



Daily Subject wise Quiz Day 26 Environment I (Online Prelims Test)

1) Which one of the following is the correct sequence of ecosystems in the order of decreasing productivity?

- a. Oceans, lakes, grasslands, mangroves
- b. Mangroves, oceans, grasslands, lakes
- c. Mangroves, grasslands, lakes, oceans
- d. Oceans, mangroves, lakes, grasslands

Answer : c

Order of productivity

- The percentage of energy that enters an ecosystem in the form of biomass at a particular trophic level is termed as Productivity of the Ecosystem.
- Production/unit area depends on the number and diversity of producers.
- Mangroves are one of the high productive regions in the world whereas ocean has least productivity.

2) Which of the followings statements best describes an Indicator species?

- a. It is a species whose presence, absence or abundance reflects a specific environmental condition.
- b. It is a species non-native to the ecosystem under consideration and whose introduction causes or is likely to cause harm.
- c. It is a species which is introduced to reduce the level of pollution in an ecosystem.
- d. It is a species that has a disproportionately large effect on the communities in which it occurs.

Answer : a

Indicator Species

- Indicator species, organism—often a microorganism or a plant—that serves as a measure of the environmental conditions that exist in a given locale.
- Example - Lichens: Quality of air can be determined based on its presence.

3) Consider the following statements with respect to the Tropic levels

- 1. The energy pyramid of an ecosystem is always upright and narrows to the top.
- 2. The biomass in the upper trophic levels is generally very high as compared to the lower trophic levels.

Which of the above statements is/are correct?

- a. 1 only
- b. 2 only

- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

Trophic Levels

- The trophic level of an organism is the position it occupies in a food web.
- A food chain is a succession of organisms that eat other organisms and may, in turn, be eaten themselves.
- The trophic level of an organism is the number of steps it is from the start of the chain.
- Since each higher trophic level receives only a fraction of energy of the lower trophic levels, the energy pyramid is narrow at the top.
- But, generally (barring some aquatic ecosystems) lower trophic levels have higher biomass as compared to the higher trophic levels.

4) Consider the following statements with respect to Vegetative Propagation

1. Plants raised by vegetative propagation can bear flowers and fruits earlier than those produced from seeds.
2. Vegetative propagation is not possible from the plants that have lost the capacity to produce seeds.
3. Plants produced through vegetative propagation are genetically similar enough to the parent plant.

Which of the above statements is/are correct?

- a. 1 & 2 only
- b. 1 & 3 only
- c. 2 & 3 only
- d. All of the above



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Answer : b

Vegetative propagation

- There are many plants in which parts like the root, stem and leaves develop into new plants under appropriate conditions.
- This property of vegetative propagation is used in methods such as layering or grafting to grow many plants like sugarcane, roses, or grapes for agricultural purposes.
- Plants raised by vegetative propagation can bear flowers and fruits earlier than those produced from seeds.
- Such methods also make possible the propagation of plants such as banana, orange, rose and jasmine that have lost the capacity to produce seeds.
- Another advantage of vegetative propagation is that all plants produced are genetically similar enough to the parent plant to have all its characteristics.

5) Consider the following statements with respect to Food chain in ecosystem

1. In an aquatic ecosystem, more energy flows through grazing food chain than detritus food chain.
2. In a terrestrial ecosystem larger fraction of energy flow through detritus food chain than grazing food chain.

Which of the above statements is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

Food Chain

- In an aquatic ecosystem, grazing food chain is the major conduit for energy flow.
- As against this, in a terrestrial ecosystem, a much larger fraction of energy flows through the detritus food chain than through the grazing food chain.
- When energy is passed in an ecosystem from one trophic level to the next, only ten percent of the energy will be passed, around 90% of energy will be lost.



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