SmartKalike

CBSE Class 10 · Science

Our Environment

10 most probable questions for Boards 2027

Q1. 1 mark · Very short answer

Approximately what percentage of the sunlight falling on their leaves do green plants capture and convert into food energy?

Answer

The green plants in a terrestrial ecosystem capture about 1% of the energy of sunlight that falls on their leaves and convert it into food energy.

Q2. 2 marks · Short answer

What is a food chain? What is meant by a trophic level in a food chain?

Answer

A food chain is a series of organisms feeding on one another. Each step or level of the food chain forms a trophic level, such as producers, herbivores and carnivores.

Q3. 3 marks · Medium answer

Name the groups of organisms occupying the first, second, third and fourth trophic levels. Explain how producers make energy available to consumers in an ecosystem.

Answer

1. Autotrophs, or producers, occupy the first trophic level; herbivores, or primary consumers, occupy the second.
2. Small carnivores, or secondary consumers, occupy the third trophic level, and larger carnivores, or tertiary consumers, occupy the fourth trophic level. Producers capture solar energy and convert it into chemical energy, making that energy available to heterotrophs, or consumers.

Q4. 1 mark · Multiple choice

On average, what fraction of the food energy at one trophic level becomes body matter available to the next trophic level? (A) 1% (B) 10% (C) 50% (D) 90%

Answer

(B) 10% — An average of 10% of the food eaten is turned into its own body and made available for the next level of consumers.

Q5. 2 marks · Short answer

Why is energy flow through trophic levels unidirectional? Explain why food chains generally consist of only three or four steps.

Answer

The flow of energy is unidirectional. The energy that is captured by the autotrophs does not revert back to the solar input and the energy which passes to the herbivores does not come back to

autotrophs. Since so little energy is available for the next level of consumers, food chains generally consist of only three or four steps.

Q6. 3 marks · Medium answer

Explain why materials such as plastics can persist for a long time in the environment. State two possible effects of non-biodegradable substances on the environment or its ecosystems.

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Q7. 1 mark · Multiple choice

Which statement correctly distinguishes biodegradable from non-biodegradable substances? (A) Biodegradable substances are broken down by biological processes; non-biodegradable substances are not. (B) Both are always broken down by biological processes. (C) Non-biodegradable substances are broken down biologically, but biodegradable substances are not. (D) Neither type can be changed in the environment.

Full answer on SmartKalike: https://smartkalike.com/cbse/class-10/science/our-environment

Q8. 2 marks · Short answer

What is ozone’s molecular formula? State the essential function of ozone at higher levels of the atmosphere.

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Q9. 1 mark · Multiple choice

Why does the same enzyme not break down every substance in food? (A) Enzymes act specifically on particular substances. (B) Enzymes act only on non-biodegradable substances. (C) Enzymes break down every substance at the same rate. (D) Enzymes work only outside the body.

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Q10. 2 marks · Short answer

State one harmful effect of ultraviolet radiation on organisms described in the textbook.

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