

CBSE test Paper 02
Ch-15 Biodiversity and Conservation

1. If the outermost circle in the shown figure indicates the manipulative zone of biosphere reserve then 1 & 2 represent:



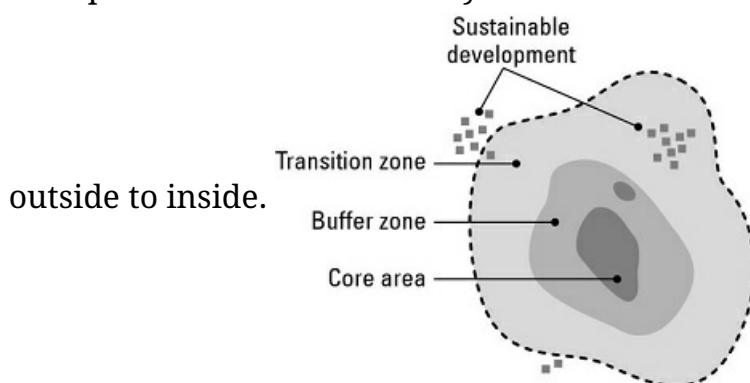
- a. buffer zone and core zone respectively
 - b. tourism zone and core zone respectively
 - c. core zone and cultivation zone respectively
 - d. core zone and buffer zone respectively
2. If a species experiences a 90 percent decline over 10 years (or three generations), would be classified as :
- a. vulnerable
 - b. endangered
 - c. critically endangered
 - d. data deficient
3. Read the following statements:
- i. Insects are essentially absent from the sea.
 - ii. The species diversity on land is generally considerably lower than oceans.
- a. Statement i) is correct but ii) is wrong.
 - b. both statements are wrong
 - c. both statements are correct
 - d. Statement ii) is correct but i) is wrong.
4. Which of the following groups represent features of ex situ conservation
- a. examples are botanical garden and biosphere reserve
 - b. conserves plant germplasm & allows people participation
 - c. costly, allows captive breeding & preserves recalcitrant seeds
 - d. cheaper, allows captive breeding & preserves recalcitrant seeds
5. CES stands for:
- a. Centre for Ecotype services

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- b. Centre for Ecosystem services
 - c. Centre for Environmental sciences
 - d. Centre for Ecological sciences
6. Name the region of biosphere reserve which is legally protected and where no human activity is allowed.
 7. Name two alien species introduced in India.
 8. Give the name of two conventional methods of ex-situ conservation.
 9. Where are the endemic species concentrated in India?
 10. What is meant by endemic species?
 11. What is the most important cause of biodiversity loss?
 12. Give three hypothesis for explaining why tropics show greatest levels of species richness.
 13. Snake charmer came to the house and smelled the presence of a cobra which the residents had never seen in the last 10 years. The landlord agreed to allow the man to search, catch and take away with him the snake. Little Jazman disagreed and drove the man away.
 - i. Did Jazman do the right thing? What values did he show?
 - ii. What importance do snakes have in nature?
 - iii. Draw a food web showing the place of snakes.
 14. Biodiversity must be conserved as it plays an important role in many ecosystem services that nature provides. Explain any two services of the ecosystem.
 15. How do ecologists estimate the total number of species present in the world?

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Answer

1. d. core zone and buffer zone respectively, **Explanation:** Biosphere reserves are divided into a number of zones. The outer most circle of biosphere represent manipulative zone followed by a buffer zone and core zone respectively from



2. c. critically endangered, **Explanation:** A critically endangered (CR) species is one which has been categorized by the International Union for Conservation of Nature (IUCN) as facing a very high risk of extinction in the wild. Criteria for critically endangered is an observed, estimated, inferred or suspected population size reduction of $\geq 90\%$ over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased. Critically endangered species should be protected to avoid extinction.
3. a. Statement i) is correct but ii) is wrong, **Explanation:** Insects are essentially absent from the sea because insects respire using trachea from air. The species diversity on land is generally considerably higher than ocean therefore, statement ii is incorrect.
4. c. costly allows captive breeding & preserves recalcitrant seeds, **Explanation:** Ex-situ conservation is costly procedure. It allows captive breeding and preserves recalcitrant seeds. It is done inside laboratory at low temperature and controlled environmental conditions.
5. d. Centre for Ecological sciences, **Explanation:** CES The Centre for Ecological Sciences, founded in 1983 with the support of the Ministry of Environment and

Forests offers exciting opportunities for research in a variety of areas in ecology.

6. Core zone or natural zone. This area has undisturbed ecosystem and is legally protected.
7. (i) Water Hyacinth (*Eicchornia crassipes*)
(ii) Carrot grass (*Parthenium*)
8. Two conventional methods of ex-situ conservation are:
 - Zoological parks
 - Botanical gardens
9. Endemic species are found concentrated in North East, North West, Western Ghats and Andaman Nicobar Islands. Lion-Tailed Macaque in Western Ghats and Andaman serpent-eagle found in Andaman Nicobar Islands are examples of some endemic species.
10. The species which are restricted or confined to a particular geographical region are called endemic species. Example: Lion Tailed Macaque monkeys are found exclusively in Western Ghats in India.
11. Habitat loss and fragmentation. This is the most important cause driving animals and plants to extinction. When large habitats are wiped out or broken up into small fragments due to various human activities, mammals and birds requiring large territories and certain animals with migratory habits are badly affected, leading to population decline.
12. Biodiversity is not uniformly distributed throughout the world. Polar regions have very little biodiversity whereas South America has the greatest biodiversity on the earth. There are many hypothesis for higher biodiversity in tropics:
 - (1) There are no unfavourable seasons or harsh climatic conditions in tropics. Continued favourable environmental condition has helped tropical organisms to flourish more.
 - (2) There is more solar energy available in the tropics due to which productivity is higher and this contribute to greater diversity in both plants and animal species.
 - (3) The tropical environment is older than other types of habitats. This has provided more time for the evolution of greater number of plants and animals.
13. i. Yes. He protected the snake from being caught or killed by the snake charmer for his own selfish interest. Jazman showed values such as scientific attitude,

kindness, obligation to maintain the biodiversity of nature.

ii. Snake is an important member in the food chain and food web.

iii. 2 & 3



14. (1) Ecosystem provides direct economic benefits to humans in the form of food like cereals, pulses, nuts and fruits. We also get many other products of commercial importance such as timber, fibres, firewood, construction material, industrial products like tannins, lubricants, dyes, resins, perfumes and products of medicinal importance.

(2) Forests act as 'carbon sink' and producers of huge amount of oxygen. The fast dwindling Amazon forest is producing 20 percent of the total oxygen, without which we cannot live for a moment. Thus forest ecosystem plays a crucial role in maintaining carbon-oxygen balance in nature. This keeps check on pollution and global warming.

15. Ecologists make a statistical comparison of the species richness of exhaustively studied groups of insects belonging to the temperate and tropical regions. Then they extrapolate this ratio to other groups of animals and plants and calculate gross estimate of the total number of species present on the earth.