression line.
- D. For small areas (islands or small habitats), Z values are 0.1–0.2.
- E. For very large continental areas, Z ranges between 0.6–1.2.

Options:

- (1) A, B, C, D are true
- (2) B, D, E are true
- (3) A, C, D, E are true
- (4) A, B, E are true

Q.5. From the statements given below, choose the correct option wrt ecosystem stability

- A. David Tilman’s experiments demonstrated that more diverse plots showed higher productivity.
- B. Species-rich ecosystems are more stable and resistant to invasions.

- C. Rich biodiversity buffers ecosystems against environmental fluctuations.
- D. Extinction of one species always leads to total collapse of an ecosystem.
- E. Greater biodiversity ensures more sustainable ecosystem functions.

Options:

- (1) A, B, C, E are true
- (2) A, B, D, E are true
- (3) B, C, D, E are true
- (4) A, C, D, E are true

Q.6. From the statements given below, choose the correct option regarding loss of biodiversity

- A. The current extinction rate is 100–1000 times faster than pre-human extinction rates.
- B. Habitat loss and fragmentation are primary causes of extinction.
- C. Over-exploitation of resources has led to the decline of species like the Steller's sea cow and passenger pigeon.
- D. Co-extinction refers to disappearance of species when their host/partner species goes extinct.
- E. Global warming and climate change have negligible impact on biodiversity.

Options:

- (1) A and C are true only
- (2) D and E are true only
- (3) A, B, C, D are true
- (4) A and B are true only

Q.7. From the statements given below, choose the correct option wrt Red Data Book and IUCN categories

- A. IUCN maintains a Red Data Book listing threatened species worldwide.
- B. Species are classified into categories such as Vulnerable, Endangered, Critically Endangered, and Extinct etc.
- C. A species facing a very high risk of extinction in the near future is called Vulnerable.
- D. Endangered species face extremely high risk of extinction in immediate future.
- E. Extinct species no longer exist anywhere on Earth.

Options:

- (1) A, B, D are true only
- (2) C and E are true only
- (3) B, C, D are true only
- (4) A, B, D, E are true only

Q.8. From the statements given below, choose the correct option wrt India as a Mega-Diversity Nation

- A. India is one of the 12 mega-diversity countries of the world.
- B. It has 4 biodiversity hotspots: Himalaya, Indo-Burma, Indo-China, and Sundarbans.
- C. India's share of world's species is about 8.1%.
- D. Endemism in India is high, especially in reptiles, amphibians, and angiosperms.
- E. Western Ghats and Indo-Burma are included among biodiversity hotspots.

Options:

- (1) A, C, D, E are true
- (2) A, B, C are true only
- (3) C and D are true only
- (4) A, B, D, E are true

Q.9. From the statements given below, choose the correct option wrt sacred groves and traditional conservation

- A. Sacred groves are forest patches protected by communities due to religious beliefs.
- B. They act as refuges for rare and threatened species.
- C. Notable sacred groves are found in Khasi and Jaintia Hills of Meghalaya.
- D. In Rajasthan, Aravalli Hills are sacred groves
- E. Sacred groves are found in Sarguja, Chanda and Bastar areas of Himachal Pradesh

Options:

- (1) A, B, C, D are true
- (2) A, B, and D are true only
- (3) B and C are true only
- (4) All are true except D

Q.10. From the statements given below, choose the correct option regarding Ex-situ conservation

- A. Ex-situ conservation means protection of species outside their natural habitats.
- B. It includes botanical gardens, zoological parks, seed banks, and cryopreservation.

- C. Ex-situ methods are more expensive than in-situ conservation.
- D. Captive breeding programs are examples of ex-situ conservation.
- E. National parks and sanctuaries are also ex-situ conservation methods.

Options:

- (1) A, B and C are true only
- (2) B and D are true only
- (3) A, B, C, D are true
- (4) All are true except D

Q.11. From the statements given below, choose the correct option regarding In-situ conservation

- A. In-situ conservation means protecting species in their natural habitats.
- B. National parks, biosphere reserves, and sanctuaries are examples.
- C. In-situ methods also maintain genetic diversity of wild and domesticated species.
- D. Hotspots are regions of high biodiversity and endemism under severe threat.
- E. In-situ is less effective than ex-situ in maintaining ecological integrity.

Options:

- (1) A, B, C, D are true
- (2) A, B, C, E are true
- (3) B, C, D, E are true
- (4) A, D, E are true

Q.12. From the statements given below, choose the correct option regarding biodiversity hotspots

- A. Regions with very high degree of endemism
- B. Western Ghats are one of the biodiversity hot spot of India
- C. Strict protection of these hotspots could reduce the ongoing mass extinctions by almost 30 per cent.
- D. All the biodiversity hotspots put together cover less than 2 per cent of the earth's land area
- E. India has 2 biodiversity hotspots.

- (1) C and E are true only
- (2) A, B, C, D are true only
- (3) B, C, D, E are true only
- (4) A and D are true only

Q.13. From the statements given below, choose the correct option wrt causes of biodiversity loss

- A. Habitat loss and fragmentation is the biggest cause of biodiversity decline.
- B. Introduction of exotic species has led to extinction of native species.
- C. Facultative relationship between plant and animal causes biodiversity loss
- D. Over-exploitation caused decline of passenger pigeon.
- E. Population pressure has little effect on biodiversity.

Options:

- (1) A, B, C, D are true
- (2) A, C and D are true only
- (3) B, C, D, E are true
- (4) A, B and D are true only

Q.14. From the statements given below, choose the correct option with respect to ethical and aesthetic values of biodiversity

- A. Biodiversity has ethical value as all species have right to exist.
- B. It provides aesthetic pleasures through ecotourism, bird-watching, and nature photography.
- C. Ethical values are measurable in economic terms.
- D. Aesthetic appreciation promotes conservation efforts.
- E. Cultural beliefs in India support conservation of species like tulsi and peepal.

- (1) A, B, D, E are true
- (2) A, C, D, E are true
- (3) B, C, D, E are true
- (4) A, B, C, E are true

Q.15. From the statements given below, choose the correct option regarding ecosystem services of biodiversity

- A. Biodiversity contributes to ecosystem services such as pollination, nutrient cycling, and climate regulation.
- B. Soil formation and oxygen generation are supporting services provided by biodiversity.

- C. Ecological services of biodiversity are worth more than US \$33 trillion per year.
- D. Biodiversity is not linked with ecosystem productivity.
- E. Pollination by bees and bats is a regulating service.

Options:

- (1) A, B, C are true only
- (2) A, B, C, E are true only
- (3) B, C, D, E are true only
- (4) A, C, D, E are true only

Q.16. From the statements given below, choose the correct option wrt Rivet Popper Hypothesis

- A. This hypothesis was proposed by Paul Ehrlich.
- B. It compares species in an ecosystem to rivets in an airplane.
- C. Loss of one or two rivets may not affect flight immediately.
- D. Loss of key species (critical rivets) can cause ecosystem collapse.
- E. According to this hypothesis, every species has equal ecological importance.

Options:

- (1) A, B, C, D are true
- (2) A, C, D, E are true
- (3) B, C, D, E are true
- (4) A, B, E are true

Q.17. From the statements given below, choose the correct option for Biosphere Reserves in India

- A. Biosphere reserves are multipurpose protected areas for conservation.
- B. They have core, buffer, and transition zones.
- C. Core zone is strictly protected, buffer allows limited human activity.
- D. Transition zone promotes sustainable resource use.
- E. It is an exmpale of ex-situ conservation of biodiversity

Options:

- (1) A, B, C, D are true
- (2) A, C, D, E are true
- (3) B, C, D, E are true
- (4) A, B, D, E are true

Q.18. From the statements given below, choose the correct option regarding sacred groves

- A. They are patches of forest protected by local people due to religious beliefs.
- B. They act as reservoirs of biodiversity.
- C. They are mostly found in urban areas.
- D. They preserve rare, endangered plants and animals.
- E. They are found in Sarguja, Chanda and Bastar areas of Madhya Pradesh

Options:

- (1) A, B, D and E only
- (2) A, B, C only
- (3) A, C, E only
- (4) All A–E correct

Q.19. From the statements given below, choose the correct option with respect to effect of loss of biodiversity in a region

- A. Decline in plant production
- B. Increased resistance to environment perturbations such as draught
- C. Pest and disease cycle will change
- D. Water uses of that region will remain same
- E. There is increased in ecosystem stability

Options:

- (1) A, B, C, D are true only
- (2) C and D are true only
- (3) A and C are true only
- (4) A, B and D are true only

Q.20. From the statements given below, choose the correct one only

- A. Introduction of Nile perch in lake Victoria in East Africa leads to extinction of more than 200 species of cichlid fish.
- B. Clarias gariepinus is illegally introduced in our rivers
- C. Parthenium is invasive weed
- D. More than 25 % of the drugs currently sold in the market worldwide derived from plants
- E. Tropical rain forest covers 14 % of land area now a days

Options:

- (1) A, B, C, D are true
- (2) A, C, D, E are true
- (3) B, C, D, E are true
- (4) A, B, D, E are true

ANSWERS - KEY

Q	1	2	3	4	5	6	7	8	9	10
Ans.	(4)	(4)	(1)	(2)	(1)	(3)	(4)	(1)	(1)	(3)
Q	11	12	13	14	15	16	17	18	19	20
Ans.	(1)	(2)	(4)	(1)	(2)	(1)	(1)	(1)	(3)	(1)

