

## Chapter 4- Ecosystem

### Multiple Choice Questions:

1. Put a tick mark (✓) against the correct alternative in the following statements:

a. The term “ecosystem” is derived from the Greek word “Oikos” meaning.

1. Body weight
2. Food
3. House
4. Size

**Solution:** 3. House

b. Rat in any food chain would occupy the position of

1. Tertiary consumer
2. Secondary consumer
3. Primary consumer
4. Producer

**Solution:** 3. Primary consumer

c. Evergreen broad-leaved trees are characteristic of

1. Tropical rain forests
2. Temperate deciduous forests
3. Coniferous forests
4. All of the above types of forests.

**Solution:** 1. Tropical rain forests

**Short Answer Type:**

1. Mention if the following statements are true (T) or false (F).

(a) Snakes are primary consumers (T/F)

**Solution: False**

(b) Some humans are strictly primary consumers & some others are of other types of consumers also (T/F)

**Solution: True**

(c) No ecosystem can survive without light (T/F)

**Solution: True**

(d) Cattle go to ponds for drinking water, so they are a constituent of pond ecosystem (T/F)

**Solution: False**

**2. Match the items in Column I with as many items as possible in Column II.**

Column I

Column II

1. Deer

(i) Autotroph

2. Parrot

(ii) Ecosystem

3. Cobra

(iii) Pond

4. Pine tree

(iv) Deciduous forests

5. Grasshopper

(v) Parasite

(vi) Carnivore

(vii) Producer

**Solution:**

**Column I**

**Column II**

1. Deer (iii) Pond
2. Parrot (iv) Deciduous forests, Autotroph, Producer
3. Cobra (vi) Carnivore
4. Pine tree (iv) Deciduous forests

**3. Rewrite the following in their correct sequence in a food chain:**

- (a) Snake → Grasshopper → Grass → Frog
- (b) Grass → Tiger → Deer
- (c) Snake → Peacock → Rat → Wheat

**Solution:**

- (a) Grass → Grasshopper → Frog → Snake
- (b) Grass → Deer → Tiger
- (c) Wheat → Rat → Snake → Peacock

Long Answer Type:

**Question 1.**

Differentiate among primary, secondary and tertiary consumers. Give one example of each in a food chain.

**Solution:** Self-food producers are plants that produce food through photosynthesis i. e. these are autotrophs. There are plant-eating animals called herbivores as Rabbits, deers, pigeons, cows, buffaloes etc. and insects like grasshoppers, bees, butterflies and crickets also eat plants or plant products as fruits, flowers, pollen grains and plant juices. Such animals are called primary consumers.

Animals like tigers, lions, wolves, lizards, frogs eat the primary consumers. Birds vultures, kites, eagles eat the primary consumer, (i.e. These birds eat the flesh of many birds like pigeons, sparrows.) These animals or birds are called secondary consumers. The peacocks eat animals like snakes; they eat the secondary consumers and are called tertiary consumers. Owls and eagles are top carnivores. So it is a quaternary consumer.

**Question 2.**

Define the term (a) flora and (b) fauna.

**Solution:**

**Flora:** Flora is the plants occurring in a particular area, i.e. vegetative growth forms flora.

Flora deals with plants. **Fauna:** The animals occurring in an area form the fauna of that area. Fauna deals with animals.

Flora and fauna of an area are the plants and animals found in that area.

**Question 3.**

List any three members each of flora and fauna of tropical rain forests

**Solution:**

The tropical rain forest is on the western coast of India and in the north, east.

**Flora:** bamboos, ferns, shrubs (Evergreen trees).

**Fauna:** leopards, jungle cats, monkeys, snakes, flying squirrels, insects, snails, centipedes, millipedes.

**Question 4.**

Define the following terms and give two examples in each case.

(a) Symbiosis (b) Parasitism (c) Predation

**Solution:**

(a) **Symbiosis:** It refers to relationships between organisms of different species that show an intimate association with each other. Relationships that provide at least one of the participating species with a nutritional advantage are known as symbiotic relationships.

Examples of Symbiosis Relationships are of Fungus and photosynthetic alga and Microbes and cattle.

(b) **Parasitism:** There is a type of symbiotic relationship between organisms of different species is called parasitism where one organism, the parasite, benefits at the expense of the other, the host.

Examples of Parasitism are tapeworms, flukes, the Plasmodium species and mosquitoes.

(c) **Predation:** A predator is any consumer that kills and eats another living organism to obtain energy. The organism being eaten is called prey. Examples are Lions, Deer, Wolves, and Eagles.