



### Chapter 9

#### The Living Organisms - Characteristics And Habitats

#### SOLUTIONS:

#### Exercises:

**Q1.** What is a habitat?

**Ans:** Habitat is the place where organisms live and get their food, water, air, shelter and other needs for their survival.

**Q2.** How are cactus adapted to survive in a desert?

**Ans:** Following are the adaptation of cactus to survive in desert;

- Leaves are modified to spines to reduce loss of water from the leaves through transpiration.
- Stem is thick and fleshy.
- Stem have thick waxy coating to retain water in the tissues.
- Photosynthesis in desert plant is carried out by the stems.
- Roots are deeply rooted into the soil for absorbing water.

**Q3.** Fill up the blanks

(a) The presence of specific features, which enable a plant or an animal to live in a particular habitat, is called \_\_\_\_\_

(b) The habitats of the plants and animals that live on land are called \_\_\_\_\_ habitat.

(c) The habitats of plants and animals that live in water are called \_\_\_\_\_ habitat.

(d) Soil, water and air are the \_\_\_\_\_ factors of a habitat.

(e) Changes in our surroundings that make us respond to them are called \_\_\_\_\_.

**Ans:** a. Adaptation.      b. Terrestrial      c. Aquatic.      d. Abiotic      e. Stimuli

**Q4.** Which of the things in the following list is non living?

Plough, Mushroom, Sewing machine, Radio, Boat, Water hyacinth, Earthworm

**Ans:** Plough, Sewing machine, Radio, Boat are the non living thing.

**Q5.** Give an example of a non-living thing, which shows any two characteristics of living things.

**Ans:** Example: Cloud. Two characteristics of living things which cloud show are

- A cloud grows in size.
- A cloud moves in the sky.

**Q6.** Which of the non-living things listed below, were once part of a living thing?  
Butter, Leather, Soil, Wool, Electric bulb, Cooking oil, Salt, Apple, Rubber

**Ans:** Butter, Leather, Wool, Cooking oil, Apple, Rubber are the non living things that are extracted from living things. So they were once part of a living thing.

**Q7.** List the common characteristics of the living things.

**Ans:** The common characteristics of the living things

- A. Living organisms need food to get energy needed for them to grow.
- B. They can grow from young ones to adults.
- C. All the living organisms respire.
- D. They can respond to stimuli.
- E. They can reproduce their offspring.
- F. They can excrete unwanted residue from their body.

**Q8.** Explain why speed is important for survival in the grasslands for animals that live there.  
(Hint: There are few trees or places for animals to hide in grasslands habitats.)

**Ans:** Grassland is mainly dominated by grasses. There are few trees or places for animals to hide. They can only survive and escape if they run very fast. That is why speed is important for survival in the grasslands for animals. For example deer has to run faster than lion and tiger and if they don't have speed, they cannot survive and will be eaten by the predators.



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### **Extra Questions and Answers:**

**Q1.** Define adaptation.

**Ans:** Adaptation is the presence of specific features or certain habits which enable an organism to live naturally in their habitat. Adaptation of organisms differs depending on their habitat.

**Q2.** Name two type of habitat.

**Ans:** Terrestrial habitat and Aquatic habitat.

**Q3.** Give two characteristic of free floating plants of aquatic habitat. Give example.

**Ans:** i. Free floating plants remain in contact with water and air but not rooted in soil.

ii. They have numerous cavities filled with air which make it porous and help in floating in water. Example: Water Hyacinth, red fern etc.

**Q4.** Write down the features of fish that help them to survive under the water.

**Ans:** The features of fish are given below:

- A. Fish have slippery scales on their bodies.
- B. Fish have flat fins and tails that help them to change direction and keep their body balance in water.
- C. They have gills to use dissolved oxygen.
- D. They have streamlined body shape.

**Q5.** Why do mountain animals have thick skin and body cover with fur?

**Ans:** Mountain habitat is normally very cold and windy, and there is snow fall in winter. So in order to survive there and to keep their body warm, mountain animals have thick skin and body covered with fur.

**Q6.** What is transpiration?

**Ans:** Transpiration is the loss of water from the leaves of the plant.

**Q7.** Distinguish between breathing and respiration.

**Ans:** Breathing is the process of taking in oxygen and giving out of carbon dioxide by an organism. It is a part of respiration whereas Respiration is the process in which an organism obtains energy by breaking down the food in the presence of oxygen.

**Q8.** Name the breathing organ of the following animal

Earthworm, Fish, Plant, Human, Frog

**Ans:**

<b>Animals</b>	<b>Breathing organ</b>
Earthworm	Skin
Fish	Gills
Plant	Leaves
Human	Lungs
Frog	Skin and lungs

**Q9.** Define stimuli. Explain giving example.

**Ans:** Changes in our surrounding that makes us respond to them is called stimuli.

Example: wild animals run away when bright light is flashed towards them. Cockroaches run and hide when kitchen light is on. When thorn pricks our finger we pull our hand. Plant like *Mimosa* close their leaves when touched.

**Q10.** How does plant reproduce?

**Ans:** Plant reproduces through seed, through cutting of vegetative part and through buds.

**Q11.** Why do we feel warm when we put our hand inside a sack of wheat?

**Ans:** We feel warm inside a sack of wheat because heat is produced inside the sack of wheat through respiration of seed.

**Q12.** What is the difference between living and non living thing.

**Ans:** Living thing can reproduce, move, have senses and respond to an stimuli, need food and respire whereas non living thing cannot reproduce, cannot move, no sense organ, required no food and energy and no respiration.



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