

Solution

BIODIVERSITY AND CONSERVATION WS 1

Class 12 - Biology

1. (a) Assam

Explanation: Assam

2.

(d) 1000

Explanation: Various human activities like pollution, deforestation, urbanization, industrialization have increased the extinction rate of various organisms by a factor of 1000.

3.

(d) Amazon rain forest

Explanation: The Amazon rain forest (it is so huge that it is called the 'lungs of the planet') harbouring probably millions of species is being cut and cleared for cultivating soya beans or for conversion to grasslands for raising beef cattle.

4.

(d) Phenology

Explanation: Phenology

5.

(d) Biosphere reserves only

Explanation: The biosphere reserve is generally a vast protected area of land patches divided into three different zone, core, buffer, and transition zone. A transition zone May contain a variety of agricultural activities, grazing, plantation, cultivation, and settlements and other uses and in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests, and other stakeholders work together to manage and sustainably.

6.

(b) Death of fish due to lack of oxygen.

Explanation: Death of fish due to lack of oxygen.

7.

(c) Mango

Explanation: Mango

8.

(d) Rhinoceros unicornis

Explanation: Rhinoceros unicornis

9.

(d) in situ conservation

Explanation: In situ conservation is the conservation of organisms in their natural geographic regions by providing protection from poaching, cutting, or other similar activities. In sanctuaries, national parks and biosphere reserves organisms are kept in natural habitat.

10.

(b) 2002

Explanation: 2002

11.

(b) Aravalli Hills - Karnataka

Explanation: Aravalli Hills - north-western part of India

12. (a) Lesser interspecific competition

Explanation: Lesser interspecific competition is not generally seen in biodiversity hotspots.

13.

(d) Narmada

Explanation: Narmada

14. (a) Andamans

Explanation: Andamans

15.

(c) Animals on verge of extinction.

Explanation: Animals on verge of extinction.

16. (a) Amphibian

Explanation: Amphibian faces maximum threat of extinction.

17. (a) 1973

Explanation: 1973

18.

(d) (ii), (iii) and (iv) only

Explanation: (ii), (iii) and (iv) only

19.

(c) Biosphere reserves

Explanation: Biosphere reserves

20.

(b) Homogenized population

Explanation: Gene flow or movement of genes leads to homogenized populations of a species in an ecosystem. Homogenized populations have all the species having almost the same genetic makeup.

21.

(c) Amazon rainforest

Explanation: Amazon rainforest

22.

(d) Over exploitation by humans

Explanation: Many species extinctions in the last 500 years (Steller's sea cow, passenger pigeon) were due to overexploitation by humans.

23.

(d) Yucca

Explanation: Yucca

24.

(d) Ecotourism

Explanation: Ecotourism is a form of tourism involving visiting fragile, pristine, and relatively undisturbed natural areas, intended as a low-impact and often small scale alternative to standard commercial mass tourism.

Conserving biodiversity provides a number of benefits along with the contribution to the economy of the country by ecotourism. Large number of foreign visits to diverse rich countries as tourists.

25.

(b) Distribution of certain species in a restricted area.

Explanation: Endemism is the ecological state of a species being unique to a defined geographic location, such as an island, nation, country, or other defined zone, or habitat type; organisms that are indigenous to a place are not endemic to it if they are also found elsewhere.

26.

(d) Ecotone

Explanation: Ecotone

27.

(c) Restoring extinct species of plants and animals

Explanation: Importance of Biosphere Reserve:

- i. **Conservation:** Biosphere reserves conserve genetic resources, species, ecosystems, and landscapes without uprooting inhabitants.
- ii. **Development:** Sustainable economic, cultural, social, and ecological developments are ensured.
- iii. **Restoration:** Biosphere reserve helps to rebuild any damage caused to ecosystems and habitats.

iv. **Education and Research:** Biosphere reserve provides a lot of scientific information for specific scientific studies and research.

28. **(a)** Sacred groves

Explanation: Sacred groves of India are forest fragments of varying sizes, which are communally protected, and which usually have a significant religious connotation for the protecting community. Hunting and logging are usually strictly prohibited within these patches.

Rare endangered and endemic taxa can be found intact and flourishing in sacred groves.

29.

(b) Fungi

Explanation: Fungi exhibit more species diversity. This is followed by algae, bryophytes, and then fens and allies.

30.

(d) 1.7 - 1.8 million

Explanation: 1.7 - 1.8 million

31.

(b) 1991

Explanation: 1991

32. **(a)** Self perpetuating

Explanation: Self perpetuating

33. **(a)** Amazon rain forest

Explanation: The Amazon Rainforest, also known as Amazonia or Amazon Jungle, is one of the world's greatest natural resources and covers most of the Amazon Basin of South America.

Because its vegetation continuously recycles carbon dioxide into oxygen, it has been described as the "Lungs of our Planet".

About 20% of earth's oxygen is produced by the Amazon rainforest.

34.

(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 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.

35.

(b) Eastern Himalaya and Western Ghats

Explanation: Eastern Himalaya and Western Ghats

36.

(c) Costly, allows captive breeding and preserves recalcitrant seeds.

Explanation: Ex-situ conservation is a costly procedure. It allows captive breeding and preserves recalcitrant seeds. It is done inside a laboratory at low temperatures and controlled environmental conditions.

37.

(b) 23.5° - 66.5°

Explanation: 23.5° - 66.5°

38. **(a)** Western Ghats and Eastern Himalayas

Explanation: Western Ghats and Eastern Himalayas

39.

(d) Kerala

Explanation: Kerala

40.

(b) Rio-de Janeiro

Explanation:

- United Nations Conference on Environment and Development (UNCED), byname Earth Summit, the conference held at Rio de Janeiro, Brazil (June 3–14, 1992), to reconcile worldwide economic development with protection of the environment.
- The Earth Summit was the largest gathering of world leaders in history, with 117 heads of state and representatives of 178 nations in all attending.
- By means of treaties and other documents signed at the conference, most of the world's nations nominally committed themselves to the pursuit of economic development in ways that would protect the Earth's environment and nonrenewable resources.

41. (a) Presently the population is sufficient but is undergoing depletion.

Explanation: A vulnerable species is one which has been categorized by the International Union for Conservation of Nature as likely to become endangered unless the circumstances threatening its survival and reproduction improve. The population of Vulnerable species is sufficient but is undergoing depletion due to some factors so that it is facing the risk of extinction in the medium-term in the future.

42.

(d) Cynodon

Explanation: Carrot grass (Parthenium), Lantana, and water hyacinth (Eichhornia) caused environmental damage and posed a threat to our native species by invasive weed species.

43. (a) Deforestation

Explanation: Deforestation

44. (a) Zoological garden

Explanation: Zoological garden

45.

(d) Euphorbiaceae

Explanation: Euphorbiaceae

46. (a) Extinct organisms

Explanation: In biology and ecology, extinction is the end of an organism or of a group of organisms (taxon), normally a species. The moment of extinction is generally considered to be the death of the last individual of the species, although the capacity to breed and recover may have been lost before this point. For example Dodo.

47.

(b) Scavengers

Explanation: Scavenger feeds on dead animal and plant material present in the habitat. Cleanliness observed by human beings will adversely affect the habitat of the scavengers.

48. (a) 34

Explanation: 34

49.

(c) The desert areas of Rajasthan and Gujarat have a very high level of desert animal species as well as numerous rare animals.

Explanation: The desert areas of Rajasthan and Gujarat have a very high level of desert animal species as well as numerous rare animals.

50.

(c) Dachigam National Park - Snow leopard

Explanation: Dachigam National Park - Snow leopard

51.

(b) Uttar Pradesh

Explanation: Uttar Pradesh

52.

(d) Dachigam National Park, Jammu and Kashmir

Explanation: Dachigam National Park, Jammu and Kashmir

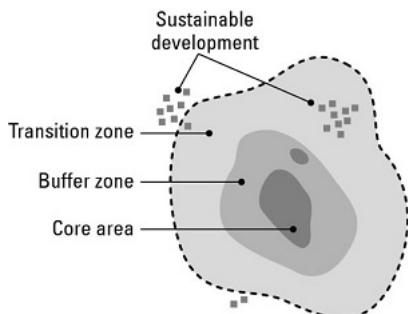
53.

(c) Desert biome

Explanation: For a habitat to be listed as a desert, it must receive very little precipitation (rainfall or snowfall) throughout the year. This means that the southern polar region is, by definition, a desert. Regardless of whether the temperature is extremely hot or extremely cold, there is very little biodiversity in the desert because it is a harsh climate.

54. **(a) Natural zone, buffer zone and transition zone.**

Explanation: The three zones of biosphere reserves are natural zone, buffer zone, and transition zone. The natural zone is also known as core zone and transition zone is called as manipulation zone.



55.

(d) Khecheopalari Lake of Sikkim.

Explanation: Sacred lake is a pool of water generally near religious places where catching fish and other aquatic animals are strictly prohibited. Khecheopalari Lake of Sikkim is a sacred lake in India among many.

56. **(a) Tropics**

Explanation: Tropical environments, unlike temperate ones, are less seasonal, relatively more constant and predictable. There is more solar energy available in the tropics, which contributes to higher productivity. Alpine plants are adapted to the harsh conditions of the alpine environment, which include low temperatures, dryness, ultraviolet radiation, wind, drought, poor nutritional soil, and a short growing season.

57. **(a) Keolado National Park**

Explanation: Keolado National Park

58.

(d) The Earth Summit

Explanation: The historic Convention on Biological Diversity ('The Earth Summit') held in Rio de Janeiro in 1992, called upon all nations to take appropriate measures for conservation of biodiversity and sustainable utilization of its benefits.

59. **(a) All the species are neither threatened nor indigenous species of India.**

Explanation: African catfish (*Clarias gariepinus*), Lantana, and water hyacinth (*Eichhornia*) all are exotic species that are invasive weed species that came from other countries in India.

60. **(a) Brazil**

Explanation: Brazil

61.

(b) Preparation of homozygous diploids.

Explanation: Preparation of homozygous diploids.

62. **(a) A species which makes up only a small proportion of the total biomass of a community, yet has a huge impact on the community organization and survival.**

Explanation: A species which makes up only a small proportion of the total biomass of a community, yet has a huge impact on the community organization and survival.

63.

(c) Western Ghats

Explanation: Western Ghats

64.

(c) 1.8 %

Explanation: 1.8 %

65.

(d) Research and education

Explanation: Buffer zone is managed to accommodate a variety of resources for restoration of degraded ecosystems and habitats, conservation of genetic resources, species and ecosystem, and monitoring of development and conservation programme. It is mainly for research and education.

66. **(a) extinct**

Explanation: The dodo is an extinct flightless bird that was endemic to the island of Mauritius, east of Madagascar in the Indian Ocean. The last confirmed sighting of a dodo was in 1681 and by the end of the 17th century, there were no dodos left.



67. **(a) Amazonian rain forests**

Explanation: The Amazon in South America is the largest, most diverse tropical rainforest on Earth, covering an area of five and a half million square kilometres.

The Amazon rainforest functions as a giant air machine that absorbs a large amount of carbon dioxide, and produces oxygen. That is why it is often called the "Lungs of the Earth."

68.

(d) Habitat destruction

Explanation: Habitat destruction

69.

(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. It's the highest risk category assigned by the IUCN Red List for wild species. In India, about 18 animals and 44 plant species are critically endangered.

70.

(d) Critically endangered, endangered, vulnerable.

Explanation: The International Union for Conservation of Nature (IUCN) is the foremost authority on threatened species, and treats threatened species not as a single category, but as a group of three categories, depending on the degree to which they are threatened:

- Vulnerable species
- Endangered species
- Critically endangered species

71.

(d) Amur Leopard, Cross River gorilla, Hawksbill turtle, and Leatherback turtle

Explanation: According to the red data book 2008, Critically endangered is the highest conservation status animals. The Amur Leopard has just over 60 individuals left in its population. The Cross River Gorillas are a population between 200 and 300 individuals. Hawksbill Turtle, Leatherback Turtle have all unknown population numbers.

72.

(d) Red Panda

Explanation: Red Panda

73.

(b) Insitu conservation

Explanation:

- Habitat conservation is a management practice that seeks to conserve, protect, and restore habitat areas for wild plants and animals, especially conservation reliant species, and prevent their extinction, fragmentation, or reduction in range.

- In-situ conservation is the on-site conservation or the conservation of genetic resources in natural populations of plant or animal species, such as forest genetic resources in natural populations of tree species.

74.

(b) Coral reefs

Explanation: Coral reefs are believed by many to have the highest biodiversity of any ecosystem on the planet even more than a tropical rainforest. Occupying less than one percent of the ocean floor, coral reefs are home to more than twenty-five percent of marine life.

75.

(d) *Mystus singhala*

Explanation: *Mystus singhala*