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परमाणु ऊर्जा शिक्षण संस्था, मुंबई

Atomic Energy Education Society

Session-2023-24

Class: VI

Subject: Science

WORKSHEET NO-4 (Answer Key)

Name of the Chapter: Getting to know plants

Name of the Topic : Getting to know plants

I.Choose the correct option from the following . 1x10=10

- 1. (b) Stem
- 2. (d) seeds
- 3. (b) leaves
- 4. (b) Ovary, style and stigma
- 5. (d) transpiration
- 6. (c) stamen
- 7. (c) Wheat
- 8. (a) herb
- 9. (b) Banana
- 10. (b) shrubs

II. Fill in the blanks with suitable word/s.

- 1. Sepals
- 2. veins
- 3. stem
- 4. herbs
- 5. stomata
- 6. chlorophyll
- 7. climbers
- 8. water, nutrients

1x10=10

- 9. herbs, shrubs, trees
- 10. fibrous

III. Answer the following question in one sentence.

2x10=20

1.

es arise from the stem.
hard, thick and woody.

- 2. The unwanted plants that grow in the field with the main crops or in their surroundings are called weeds. Weeds are the plants which are not grown by the farmers, e.g., grass.
- 3. Carbon dioxide and oxygen are involved in photosynthesis. Carbon dioxide is used whereas oxygen is released in photosynthesis.
- 4. The smaller roots that grow on the main taproot are called lateral roots.
- 5. Roots absorb water and minerals from soil for the other parts of the plants. Roots hold the plant firmly to the soil.
- 6. By looking at the venation of the leaves, we can identify the root system of a plants. Plants with leaves having parallel venation have fibrous root and leaves having reticulate venation have taproot.
- 7. Functions of sepals: Sepals protect the inner parts of flower when it is a bud. Function of petals: Petals attract the insects which are the agencies of pollination by colour and fragrance.
- 8. Male part of a flower is known as stamen. It has two parts-filament and anther. Anther contains pollen grains.
- 9. The part of leaf which is attached to the stem is called petiole and the broad green part of the leaf is called lamina.
- 10. Yes. Stem carries the water absorbed by the roots to the leaves and also the food prepared by the leaves to the roots.

IV. Answer the following questions in brief. 3x5=15

 There are following two main functions of leaf: Transpiration: The extra water comes out of the leaves through stomata in the form of vapour. This process is called transpiration. Photosynthesis: The process by which leaves prepare their food from water and carbon dioxide in the presence of sunlight and a green-coloured substance i.e., chlorophyll is called photosynthesis.
2.

Taproots	Fibrous Roots

There is only one main and long root from which small roots grow.	There is no main root. Many roots are grown together from the base of the stem in the form of bundle.
These roots go deep into the soil to more depth.	These roots do not go very deep.
These roots cannot be separated from soil easily.	These roots are easily separated from the soil.
Found in the plants like weeds having reticulate venation in leaves.	Found in the plants like grasses having parallel venation in leaves.

- 3. No, it will not turn blue-black because all the starch present in the leaf would have been used up by the plant. And due to the non-availability of sunlight, no starch would be synthesized in the leaves.
- 4. Take some water in a glass. Add few drops of red ink to the water. Cut the stem of a herb plant from its base. Put it in the glass. We will see that some parts of the stem become red. This activity shows that stem conducts water.
- 5. The plants with green and tender stems are called herbs. They are usually short and may have no or less branches. For example, tomato, potato. The plants which have a hard but not a very thick stem are called shrubs. Such plants have the stem branching out near the base. For example, lemon, rose plants. The plants which are very tall and have hard and thick brown stem are called trees. The stems have branches in upper part and much above the ground. For example, mango, neem.

V. Answer the following questions .

5x5=25

 A typical flower contains the following parts: Sepals: The small green leaf-like structures of the flower are called sepals, Petals: The big coloured leaf-like structures are called petals. Different flowers have petals of different colours.

Stamen: It is the male part of the flower. It has two parts: (a) Filament and (b) Anther.

Pistil: The innermost part of a flower is called pistil. It has three parts: (a) Stigma, (b) Style and (c) Ovary. It is the female part of the flower.

- 2. Take a leaf in a test tube and pour spirit till it completely covers the leaf. Now put the test tube in a beaker having water. Heat the beaker till all the green colour from the leaf comes out into the spirit in the test tube. Take out the leaf and wash it with water. Put it on a plate and pour some iodine solution over it. The iodine solution is brown in colour but when it comes in contact with starch it turns blue-black. The iodine solution will turn blue-black when dropped on the leaf, this confirms the presence of starch in the leaf.
- 3. Leaf venation: The design made by veins in a leaf is called leaf venation. There are the following two types of leaf venation:

(i) Reticulate venation: If the design of veins makes a net-like structure on both the sides of midrib then it is called reticulate venation. For example, mango leaf, gram leaf.

(ii) Parallel venation: If the veins are parallel to each other or to midrib then such type of venation is called parallel venation. For example, wheat leaf, barley leaf.

- 4. To remove the green colour of the leaf, firstly, the leaf has to be boiled in water, next, it has to be boiled in alcohol so that chlorophyll comes out. Boojho missed the step of not boiling the leaf in the alcohol, which removes the chlorophyll, and therefore, he did not get the expected result (i.e. change in colour of the leaf).
- 5. Yes, the stem of a plant can be compared with a street with two-way traffic. It is because in the stem, water and mineral move in an upward direction and food moves in a downward direction.

The stem transports water and minerals from the root to the leaves and other parts of the plant (upward).

The food prepared by the leaves travels through the stem to different parts of the plant and roots (downward).
