

## LIVING SCIENCE CLASS6 SOLUTION CHAPTER 10. LIVING ORGANISMS AND THEIR SURROUNDINGS

### P. 108 Oral Questions For Formative Assessment

1. ecology
2. No, the natural environment consists of both the biotic and abiotic components, that is, air, water, sunlight, soil, temperature and all living organisms in a place.
3. Auto means self. Green plants. Because green plants make their own food.
4. Air, water, soil, sunlight, temperature
5. No.

### P. 112 Oral Questions For Formative Assessment

1. Deserts
2. No, the hump stores fat and it provides food in times of shortage.
3. No, the leaves are reduced to spines to prevent water loss.
4. The long and narrow leaves of tape grass can withstand water currents without getting damaged.
5. Dolphins, whales. They breathe through blowholes located near the upper parts of their heads.
6. Penguins stay together in groups to keep themselves warm.
7. Yes, the brown colour make the lions not clearly visible to their prey as it matches with the surrounding dry grassland.

### P. 113 For Formative and Summative Assessment

- A. 1. c      2.c      3.c      4.c      5. c      6.a      7. b      8. d
- B. 1. living      2. plants      3. ecology      4. autotrophs      5. secondary consumers
6. Decomposers      7 salt water      8 true      9. succulent      10. streamlined      11. false
- 12 snow      13. hibernation      14. camouflage      15. broad

- C. 1. The study of the relationship between living things and their environment is called ecology.
2. During summers a dormouse accumulates lot of fats in its body. When winter comes, it becomes very slow and inactive. So it sleeps through the cold months of winter living off its body fat.
  3. Grass have flexible stalks so that they bend and do not break in windy conditions. They also have strong roots to anchor them.
  4. Parrots and toucans eat nuts, and have strong curved beaks to crack open the tough shells.

5. Only green plants make their own food from carbon dioxide and water, using the energy of sunlight. So they are called producers.
6. This helps them creep up to their prey without making a sound while hunting.
7. a. Plants have long roots that penetrate deep inside the soil in search of water. b. They have fleshy stems to store water. The stem is also covered with a thick waxy layer that helps to retain water.
8. The streamlined bodies reduce resistance due to water and help the water animals to swim fast in water.
- D. 1. Herbivores: Plant-eating animals are called herbivores. Examples are cows, goats and deer.  
Carnivores: Flesh-eating animals are called carnivores. Examples are lions, tigers and wolves.  
Omnivores: Animals that eat both plants and animals are called omnivores. Examples are bears, crows and humans.
2. Animals depend on plants for food, oxygen and shelter. Plants depend on animals for pollination and dispersal of seeds.
3. Biotic components:
- (i) The living or biotic components include all living organisms. These constitute the biotic or biological environment.
- (ii) The living or biotic organisms of an environment can be divided into three groups, that are producers, consumers and decomposers depending on how they obtain their food.
- Abiotic components:
- (i) The non-living or abiotic components include air, water, soil, sunlight, temperature, etc. These constitute the abiotic or physical environment.
- (ii) These factors affect the living organisms found in the area.
4. An adaptation is a feature that helps an organism to survive in a particular type of an environment. Adaptation leads to evolution. For example, the gills of a fish is an adaptation that helps it to survive in water. Again a camel has several adaptations to help it survive in a desert such as a hump, long legs. Its feet have large soles.
5. Stick insect uses camouflage to escape from enemies. The tiger uses camouflage to catch its prey. Stick insect resembles very much to a stick and enemies cannot recognize it. Orange coat of tiger with stripes matches its surroundings. This way a tiger moves closer to its prey and catches it.

6. a. Camel: It has a hump where fat is stored. This provides it with food in times of shortage. It can drink a very large quantity of water at a time but it loses very little water in the form of urine, dung or sweat. It has long legs that keep its body away from heat of the sand.
- b. Water lily: The stems are long and narrow to withstand water currents without getting damaged. Floating leaves are large and flat. They have waxy upper surfaces to make them waterproof. (iii) The roots are much reduced in size.
- c. Fish: (i) They have streamlined bodies. This helps them swim fast in water. (ii) Their body is covered with scales and mucous to make it waterproof. (iii) They have gills for breathing under water.
7. Lions have eyes in front of their faces, this helps to give them a correct idea of their prey. While the deer have eyes on the side, this enables them to look in all directions for danger.

#### HOTS Questions

1. No, because fungi, together with bacteria are responsible for most of the recycling which returns dead material to the soil in a form in which it can be reused. Without fungi and bacteria, these recycling activities would not take place. We would effectively be lost under piles many meters thick of dead plants and animal remains.
2. No, because dolphins and whales do not have gills to breathe under water. They have to come up to the water surface to breathe.
3. Before entering hibernation, animals eat a large amount of food and store energy in fat deposits in order to survive the hibernation period. This stored fat lasts longer because their body activities are slowed down.
4. Carnivores eat herbivores for their food. If there were more carnivores than herbivores in a habitat then carnivores would eat all the herbivores. So the balance of the habitat would get disturbed. Therefore, in a habitat, herbivores are expected to be in greater number.
5. All organisms other than bacteria and fungi feed on dead plants and animals but they cannot decompose them into nutrients which are returned to the soil. On the other hand, bacteria and fungi are responsible for the recycling process which returns nutrients back to the soil in a form which can be used by plants. So bacteria and fungi are called decomposers.