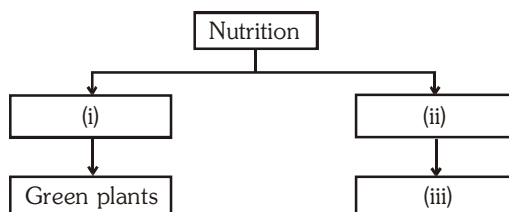




NUTRITION IN PLANTS

Multiple choice questions

1. Fill the given chart.



- (1) (i) Autotrophic, (ii) Heterotrophic, (iii) Neem
(2) (i) Autotrophic, (ii) Heterotrophic, (iii) Human
(3) (i) Heterotrophic, (ii) Autotrophic, (iii) Human
(4) (i) Autotrophic, (ii) Heterotrophic, (iii) Mango

2. Identify the figure. Which among the following listed features/characteristics hold true for it?



- (1) It is the modified part of a leaf.
(2) Hairs are present inside it which are directed downwards.
(3) It is pigmented to lure the insects.
(4) All of these

3.



Above plant mushroom gets its food

- (1) from dead and decaying plants
(2) from photosynthesis
(3) by eating small insects which come near it
(4) from the water we pour near it

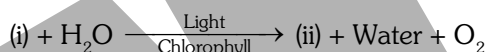
4. In cactus plant, which part performs photosynthesis and manufacture food ?

- (1) Leaves (2) Spines
(3) Roots (4) Stem

5. Which of the following statements are correct regarding producers ?

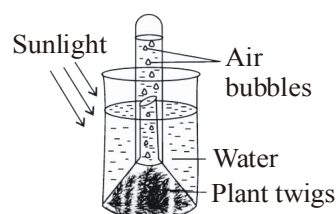
- (1) Green plants are producers because they can make their own food.
(2) Producers prepare their own food from simpler inorganic substances.
(3) Producers prepare their food by the process of photosynthesis.
(4) All of the above.

6. Fill the missing link in the following equation that shows the process of photosynthesis.



- (1) (i) CO_2 (ii) H_2O_2
(2) (i) CO (ii) $C_6H_{12}O_6$
(3) (i) $C_6H_{12}O_6$ (ii) CO_2
(4) (i) CO_2 (ii) $C_6H_{12}O_6$

7. Anusha puts some freshly cut plant twigs in a beaker filled with water. She covered the plant with a funnel and test tube as shown in the given figure and then kept the set up in sunlight. After few hours, she observes that bubbles are evolving in the setup. Which of the following is correct regarding the air bubbles?



- (1) Bubbles evolve as carbon dioxide is released in photosynthesis.
(2) Bubbles evolve because water gets heated under sunlight.
(3) Bubbles evolve as oxygen is released in photosynthesis.
(4) Both (1) & (2)

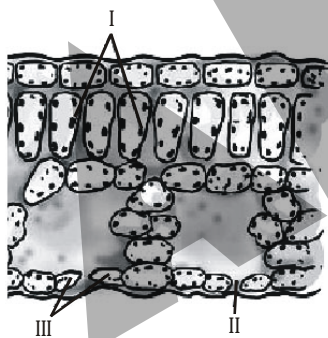
More than one correct

8. Which statements are correct regarding photosynthesis?
 (1) Destarching is done by keeping the plant in dark room for 2-3 days.
 (2) In desert plants photosynthesis takes place in green stems.
 (3) Sunlight is essential for photosynthesis.
 (4) Algae cannot perform photosynthesis.
9. Find the true statements
 (1) Carbon dioxide is used during photosynthesis.
 (2) Oxygen is released during photosynthesis.
 (3) Photosynthesis occurs in the presence of sunlight
 (4) Glucose formed during photosynthesis ultimately gets converted into starch.

True or false

10. Beside oxygen food is essential for the survival of all living organisms.
 (1) True (2) False
11. Algae are green in colour as they contain chlorophyll.
 (1) True (2) False
12. The organisms which obtain food from the sources other than the self are called autotrophs.
 (1) True (2) False
13. Plants can get carbon dioxide from soil.
 (1) True (2) False

Diagram based question (Q.14 to Q.16)



14. Identify the structure shown in the given figure.
 (1) Cell (2) Section of a leaf
 (3) Root hair (4) Root nodule
15. What do we call the structure marked as III in figure?
 (1) Guard cell (2) Chloroplast
 (3) Stomata (4) None
16. Which cells help in photosynthesis in given figure by trapping solar energy?
 (1) I (2) II (3) III (4) Both (1) & (2)
17. **Unscramble the following words**
 (i) TERAOW (ii) ENGYXO
 (iii) THGILNUS (iv) ODOF
 (v) HARCST

18. Fill in the blanks

- (i) In plants CO_2 is obtained from the atmosphere through tiny pores called _____.
- (ii) In photosynthesis _____ energy changes into _____ energy.
- (iii) _____ increase the surface area of roots which help in absorption of water.
- (iv) _____ regulate the opening and closing of stomata.

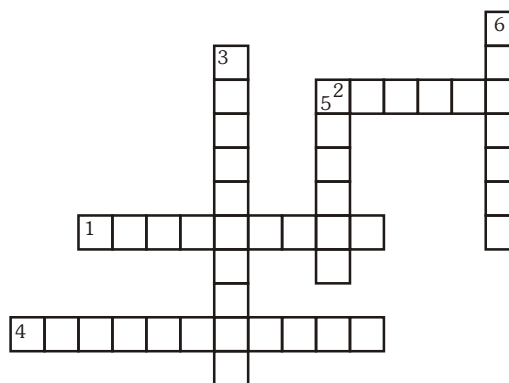
19. Based on Passage

Passage-1

They need nitrogen in a soluble form. The bacterium called *Rhizobium* can take atmospheric nitrogen and convert it into a soluble form. But *Rhizobium* cannot make its own food. So it lives in the roots of gram, peas, moong, beans and other legumes and provides them with nitrogen. Pulses (dals) are obtained from leguminous plants. In return, the plants provide food and shelter to the bacteria.

- (i) What represent 'they' in passage?
 (1) Bacteria (2) Plants
 (3) Animal (4) Fungi
- (ii) What do we call the above type of association in plants?
 (1) Parasitic (2) Symbiotic
 (3) Insectivorous (4) Saprophytic
- (iii) Which gas is fixed by the *Rhizobium* in plants?
 (1) Nitrogen (2) Sulphur
 (3) Oxygen (4) Helium

20. Puzzle



- An example of insectivorous plant.
- Symbiotic association between alga and fungus.
- An example of a saprotrophic plant.
- Pigment essential for photosynthesis.
- Food factories of plants.
- An example of a parasitic plant.

Subjective type question

Very short answer type questions

21. Potato and ginger are both underground parts that store food. Where is the food prepared in these plants?
22. Name the mode of nutrition in bread moulds.
23. What is the role of chlorophyll in plants?
24. Give any two examples of insectivorous plants.

Short answer type questions

25. Nitrogen is an essential nutrient for plant growth. But farmers who cultivate pulse crops like green gram, Bengal gram, black gram, etc. do not apply nitrogenous fertilizers during cultivation. Why?

26. Wheat dough if left in the open, after a few days, starts to emit a foul smell and becomes unfit for use. Give reason.

27. What are the four basic requirements for photosynthesis? Write an activity to show that light is essential for photosynthesis.

Long answer type questions

28. Sun is called the ultimate source of energy for all living organisms. Comment.
29. What do you mean by symbiotic relationship? Explain with example.
30. What is stomata? Draw a well labeled diagram of stomata. Also give its functions.

ANSWER KEY

Multiple choice questions

Que.	1	2	3	4	5	6	7	8	9
Ans.	2	4	1	4	4	4	3	1,2,3	1,2,3,4

True or False

10. True 11. True 12. False 13. False

Diagram based question

14. 2 15. 1 16. 4

17. Unscramble the following words

- (i) Water (ii) Oxygen (iii) Sunlight (iv) Food (v) Starch

18. Fill in the blanks

- (i) Stomata (ii) Solar, chemical (iii) Root hair (iv) Guard Cell

19. Based on Passage

- (i) (2) (ii) (2) (iii) (1)

20. Puzzle

1. Nepenthes 2. Lichen 3. Indian pipe 4. Chlorophyll 5. Leaves 6. Cuscuta