

Class IV: General Science: Chapter -5 (Adaptation in Plants)

Quick check 1(pg-56)

Fill in the blanks:

- 1.adaptation
2. Deciduous
- 3.needle like
- 4.coastd
- 5.breathing

Quick check 2 (pg-60)

Match the following:

Answers -

- 1-f
- 2-c
- 3-d
- 4-e
- 5-b

I. Very short questions (pg-61):

A. Tick the correct answer.

Answers -

- 1.c
- 2.b
- 3.b
- 4.a
- 5.b

B. State true or false:

Answers -

- 1.false
- 2.false
- 3.false
4. true
5. True

C. Name a plant which has these characteristics

Answers -

- 1.coconut
- 2.fir
- 3.cactus
- 4.pitcher
- 5.mangroves
- 6.mushroom

II. Short answer questions:

Answer 1:

- a. Habitat - The place where a living organism lives in nature is called a habitat.
- b. Adaptation - The features that help the plants and animals to survive in their natural surroundings are called adaptation.

Answer 2: -

The two features of the plants that grow in desert areas are-

- I. They have very few or no leaves.
- II. Photosynthesis is carried out by their stems.

Answer 3: -

The special features of evergreen trees is that these plants have leaves that remains green almost all year round.

Answers 4: -

floating plants, fixed plants and Underwater plants.

Answer 5: -

The plants that cannot make their own food but absorb food from dead remains of plants and animals are called saprophytic plants. Eg:- Mushroom, Indian pipe.

Answer 6: -

The leaves of plants growing in mountain region have a waxy coating to prevent damage from snow.

Answer 7: -

- a. The roots of the mangrove tree helps them to breathe and also absorb water and minerals that are required to carry out photosynthesis.
- b. The stem of a cactus Plant store water and this act as a water reservoirs.
- c. The sloping shape of conifers reduces wind resistance and helps keep the trees standing upright.
- d. The leaves of the Lotus plant are broad and coated with wax to prevent wilting. Their leaves have stomata only on the upper surface of the leaf which help them absorb and release gases.

Answer 8: -

Coniferous trees are the trees that produces cones and have evergreen needle shaped leaves that do not fall off in the winter.

Answer 9: -

The floating plants possess a lot of spongy cells filled with air which helps them float on water.

Answer 10: -

Plants that grow on other plants but do not depend on them for their nutrition are called Epiphytes.

III. Long answer questions:

Answer 1: -

page 58 (Venus fly trap the creature inside).

Answer 2: -

The desert plants has several adaptations that allow it to survive in a desert. They store very large amount of water in their roots, stem or leaves, which are protected from evaporation by having a small surface area to volume ratio and a thick waxy layer on the outside of the plants.

Answer 3.

Difference between floating plants and fixed plants:

Floating plants -

- i. These are light, spongy and float on the surface of the water.
- ii. The roots of these plants hang loosely in water.
- iii. The leaves are thick, soft and oval shaped.

Example -water lily, Duckweed.

Fixed plants: -

- i. Fixed plants are fixed in water and cannot move.
- ii. Their roots are fixed at the bottom of the pond.
- iii. Their leaves are broad and coated with wax to prevent wilting.

Example - Lotus, water lily.

Answer 4:-

Adaptation shown by plants growing in swampy areas -

It becomes very difficult for plants to grow in swampy areas, as the air cannot reach the roots. In order to survive in such swampy areas, plants like mangroves give out breathing roots which have pores for exchange of gases.

Adaptation shown by plants growing in a heavy rainfall area -

For better survival in heavy rainfall areas, Plants of these areas have had to developed special features called adaptation. The leaves of these plants have adapted to survive with large amount of rain. The leaves are big, thick, waxy and have drip tips to let rain drain quickly. Plants need to shed water to avoid growth of fungus and bacteria

Answer 5: -

Places where the soil is very sticky, clayey and contain a lot of water are called marshes.

Plants that grow in the marshy areas are the plants that have developed special adaptation that allows them to live in the water. Some adaptations that help the plants deal with low oxygen and changing water levels are elongated stems and shallow roots.

Answer 6: -

Adaptation of aquatic plants:

The leaves of the aquatic plants are very wide and disc shaped. This allows them to float on water and absorb large amount of sunlight. The stems are light, spongy and leaf surface are coated with wax which is very difficult to wet. Therefore, it keeps the surface free from excessive water.

Example - Lotus, water lily.

Question number 7 excluded.