Different Ecosystem

Improve your learning

Q. 1. Define an ecosystem. Explain it with a suitable example.

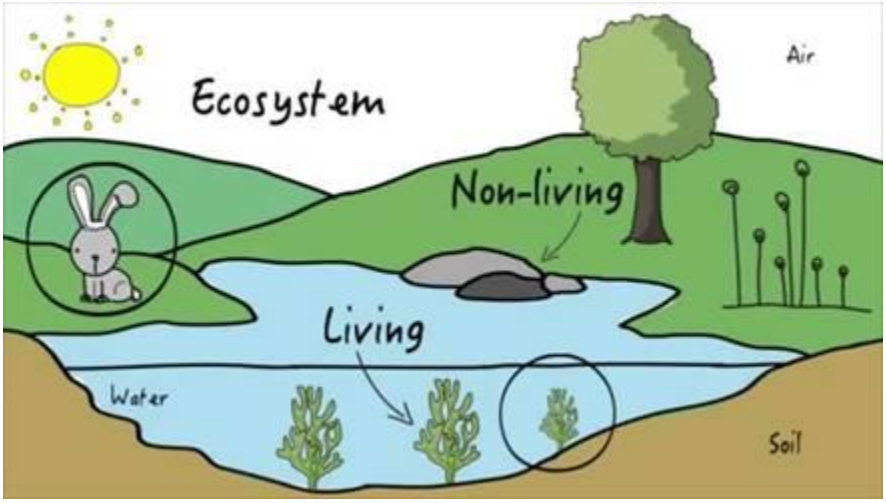
Answer : i. An ecosystem is a system which consists of abiotic (non-living) things and biotic (living) species in a specific environment.

ii. Non-living things include water, air, sunlight, soil, etc., and living things include plants and animals.

iii. Living things cannot live without non-living things.

iv. Hence, in an ecosystem, there is an interaction between living and non-living things and also among the living things.

v. Forest, grassland, pond, and desert are some examples of ecosystems.



Q. 2. Explain how the diversity of living organisms helps in enriching any ecosystem. (

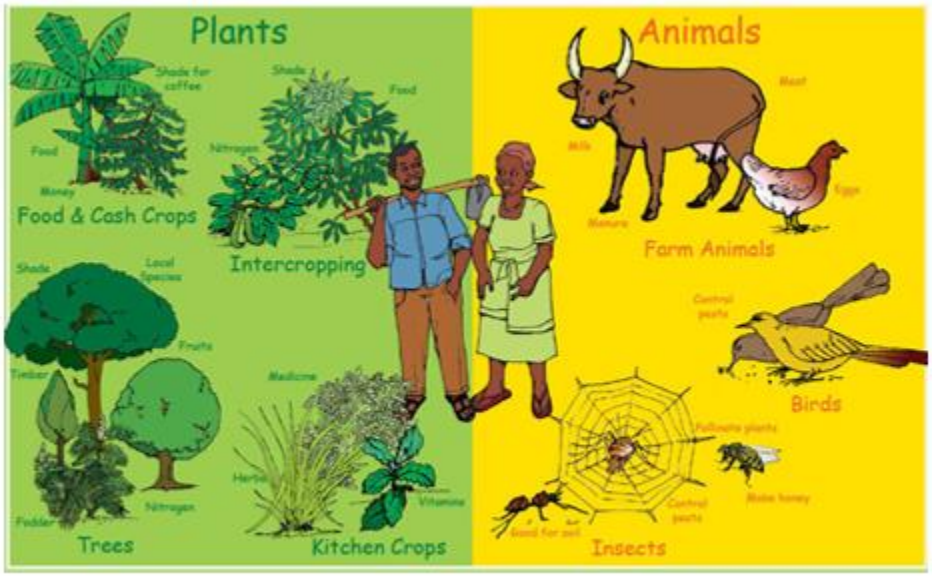
Answer : i. The existence of the ecosystem depends on the survival of the organisms in an ecosystem.

ii. All the organisms require energy for their growth, development and to reproduce.

iii. They get energy from the food they eat. In any ecosystem plants are producers, they make food with the help of sunlight.

iv. Some animals eat plants such as goat deer, horse, zebra and some animals eat other animals such as tiger eats zebra or deer.

v. Microorganisms such as bacteria and fungi feed on a dead and decaying matter which helps in recycling of nutrients in the ecosystem. In this way, the diversity of organisms enrich the ecosystem.



Biodiversity enriching ecosystem

Q. 3. What happens when two animals having similar habits share one ecosystem?

Answer : Let's take an example of two animals similar in habits, deer, and zebra both are plants eating animals. They eat plants of similar kinds. Therefore, they compete for the same food and space. There is a struggle for existence. The stronger survives and weaker eliminated from the ecosystem.

Q. 4. What is the difference between habitat and ecosystem?

Answer :

Habitat	Ecosystem
It is the place where organisms live is habitat. Example forest, pond	The interrelationships between living organisms and the non-living environment are an ecosystem.
Habitat is denoted place. Hence, It is a physical unit.	Plant, animal and micro-organism and their non-living environment interacting as a functional unit.

Q. 5. Who am I?

● I am the base of the food chain. .....……
● I depend on plants for food. .....……
● I break down the remains of dead plants and animals. …….

Answer : ● Producers.

Producers are the organisms which make food in presence of light. For examples, green plants, algae, phytoplankton.

● Consumers.

Consumers are the animals which depend on plants for food. For examples, deer, cow, zebra.

● Decomposers.

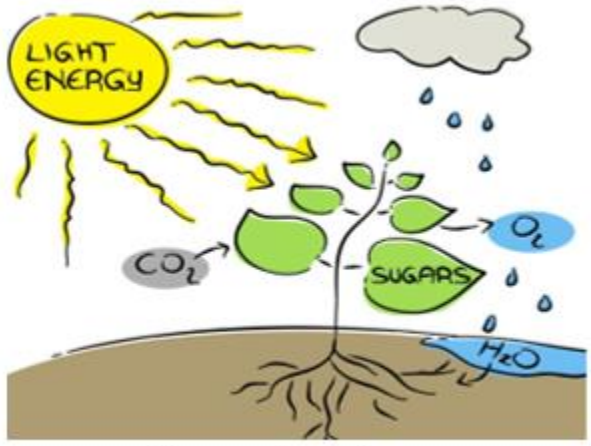
Decomposers are the microorganisms which feed on dead plants and animals. For examples, bacteria, and fungi.

Q. 6. Which of the following is a producer? and why?

(a) fox (b) fungus (c) chicken (d) grass

Answer : (d) Grass.

Grasses are green plants which synthesize food (carbohydrate) in presence of sun light in the process of photosynthesis. That's why grass is called producers.



Photosynthesis by grass

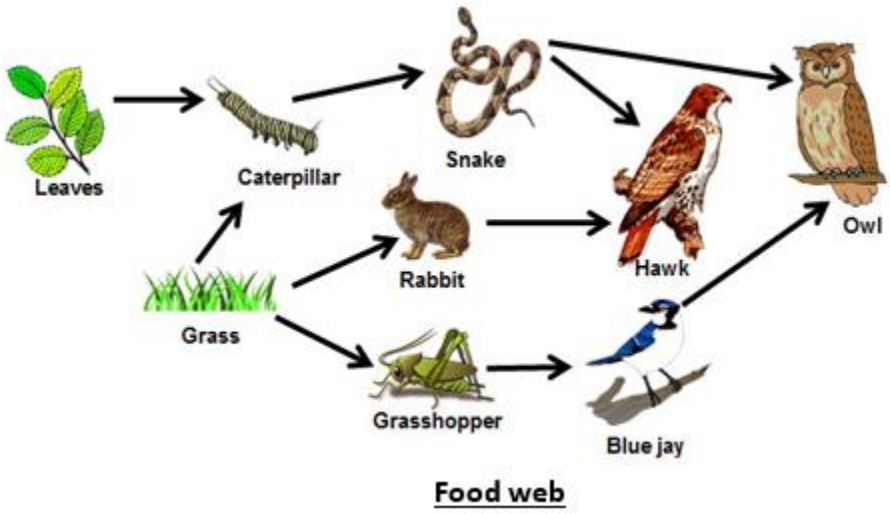
Q. 7. What do you understand by food web? Describe your own food web with the help of a diagrammatic representation.

Answer : i. In an ecosystem, many food chains operates at a given time. These food chains are connected themselves.

ii. Interconnection of food chains is called food web.

iii. In a given diagram, there are four food chains are in operation.

iv. These food chains are interconnected at making a food web.



Food web

Q. 8. An ecosystem that had mice. What happens if more cats were added to it?

Answer : i. Cats feed on mice. If cat population increases then, the mice population would significantly decrease, especially if the cats were themselves at the top of the food chain.

ii. There will be no balance between predator (cat) and prey (mice).

iii. Therefore, food chain may not operate properly.

Q. 9. List out producers (Plants, Bushes, and Trees). Consumers (herbivores and carnivores) and Decomposers that you observed in your agriculture field or school garden.

Answer :

Producers	Consumers	Decomposers
Paddy plant	Frog - herbivore	Mushroom
Grasses	Mice - herbivores	Rhizopus
Marigold plant	Snake – carnivore	Bread mold
Mango tree	Owl- carnivore	

Decomposers are bacteria and fungi. Bacteria we can't see by our eyes. Only some fungi variety can be seen.

Q. 10. In grassland ecosystem, rabbit eats only plants. They eat plants faster than the plants can grow back. What must happen to bring the ecosystem into balance?

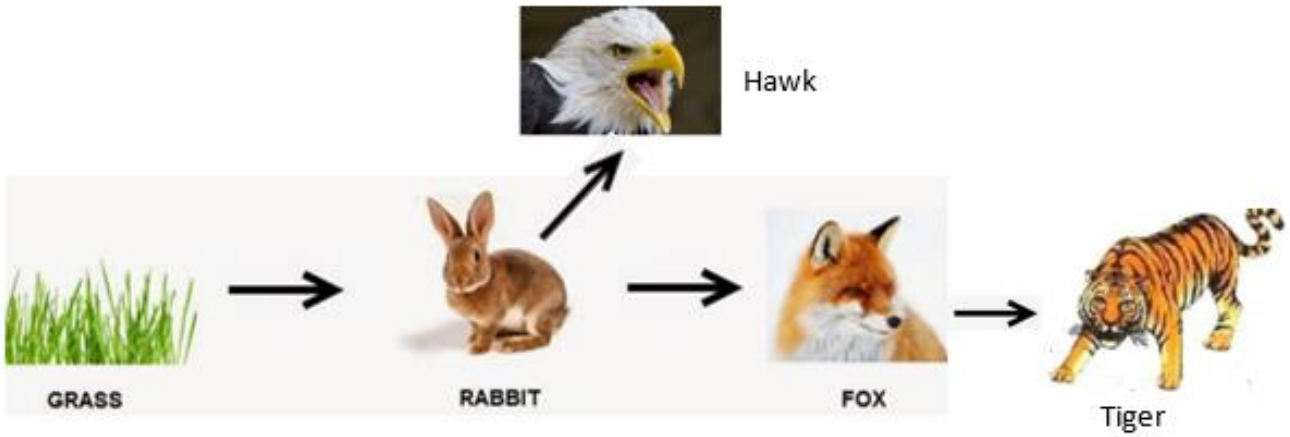
Answer :

In a given food chain in a grassland ecosystem, rabbit feed on plants faster that the growth of plants. To bring this ecosystem into balance more carnivores such as fox, hawks are needed to control the population of rabbit?

Q. 11. Plant, tiger, rabbit, fox, hawk

Did you find any connection among the above list of things? If we remove Rabbit from the list what will happen?

Answer : Plant, tiger, rabbit, fox, hawk is the part of food chain and food web.



i. Rabbit eats grass (herbivores).
ii. If the rabbit is removed from the given food web, the grass population will increase enormously in absence of herbivore.

iii. The population of fox, tiger, and hawk will decrease in absence of their food (rabbit).
iv. Therefore, an imbalance will be created in a given ecosystem.

Q. 12. What do you understand by inter-dependency of animals and plants? How do you appreciate?

Answer : i. Interdependence is the dependence of two or more living things on each other.

ii. There are different ways that animals and plants are interdependent in an ecosystem.

iii. They depend on each other for their basic needs such as food, protection, shelter, and reproduction.

iv. Plants provide food to animals and humans, who cannot make their own foods like plants do.

v. Plants and trees also provide shelter and protection for different animals like birds, squirrels and insects.

vi. For examples birds also build nest high up in trees away from predators.

vii. Similarly, plants also benefit from animals in that animal can aid in seed dispersal ensuring the survival of plants in other regions of an ecosystem.

viii. Bees also help in the pollination of plants in a habitat.