

## Chapter 01

# Nutrition in Plants

### 1 Mark Questions

1. Organism 'X' take nutrition form from dead and decaying matter in solution. Identify organism 'X' and its mode of nutrition.
  - (a) X can be *Cuscuta* mode of nutrition can be heterotrophic
  - (b) X can be fungi, mode of nutrition can be saprotrophic
  - (c) X can be mushrooms, mode of nutrition can be parasitic
  - (d) X can be fungi, mode of nutrition can be symbiotic
2. Besides leaves which other part of plant can carry out the process of photosynthesis?
  - (a) Stem of some plants
  - (b) Flower of some plants
  - (c) Roots of some plants
  - (d) None of the above
3. Choose the incorrect statement.
  - I. Chlorophyll is necessary for photosynthesis
  - II. Carbon monoxide is necessary for photosynthesis
  - III. Light is necessary for photosynthesis
  - IV. Starch in leaf is produced due to photosynthesis

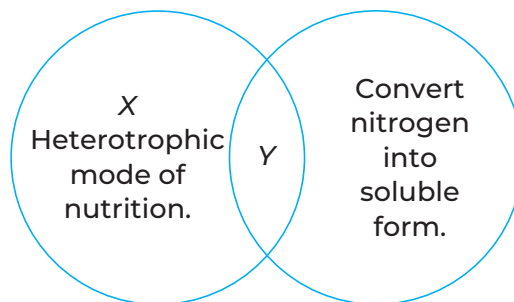
**Codes**

  - (a) Only I
  - (b) Only II
  - (c) Both II and IV
  - (d) Both III and I
4. Which of the following is correct w.r.t the change of energy during photosynthesis?
  - (a) Solar energy converted into mechanical energy
  - (b) Chemical energy converted into mechanical energy
  - (c) Bioenergy converted into chemical energy
  - (d) Solar energy converted into chemical energy

5. Which one of the following pair shows symbiotic relationship?
- (a) *Rhizobium* and legume
  - (b) Lichens
  - (c) Both (a) and (b)
  - (d) Fungi and mushroom
6. When wheat dough is left in the open, after a few hours it starts to emit foul smell and become unfit to use. What can be the reason behind it?
- (a) Carbohydrate present in dough provide favourable condition to yeast and other fungi to grow
  - (b) Carbohydrate present in dough spoils due to bacterial growth
  - (c) Both (a) and (b)
  - (d) None of the above
7. In the absence of Y photosynthesis will not occur in the leaves of plants. Here 'Y' is
- (a) guard cells
  - (b) space between cells
  - (c) chlorophyll
  - (d) vacuole
8. Pitcher plants trap insects because it
- (a) is a heterotrophs
  - (b) grow in soil which lack nitrogen
  - (c) do not have chlorophyll
  - (d) have digestive system like animals
9. Plant which show both autotrophic and heterotrophic mode of nutrition is
- (a) *Dionaea*
  - (b) *Hibiscus*
  - (c) Bread mould
  - (d) *Cuscuta*
10. Solve the riddle.  
I am white and soft, I grow well in rainy season. Children pluck me from ground and admire me. I absorb nutrient from dead and decay parts of plants and animals in the soil.  
Identify the organism and its mode of nutrient.
- (a) Mushroom, saprophyte
  - (b) Yeast, saprophyte
  - (c) Fish, heterotrophs
  - (d) Mosquito, parasite

## 2 Marks Questions

11. Today Somya learnt about stomata that “Stomata are the tiny pores present on leaf surface to exchange gases and waste water. These stomata open and close with the help of guard cell. But she is curious to know that why these tiny pores are closed during night time? Identify the reason which correctly explains such behaviour of stomata?
- (a) To reduce water loss  
(b) To reduce the up take of CO<sub>2</sub>  
(c) To protect plant from harmful gases  
(d) All of the above
12. Choose the incorrect statement.
- I. Water comes into leaves through stomata in the form of vapours.  
II. Plants take atmospheric nitrogen through stomata and utilize as a nutrient.
- (a) Only I  
(b) Only II  
(c) Both (a) and (b)  
(d) None of the above
13. Refer to the Venn diagram.



- Identify the correct option for X and Y.
- (a) X-can be amerbel which take food from plant and Y-can be mushroom  
(b) X-can be fungi and Y-can be lichens  
(c) X-can be any heterotrophic plant which depend on others for nutrition and Y-can be *Rhizobium*  
(d) X-can be algae and Y-can be fungi

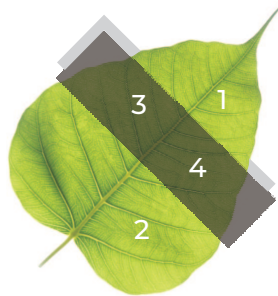
**14.** State whether the following statements are true [T] or false [F].

- I. All green plants can prepare their own food.
- II. Water and minerals in plants are transported by the vessel from root to plant parts.
- III. Plants store food in the form of protein.
- IV. *Rhizobium*, fungi, algae, pitcher plant have heterotrophic mode of nutrient.

Choose the correct option.

- |     |   |    |     |    |     |   |    |     |    |
|-----|---|----|-----|----|-----|---|----|-----|----|
|     | I | II | III | IV |     | I | II | III | IV |
| (a) | T | T  | F   | T  | (b) | F | T  | T   | F  |
| (c) | T | F  | F   | F  | (d) | T | T  | F   | F  |

**15.** Some students perform an experiment in which they cover a portion of a leaf with black paper and place the plant in bright light for several hours. Four samples then cut from the leaf in the position shown and were tested for starch.



Which disc contained starch and will give positive test for it?

- (a) Only 1                      (b) 1 and 2                      (c) Only 2                      (d) 3 and 4

### Answers

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1. (b)	2. (a)	3. (b)	4. (d)	5. (c)	6. (a)	7. (c)	8. (b)	9. (a)	10. (a)
11. (a)	12. (c)	13. (c)	14. (d)	15. (b)					

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