Interdependence in Living beings - Plants and Animals

A. Tick (✓) the correct answer.

1. Green coloured substance present in leaves is
   a) stomata b) vein c) lamina ✓d) Chlorophyll

2. Which of the following are decomposers?
   a) Plants b) Animals c) Human ✓d) Fungi

3. Animals that eat dead and decaying animals and plants are known as
   a) herbivores b) carnivores ✓c) scavengers
   d) omnivores

4. Which is not a natural cause of ecological imbalance?
   a) Volcanic eruption ✓b) Deforestation c) Tsunami
   d) Flood

B. Name the following :-

1. The process by which green plants make their own food - Photosynthesis.
2. Green pigment present in plants - Chlorophyll
3. Animals that eat both plants and animals - Omnivores.
4. Food factory of plants - Leaves
5. A chain that shows the flow of nutrients and energy among living organisms - Food chain

C. Answer the following questions :-

1. What is photosynthesis ? What are the raw materials required for this process ?

Ans- The process by which green plants make food in the presence of sunlight is called photosynthesis. The raw materials need for this process are carbon dioxide, water, sunlight and chlorophyll.

2. How are animals classified on the basis of their food habits ?

Ans- On the basis of their food habits, animals are classified into three groups :- herbivores, carnivores and omnivores.

3. How are plants and animals dependent on each other ? Explain.

Ans- Plants and animals depend on each other in many ways.

a) Plants and animals help to maintain the balance of oxygen and carbon-dioxide in the environment by exchange of gases.

b) Plants give out oxygen. This oxygen is needed by animals for breathing.

c) Animals give out carbon dioxide, which is needed by plants for photosynthesis.

d) Animals depends directly or indirectly on plant for their food.

4. Give examples of scavengers and decomposers. Mention their role in ecosystem.

Ans- Examples of Scavengers are - Vulture, crow, housefly, hyena.

Examples of Decomposers are - Bacteria, Fungi, Some worms

Role of scavengers - Scavengers feed on dead animals and plants. They play an important role in cleaning the environment.

Role of Decomposers - Decomposers eat decaying matter and break them down releasing nutrients and minerals into the soil which are essential for plants.

5. What is food chain? Discuss with the help of an example.

Ans- Food chain is a chain of organisms which shows that each organism in the chain depends on the lower organism for its food. A simple food chain could start with grass, which is eaten by rabbits. Then the rabbits are eaten by foxes.
Here grass is the producer. Rabbit is the primary consumer and fox is the secondary consumer.

Grass (producer) ⟶ Rabbit (Primary consumer) ⟶ Fox (secondary consumer)

Q-6 How do human activities cause imbalance in ecosystem?

Ans- Some of the human activities that cause imbalance in ecosystem are i) Introduction of a new species
ii) Deforestation
iii) Forest fire
iv) Pollution
v) Overhunting of a species

Deforestation or forest fire leads to loss of vegetation and habitats of many wild animals. Hunting and poaching lead to reduction of number of animals and extinction of many species.

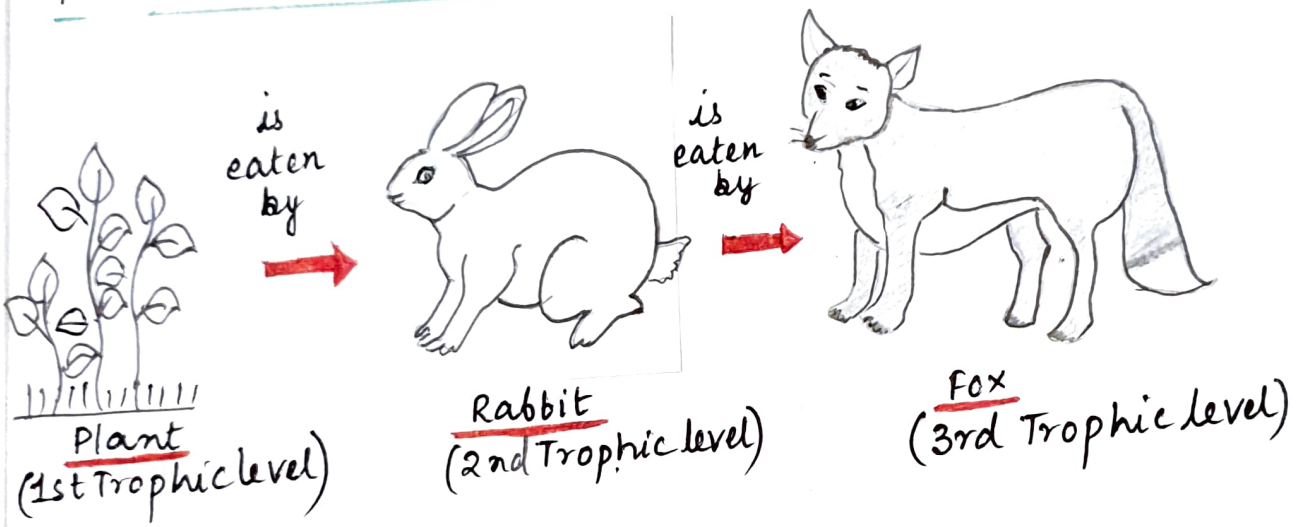
D. Write T for true and F for false statements

1. Scavengers are another type of consumers that help in cleaning environment. (T)
2. Food chain always starts with producers. (T)
3. A balanced ecosystem has more trees and less animals. (T)
4. Hunting, poaching and deforestation are some of the natural causes of ecological imbalance. (F)
5. Animals get fresh oxygen from plants. (T)

E. Match the columns:-

1. Vulture - Scavenger
2. Grass - Producer
3. Grasshopper - Primary consumer
4. Tiger - Secondary consumer
5. Bacteria - Decomposer

F. Draw and label a simple food chain



G. What would happen:

1. if there are no plants on earth?

Ans- If there are no plants on earth, animals would have no oxygen to breathe and would die. People also depends on plants for food. All animals eat either plants or plant eating animals. Without plants there would be no food to eat.

2. If there is no exchange of gases in plants?

Ans- If there is no exchange of gases in plants, no carbon dioxide will move into the plant and there will not be any photosynthesis. If there is no photosynthesis, then plants wont be able to make food and so they will die. Animals wont get oxygen to breathe.

H. Consumers depend on producers. Justify the statement.

Ans- As animals cannot make their own food, they depend on plants for their food. Hence they are called consumers. The consumers get their energy from the food they eat. So, they depend on plants directly or indirectly for their food requirement.

I. Categorise the animals according to their food habits.

a) Elephant, bee, grasshopper, rabbit - Herbivore

b) Cat, frog, fox, shark - Carnivore

c) Spider, bear - Omnivore

d) Mosquito - Herbivore (male) / Parasite (female)