**BCM SCHOOL BASANT AVENUE DUGRI LUDHIANA**

**CLASS-VII SUBJECT -SCIENCE**

**CH-10 (Life Processes in plants and Heat Transfer in Nature)**

Q 1 A plant twig is placed in red-colored water. The red color appears in the stem, leaves, and flowers the next day. Which tissue is responsible for this

upward transport?

(A) Phloem. (B) Stomata (C) Chlorophyll. (D) Xylem

Q2 Plants store food as starch. When needed, this starch can be broken down back into glucose.

Why is glucose important for the plant?

(A) It provides green color to the leaves.

(B) It absorbs water from the soil.

(C) It is used during respiration to release energy

for the plant's life activities.

(D) It helps in the transport of minerals.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, and R is also false.

Q 3 Assertion : Stomata help plants in the exchange of gases necessary for photosynthesis and respiration.
Reason : Stomata are found only on the stems of plants.

Q 4 Assertion : Xylem is responsible for the transport of food from leaves to other parts of the plant.
Reason : Xylem transports water and minerals absorbed by the roots to other parts of the plant.

Q5 Why are leaves generally green and broad? How does this help the plant?

Q 6 A student cuts the stem of a white carnation flower obliquely and places it in a beaker containing water mixed with blue ink. After a few hours, they observe blue streaks appearing in the white petals of the flower.

1. Through which tissue in the stem and petals did the blue ink travel?

2. What process does this experiment demonstrate in plants?

3. If the student had used phloem tissue instead, would they observe the same result? Why or why not?

Q7 What happens during respiration in plants? Write the word equation for the process.

Q 8 Look at the table provided.

A.Why did only the green patches of the leaf kept in sunlight turn blue-black after the iodine test.

B .Why did the leaf of the plant kept in the dark showed no color change ?

| S. No. | Light conditions for potted plant | Initial colours before iodine test | Final colours after iodine test |
|---|---|---|---|
| 1. | Plant kept in sunlight  | Green and non-green patches on the leaf  | Green patches of leaf turned blue-black  |
| 2. | Plant kept in the dark  | Green and non-green patches on the leaf  | No change in colour  |

Q 9 A student takes a leaf from a plant that has been growing in sunlight and performs the starch test. They observe that the entire leaf turns blue-black. They take another leaf from the same plant, cover a small portion of it with black paper for two days while it's still on the plant in sunlight, then test this leaf for starch.

1. What does the blue-black colour on the first leaf indicate?

2. What result would the student expect for the part of the second leaf that was covered with

black paper? Why?

3. What result would be expected for the uncovered parts of the second leaf? What

does this experiment demonstrate?