

- ▶ **Statement 2 is incorrect:** All organisms have adaptations that help them survive and thrive. Some adaptations are structural. Structural adaptations are physical features of an organism like the bill on a bird or the fur on a bear. Other adaptations are behavioral. Having striped fur for camouflage on the female one to attract its male counterpart for reproduction is a structural adaptation.
- ▶ **Statement 1 and 3 are correct:** Behavioral adaptations are the things organisms do to survive such as migration, hibernation, camouflage, nocturnal and boreal type of living.
- ▶ **Statement 4 is incorrect:** The animals which live in hot and dry climates adapt some structural or physical changes to survive in such time of climate. To prevent water loss from the body their bodies are reduced in size.

22. Correct Option: (b)

Explanation:

- ▶ **Statement 2 is correct:** Amensalism is a negative association between two species in which one species harms or restricts the other species without itself being adversely affected or harmed by the presence of the other species. Organisms that secrete antibiotics and the species that get inhibited by the antibiotics are examples of Amensalism.
- ▶ **Statement 1 is incorrect:** Mutualism or interspecies reciprocal altruism is a long-term relationship between individuals of different species where both individuals benefit from each other but their relationship is not obligatory. An example of mutualism is the relationship between the ocellaris clownfish that dwell among the tentacles of Ritteri seaanemones.
- ▶ **Statement 2 is incorrect:** In a parasitic relationship, the parasite benefits while the host is harmed. Parasitism takes many forms, from endoparasites that live within the host's body to ectoparasites and parasitic castrators that live on its surface and micro predators like mosquitoes that visit intermittently.
- ▶ **Statement 4 is incorrect:** Commensalism describes a relationship between two living organisms where one benefits and

the other is not significantly harmed or helped. Commensal relationships may involve one organism using another for transportation or for housing, or it may also involve one organism using something another created, after its death. Examples of metabiosis are hermit crabs using gastropod shells to protect their bodies, and spiders building their webs on plants.

23. Correct Option: (a)

Explanation:

- ▶ **Statement 1 is correct:** Also known as 'Reech' in the country. The sloth bear is a nocturnal (hunting at night) bear species that feeds chiefly on insects, found wild within the Indian Subcontinent.
- ▶ IUCN estimates that less than 20,000 sloth bears survive in the wilds of the Indian subcontinent and Sri Lanka. IUCN classifies it as vulnerable.
- ▶ **Statement 2 and 3 are correct:** It is listed in Schedule I of Indian Wildlife Protection Act, 1972, which provides Legal protection. All trade and export of their body parts has been banned. The forest department also gives compensation for bear attacks if there is a death or injury.
- ▶ International trade is prohibited as it is listed in Appendix I of the Convention on International Trade in Endangered Species.
- ▶ **Statement 4 is incorrect:** Gujarat government has launched the Sloth Bear Habitat project to provide better habitat by restoring the ecology of Jalore wildlife sanctuary, where more trees will be planted and unwanted vegetation removed.
- ▶ Reasons for Vulnerability:
 - Habitat fragmentation and destruction –Encroachment of land even inside the protected areas is prevalent in almost all states, according to a WII survey. A fragmented habitat means they have to travel longer distances to get fruits, mites, ants and plant material. Sloth bears have poor eyesight, but a strong sense of smell. Their eyes are directed at the ground while they are searching for food. When there is human presence close by, they attack