Conservation Geography

Week 8

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1) The fig tree bears fruits in times when animals do not have much access to food. In this context,

- ○ least concern species
- ◉ keystone species
- ○ flagship species
- ○ extinct species

The correct answer is: keystone species

Explanation:

Fig trees are an example of keystone species because they provide a critical food resource during times when other fruits are scarce. Their fruits support a wide variety of animals, including bats, primates, birds, and insects, thus playing a disproportionately large role in maintaining the ecosystem's structure and functioning

2) The "subset of physical and biotic environmental factors that permit an animal (or plant) to survive and reproduce"

- ◉ habitat
- ○ ecosystem
- ○ biome
- ○ biosphere

The correct answer is: habitat

Explanation:

A habitat is defined as the subset of physical and biotic environmental factors that permit an animal or plant to survive and reproduce. It includes the natural home or environment where a species lives, encompassing both abiotic factors like soil, moisture, and temperature, and biotic factors such as food availability and presence of predators.

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3) Which of these correctly represents the process of habitat fragmentation and loss?

- (●) Original forest → Dissection → Perforation → Fragmentation → Attrition
- ( ) Original forest → Dissection → Attrition → Fragmentation → Perforation
- ( ) Original forest → Dissection → Perforation → Attrition → Fragmentation
- ( ) Original forest → Dissection → Fragmentation → Perforation → Attrition

The correct answer is:
Original forest → Dissection → Perforation → Fragmentation → Attrition

Explanation:
The process of habitat fragmentation typically starts with the dissection of the original continuous habitat, followed by perforation (small holes in the habitat), then larger-scale fragmentation into smaller patches, and finally attrition or loss of these fragments. This sequence describes how a large continuous habitat becomes broken down and reduced over time due to natural or human activities.

4) Soil formation is an example of

- ( ) provisioning service
- ( ) regulating service
- (●) supporting service
- ( ) cultural service

The correct answer is: supporting service

Explanation:
Soil formation is classified as a supporting service in ecosystem services. Supporting services are fundamental processes that enable the production of all other ecosystem services, such as nutrient cycling, soil formation, and habitat provision. They maintain the conditions necessary for life and support natural ecosystems.

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5) Biological control of pest populations is an example of

- ○ provisioning service
- ◉ regulating service
- ○ supporting service
- ○ cultural service

The correct answer is: regulating service

Explanation:

Biological control of pest populations is an example of a regulating service. Regulating services help control natural processes such as pest and disease regulation, climate regulation, and water purification, thereby maintaining ecosystem health and benefiting human activities like agriculture. Biological control naturally reduces pest populations, reducing the need for chemical interventions.

6) The acronym HIPPO does not include

- ○ habitat loss
- ○ invasive species
- ◉ pollination
- ○ pollution

The correct answer is: pollination

Explanation:

The acronym HIPPO stands for the major threats to biodiversity identified by Edward O. Wilson: Habitat loss, Invasive species, Pollution, Population (human), and Overharvesting. It does not include pollination, which is a vital ecological process but not a threat to biodiversity. Therefore, pollination is not part of HIPPO.

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7) The tiger has a home range of several square kilometres, regulates the ecosystem through controlling herbivore populations ascades, and people come to tiger reserves to watch tigers. Thus, the tiger can be called as

- ○ umbrella species
- ○ keystone species
- ○ flagship species
- ◉ all of the above

The correct answer is: all of the above

Explanation: The tiger fits the roles of:

- Umbrella species: It requires large home ranges, so protecting tiger habitats also conserves many other species.
- Keystone species: As an apex predator, it controls herbivore populations, maintaining ecosystem balance and trophic cascades.
- Flagship species: Tigers attract public interest and tourism, promoting conservation awareness and funding.

Thus, the tiger plays a multifaceted role in conservation and ecosystem health.

8) People come to Sessa orchid sanctuary in Arunachal Pradesh to witness orchids, which in this context would be classified as

- ○ umbrella species
- ○ keystone species
- ◉ flagship species
- ○ extinct species

The correct answer is: flagship species

Short explanation:

Orchids in the Sessa Orchid Sanctuary attract visitors and nature enthusiasts, making them a flagship species. Flagship species are species chosen to represent an environmental cause or conservation project because they appeal to the public and can help raise awareness and support for habitat protection. Orchids, being beautiful and charismatic, serve this role well in this sanctuary.

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9) Captive breeding is an example of

- ○ in-situ conservation
- ◉ ex-situ conservation
- ○ in-situ preservation
- ○ ex-situ preservation

The correct answer is: ex-situ conservation

Explanation:

Captive breeding involves breeding endangered or threatened species in controlled environments outside their natural habitats, such as zoos, botanical gardens, or wildlife reserves. This method is a form of ex-situ conservation, where conservation activities occur away from the natural habitat to protect and increase population numbers before possible reintroduction into the wild.

10) We prefer those areas for the creation of a conservation reserve where the level of threat is

- ○ very high
- ◉ medium
- ○ very low
- ○ non-existent

The correct answer is: medium

Short explanation:

Conservation reserves are often preferentially created in areas where the level of threat to biodiversity is medium. These areas have enough existing natural habitat and species diversity to conserve effectively while still facing enough threat to require protection to prevent further degradation. Areas with very high threat may already be too degraded, and those with very low or non-existent threat might not need urgent intervention.