CBSE CLASS X

Science (086)

QUESTION PAPER

AI-generated question paper

Code: 8MEMBQ **Questions: 12** **Maximum Marks: 21** **Generated: 2026-06-25 17:24**

SELECTIONS USED

Subject	Science
Lessons	13 Our Environment
Level of understanding	Initial understanding
Question selection	Curated chapter coverage (~3 questions per section)
Model	claude-sonnet-4-6

Composition — Difficulty: 6 straightforward · 6 medium | Types: 5 Short · 4 Very short · 3 MCQ

Q1. straightforward · initial-understanding · § Introduction **[1]**

What term describes all the interacting organisms in an area together with the non-living physical factors of their surroundings?

◆ Our Environment

Q2. straightforward · initial-understanding · § 13.1 ECO-SYSTEM — WHAT ARE ITS COMPONENTS? **[1]**

What is an ecosystem? Give one example of a biotic and one example of an abiotic component found in a pond ecosystem.

◆ Our Environment

Q3. medium · initial-understanding · § 13.1 ECO-SYSTEM — WHAT ARE ITS COMPONENTS? **[3]**

What role do decomposers play in an ecosystem, and what would happen to the environment if they were absent?

◆ Our Environment

Q4. medium · initial-understanding · § 13.1 ECO-SYSTEM — WHAT ARE ITS COMPONENTS? **[1]**

Which of the following correctly explains why food chains rarely have more than four trophic levels?
(A) Producers can only support three types of consumers at a time.
(B) So little usable energy remains after four trophic levels that supporting another level becomes impossible.
(C) Carnivores refuse to eat organisms beyond the fourth trophic level.
(D) The number of individual organisms increases at every higher trophic level, making energy transfer inefficient.

A Producers can only support three types of consumers at a time.
B So little usable energy remains after four trophic levels that supporting another level becomes impossible.
C Carnivores refuse to eat organisms beyond the fourth trophic level.
D The number of individual organisms increases at every higher trophic level, making energy transfer inefficient.

◆ Our Environment

Q5. straightforward · initial-understanding · § 13.1.1 Food Chains and Webs **[3]**

In the food chain Grass → Grasshopper → Frog → Snake, identify the trophic level occupied by each organism and name the type of consumer each animal represents.

◆ Our Environment

Q6. straightforward | initial-understanding | § 13.1.1 Food Chains and Webs **[1]**

Only about 10% of the energy available at one trophic level passes on to the next. What happens to the remaining 90%?

◆ Our Environment

Q7. medium | initial-understanding | § 13.1.1 Food Chains and Webs **[1]**

Which of the following correctly explains why harmful chemicals like pesticides are found in the highest concentration in organisms at the top of a food chain?
(A) Top-level consumers eat the most food, so they ingest more pesticides directly from the soil.
(B) Pesticides are produced naturally by large carnivores as a by-product of digestion.
(C) Non-degradable chemicals are not excreted and keep accumulating at each successive trophic level, reaching the highest concentration in top consumers.
(D) Pesticides evaporate from lower trophic levels and are absorbed through the skin of top-level consumers.

A Top-level consumers eat the most food, so they ingest more pesticides directly from the soil.
B Pesticides are produced naturally by large carnivores as a by-product of digestion.
C Non-degradable chemicals accumulate progressively at each trophic level, so the final consumer inherits the combined load from all levels below.
D Pesticides evaporate from lower trophic levels and are inhaled by top-level consumers.

◆ Our Environment

Q8. medium | initial-understanding | § 13.2 HOW DO OUR ACTIVITIES AFFECT THE ENVIRONMENT? **[3]**

What is biological magnification? Name the organism in a food chain that would have the highest concentration of pesticides, and give one reason why.

◆ Our Environment

Q9. straightforward | initial-understanding | § 13.2.2 Managing the Garbage we Produce **[1]**

Define biodegradable and non-biodegradable substances. Give one example of each.

◆ Our Environment

Q10. medium | initial-understanding | § 13.2.2 Managing the Garbage we Produce **[2]**

Plastics do not decompose when buried in soil, even though many food materials do. Why are bacteria and other decomposers unable to break down plastic?

◆ Our Environment

Q11. straightforward | initial-understanding | § 13.2.2 Managing the Garbage we Produce **[1]**

Identify which of the following sets contains ONLY non-biodegradable items:
(A) Vegetable peels, used tea leaves, old cotton rags
(B) Spoilt food, newspaper, broken rubber slippers
(C) Empty plastic medicine strips, synthetic packaging material, plastic bags
(D) Fruit peels, dry leaves, empty glass bottles

A Vegetable peels, used tea leaves, old torn clothes
B Spoilt food, milk packets, broken footwear
C Empty plastic medicine strips, synthetic packaging material, plastic bags
D Fruit peels, waste paper, empty glass bottles

◆ Our Environment

Q12. medium | initial-understanding | § 13.2.2 Managing the Garbage we Produce **[3]**

State two ways in which changes in modern lifestyle have led to increased generation of non-biodegradable waste.

◆ Our Environment

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