
Speed Test-95

1. (a) In situ means keeping endangered species of animals or plants into natural environment and not in the environment that looks like natural but is man made, like zoological & botanical gardens. *In situ* includes, national parks, sanctuaries and biosphere reserve.
2. (d) Biodiversity Act of India was passed by the parliament in the year 2002.
3. (b) Biodiversity is the number of variety of organism found within a specified geographic region.
4. (d) The 'Cheetah' has become extinct from India. The endangered subspecies *Acinonyx jubatus venaticus* lives in Asia (Iran). In 1990, there were reports in the Times of India of a cheetah sighting in eastern India. There is a chance some cheetahs remain in India, though it is doubtful. There have also been reports of Asiatic cheetahs in the Balochistan Province of Pakistan, though these continue to be unverified. The cheetah prefers to live in an open biotope, such as semi-desert, prairie, and thick bushes.

5. (d) Hot spots are those areas which were rich in biodiversity but now are under threat due to direct or indirect interference of human activities. These regions are on the edge to get some of their species extinct due to humans. Western Ghats in India are under threat due to continuous developmental activities and Doon valley is under threat due to continuous mining activities.
6. (b)
7. (d) *Podophyllum* is one of the endangered species of Indian medicinal plants. It is used to remove benign (not cancer) growths, such as certain kinds of warts. It works by destroying the tissue.
8. (a) Kaziranga National Park in Assam is famous as a protection environmental park for rhinoceros.
9. (c) 10. (b)
11. (c) Lesser inter-specific competition is not observed in biodiversity hotspots.
12. (b) In India maximum genetic diversity is seen in rice. Total of 23 variety of irrigated ecology and 8 varieties of rainfed ecology has been invented in India.
13. (d) The statements (i) and (ii) are correct. The statement (iii) is incorrect because predators cannot lead to the extinction of prey species. Predator and prey evolve together. The statement (iv) is incorrect because chemical such as nicotine and strychnine produced by the plants are not metabolic disorders but are metabolic wastes.
14. (b) Diversity is due to the long term evolutionary changes. Adaptability to continuous changes in environmental conditions is important for natural selection of variants and variations generation after generation leading to emergence of diverse descendants.
15. (d) Higher diversity in tropical areas is because (i) Speciation is a function of time. Temperate areas have undergone frequent glaciation in the past. It killed most of the species. No such disturbances occurred in tropics where species continued to flourish and evolve undisturbed for millions of years (ii) There are no unfavourable seasons in tropics. Continued favourable environment has helped tropical organisms to gain more niche specialisation and increased diversity. (iii) More solar energy is available in tropics. This promotes higher productivity and increased biodiversity. (iv) Resource availability is higher in tropics (v) There is reduced competition in tropics due to favourable environment. (vi) Rate of extinction is low in tropics.
16. (b) *Lantana*, *Eichhornia* and African catfish are exotic species. Non-native or exotic species are often introduced inadvertently for their economic and other uses. They often become invasive and drive away the local species. These species are considered to be second major cause of extinction of species. Exotic species have proved harmful to both aquatic and terrestrial ecosystems.
17. (d) A stable community is self-perpetuating and final biotic community that is in perfect harmony with the physical environment. It does not show much of changes and is usually resilient to natural or man made disturbances, it is also resistant to evasion by alien species.
18. (b) The number of species of aves, reptiles, amphibians and mammals are 1232, 456, 209 and 300 respectively.
19. (a) IUCN is International Union of Conservation of Nature and Natural Resources, which is now called World Conservation Union (WCU). It has its headquarters at Morges, Switzerland. It maintains a red data book or red list which is a catalogue of taxa facing risk of extinction.
20. (a) The relationship between species richness and area is rectangular hyperbola for a wide variety of taxa whether they are birds, bats, fresh water fishes or flowering plants and the equation can be given as $S = CA^z$. On a logarithmic scale, it is straight line described by the equation $\log S = \log C + z \log A$. Where S is species richness, Z is slope of line or regression coefficient, C is Y-intercept while A is area.
21. (b) Genetic diversity is the diversity in the numbers and types of genes as well as chromosomes present in different species and the variations in the genes and their alleles in the same species. Genetic variation in *Rauwolfia vomitoria* indicates genetic diversity. Another example is the presence of more than 50,000 genetically different strains of rice, and 1000 varieties of mango in India.
22. (d) Keystone species are those species which have significant and disproportionately large influence on the community structure and characteristics. It often has considerably low abundance and biomass as compared to dominant species. Removal of such species causes serious disruption in structure and function of community.
23. (b) National park is a reserved area used for conservation purposes. It is maintained by the government. Cultivation grazing, forestry and habitat manipulation are not allowed. Protection is provided to the entire ecosystem.
24. (d) Bishnois of Rajasthan protect *Prosopis cineraria* and Black buck religiously.
25. (b) Exotic species tend to cause a threat to biodiversity. They are not found in hot spots which are regions of high biodiversity. In India, 3 hotspots are found, i.e., Western Ghats and Sri Lanka, Indo-Burma (NE India) and Himalayas.
26. (c) Ex situ (off site) conservation is conservation of selected rare plants/animals in places outside their natural homes. Ex situ conservation includes offsite collections, gene banks in vitro fertilization, cryopreservation techniques and tissue culture.
27. (a) Jim Corbett National Park (district Nainita Utrakhhand) is the first national park of India, established in 1936.
28. (b) Earth Summit at Rio de Janeiro (1992), Brazil, promoted Convention on Biological Diversity (CBD) which was signed by 152 nations. Its recommendations came into effect on 29th Dec, 1993. India became a party to this Convention on Biological Diversity in May, 1994.
29. (a)
30. (a) Alpha diversity is present within community.
31. (d) 32. (b) 33. (c) 34. (d)
35. (b) Those species whose populations have been seriously depleted and whose ultimate security is not assured are known as Endangered species.
36. (b) 37. (c)
38. (d) Chiru is Himalayan Ibex, also called Tibetan Antelope. Shahtoosh is obtained from its neck hair. It is banned under the law.
39. (c)
40. (d) Nature selects those set of characters that are best adapted to the environment. This has resulted in the great diversity seen in the population of finches.
41. (d) 42. (b) 43. (b) 44. (d) 45. (b)