



INDIAN SCHOOL AL WADI AL KABIR

Class: VI	Department: SCIENCE 2020-2021	Date of completion August first week
Worksheet No.: 6 With answers	Topic: GETTING TO KNOW PLANTS	Note: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

I. OBJECTIVE TYPE QUESTIONS:

1. Which of the following combination of features would you observe in grass?
 - (a) Parallel venation and fibrous root
 - (b) Parallel venation and tap root
 - (c) Reticulate venation and fibrous root
 - (d) Reticulate venation and tap root.
2. Which of the following is the correct match between the characteristics of stem and the category of plant?
 - (a) Weak stem which cannot stand upright: Creeper
 - (b) Green tender stem: Shrub
 - (c) Thick, hard stem with branching near the base: Tree
 - (d) Thick, hard stem with branches high on the plant: Herb
3. Which of the following is not the primary function of stem?
 - (a) Conduction of water
 - (b) Photosynthesis
 - (c) Formation of branches
 - (d) Bears flowers and fruits
4. Which of the following is not a correct match?
 - (a) Petiole: attaches leaf to stem
 - (b) Lamina: green flat part of leaf
 - (c) Margin: gives shape to the leaf
 - (d) Veins: transpiration.

5. Read the following sentences about photosynthesis.

- (i) Sunlight, carbon dioxide, chlorophyll and water are necessary.
- (ii) Oxygen is absorbed.
- (iii) Leaves carry out photosynthesis.
- (iv) Proteins are made during photosynthesis.

Choose the correct pair of sentences that are true to photosynthesis.

- (a) (iii) and (iv)
- (b) (i) and (iii)**
- (c) (ii) and (iv)
- (d) (i) and (iv)

6. When the inner part of an ovary of a flower were observed with the help of a lens, some small beadlike structures are observed. These are called

- (a) Anther
- (b) stamen
- (c) ovules**
- (d) none of these

7. Which of the following terms constitute the female part of the flower?

- a) Sepals, petal and stamen
- b) Stigma, style and ovary**
- c) Ovary, stamen and stigma
- d) Ovary, style and stamen

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below-

- i) Both A and R are true and R is correct explanation of the assertion.**
- ii) Both A and R are true but R is not the correct explanation of the assertion.**
- iii) A is true but R is false.**
- iv) A is false but R is true**

8. Assertion (A): The minerals dissolved in water move up in stem along with water.
Reason (R): The stem bears leaves, flowers and fruits.

- i) Both A and R are true but R is not the correct explanation of the assertion.**

9. Assertion (A): Plants help in maintaining moisture conditions in the environment.

Reason (R): Plants release a lot of water into the air through the process of transpiration.

- ii) Both A and R are true and R is correct explanation of the assertion.**

10. Assertion (A): The parts of a typical flower are sepals and petals only.

Reason (R): The parts of stamen are filament and anther.

- i) A is false but R is true.**

II - BASIC CONCEPT LEVEL:

1. How do you identify the root system of a plant without pulling it out of soil?

By looking at the venation of the leaves, we can identify the root system of plants. Plants with leaves having parallel venation have fibrous root and leaves having reticulate venation have taproot.

2. What are lateral roots?

The smaller roots that grow on the main tap root are called lateral roots.

3. What is transpiration?

Transpiration is the loss of water from the aerial parts of the plant in the form of vapour. 4.

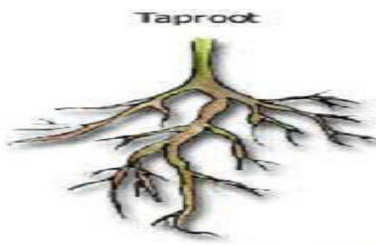

What are weeds?

Unwanted plants that grow in the fields with the main crops or in their surroundings.

5. Why are leaves generally green?

The green colour of leaves is because of the presence of chlorophyll.

6. Explain the difference between taproots and fibrous roots with the help of diagrams.

Tap root	Fibrous root
<p>Thick primary root grows vertically downward and gives off small roots known as lateral roots. Tap root system is seen in rose, pea, dahlia, gram.</p>	<p>The root system in which many roots arise as a tuft from the base of the stem. Fibrous root system is seen in grass, maize, wheat, rice</p>
	

7. What are the main functions of roots?

- i) Roots absorb water and minerals from the soil.
- ii) Roots help in holding the plant firmly in the soil.
- iii) Roots prevent soil erosion.

III – INTERMEDIATE LEVEL:

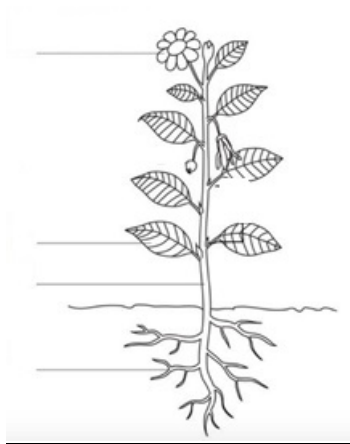
1. Can the stem of a plant be compared with a street with two-way traffic? Give reason.

The stem of a plant can be compared with a street with two –way traffic as water and mineral move in upward direction and food moves in downward direction. The stem conducts water and minerals from the root to leaves and other parts of the plant (upward). The food prepared by the leaves travels through the stem and is stored in different parts (downward).

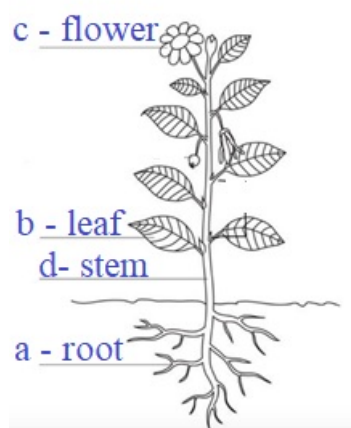
2. Read the function of parts of a plant given below.

- (a) Fixes plant to the soil
- (b) Prepares starch
- (c) Takes part in reproduction
- (d) Supports branches and bears flowers

In the diagram given below write the names of the parts whose functions you have just read at the appropriate space.



Answer



3. Transpiration amounts to loss of water in plants. Yet, it is a useful process, both for the plant and the environment. Justify.

The loss of water vapour from the plant cools down the plant when the weather is hot and helps the plant to absorb water and minerals from the soil. Transpiration is very important for maintaining moisture conditions in the environment. 10 percent of the moisture in the Earth's atmosphere is from transpiration of water by plants.

4. Roots may not always perform the function of anchorage and absorption. Give examples to justify.

Roots may not always perform the function of anchorage and absorption as some of the roots

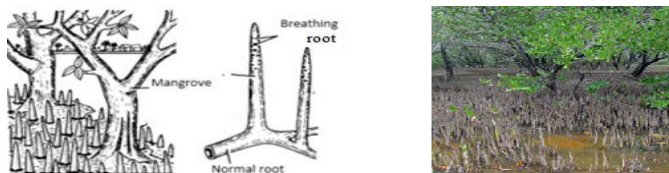
- get modified to store food (example- carrot),



- provide additional support. example –prop roots in banyan tree; stilt roots in maize plant; climbing roots in black pepper and money plants.



- help in respiration.



5. Name the reproductive part of a plant. What are the specialised reproductive parts in it?

Flower is the reproductive part of a plant. Stamen is the male reproductive part of the flower. Pistil is the female reproductive part of the flower.

6. The sapling of a tree can/ cannot be considered as herb. Justify the statement.

The sapling of a tree cannot be considered as a herb since herbs are the plants that have short length with tender stem and leaves

7. Potatoes do not produce starch. Yet, they are full of it. Justify.

Potato is an underground stem which is modified to store starch produced by the plant during photosynthesis.

IV – ADVANCED LEVEL:

1. Boojho wanted to test the presence of starch in leaves. He performed the following steps.

(1) He took a leaf and boiled it in water.

(2) He placed the leaf in a petri dish and poured some iodine over it.

He did not get the expected result. Which step did he miss? Explain.

After boiling the leaf in water, it has to be boiled in alcohol so that chlorophyll is removed and the green colour of the leaf comes out. Boojho did not boil the leaf in spirit to remove the chlorophyll and therefore, he did not get the expected result (i.e. change in color of the leaf).

2. Will a leaf taken from a potted plant kept in a dark room for a few days turn blue black when tested for starch? Give reasons for your answer.

No, it will not turn blue black because all the starch stored in the leaf would have been used up by the plant and no starch would be synthesized in the leaves due to the non-availability of sunlight.

3. Do all flowers have the same parts and are they arranged in the same way?

The flowers of different species of plants are different. The number of petals and sepals are different in different flowers. Some of the flowers have stamens and some flowers have only pistil, others have both. Sepals may be connected with petals in some cases; but in other cases, these may be separated. Thus, the properties of flowers are different.

4. Do you think that the creeping habit in a pumpkin is desirable? Why?

The creeping habit in pumpkin is desirable. Because of weak stem and huge fruit, it is not possible for pumpkin to grow on trees. The big fruit cannot be supported when it climbs. Therefore, pumpkin is always a creeper and it is desirable for better growth of the fruit.

V. EXEMPLAR QUESTIONS

1. Observe the picture of an activity given in the picture carried out with leaves of plants and polythene bag. Answer the following.



- (a) Which process is demonstrated in the activity?
- (b) When will this activity show better results on a bright sunny day or a cloudy day?
- (c) What will you observe in the polythene bag after a few hours of setting up the activity?
- (d) Mention any one precaution you must take during this activity.

Answer

- (a) The process of transpiration is being demonstrated in the given activity.
- (b) The activity will show better results on a bright sunny day because the rate of transpiration increases in the presence of sunlight.
- (c) After a few hours, small drops of water will be seen inside the polythene cover.
- (d) (i) The set-up must be airtight. (ii) Polythene bag must be dry.
(iii) The twig must be fresh with 10-12 leaves.

2. Rohit tries to pull out a grass and a rose plant from the soil. Which one will he be able to pull out more easily and why?

He will be able to pull out grass more easily as compared to rose plant because fibrous roots are found in grass which does not go down much deep in soil.

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