

DIRECTION : In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.

- 1. Assertion :** Green plants of the ecosystem are the transducers.
Reason : Producers trap the radiant energy of the sun and change it into chemical energy.
- 2. Assertion :** Aquariums are known as the man-made ecosystems.
Reason : Aquariums are created and maintained by humans.
- 3. Assertion :** Flow of energy in a food chain is unidirectional.
Reason : Energy captured by autotrophs does not revert back to the solar input and it passes to the herbivores.
- 4. Assertion :** Biomagnification is caused due to the accumulation of biodegradable toxicants in organisms at each successive trophic level.
Reason : Biomagnification leads to the maximum accumulation of chemicals in small fishes.
- 5. Assertion :** Animals adopt different strategies to survive in hostile environment.
Reason : Praying mantis is green in colour which merges with plant foliage.
- 6. Assertion :** A network of food chains existing together in an ecosystem is known as food web.
Reason : An animal like kite cannot be a part of a food web.
- 7. Assertion :** CFCs deplete the ozone layer.
Reason : CFCs are used as refrigerants and in fire extinguishers.

- 8. Assertion :** The concentration of harmful chemicals is more in human beings.
Reason : Man is at the apex of the food chain.
- 9. Assertion :** The crown fires are most destructive as they burn the tree top.
Reason : Due to crown fire the temperature of that area may rise upto 700°C.
- 10. Assertion :** Tropical rain forests are disappearing fast from developing countries such as India.
Reason : No value is attached to these forests because these are poor in biodiversity.
- 11. Assertion :** Abiotic component of an ecosystem involves cycling of material and flow of energy.
Reason : This is essential to keep biotic factors alive.
- 13. Assertion :** Man is a herbivore.
Reason : Omnivores eat both plant food and meat of animals.
- 14. Assertion :** In an ecosystem, the function of producers is to convert organic compounds into inorganic compounds.
Reason : Green plants, the producers, transduce solar energy.
- 15. Assertion :** Trophic levels are formed by only plants.
Reason : Food chains and webs are formed due to linked organisms on the basis of their nutrition.
- 16. Assertion :** Herbivores are called first order consumers.
Reason : Tiger is a top carnivore.
- 17. Assertion :** Ecology is study of relationship between living organisms and their environment.
Reason : The biotic community and non-living environment of an area function together to form an ecosystem.
- 22. Assertion :** Ozone is both beneficial and damaging.
Reason : Stop the release of chlorofluorocarbons to protect the ozone.
- 23. Assertion :** Garden is an artificial ecosystem.
Reason : Biotic and abiotic components are manipulated by humans.
- 26. Assertion :** Decomposers act as cleaning agents of the environment.
Reason : The decomposers recycle waste material in the hydrosphere.