CHAPTER – 1 Nutrition in Plants | CLASS 7TH SCIENCE IMPORTANT QUESTIONS

Important Questions

Question 1.
Potato and ginger are both underground parts that store food. Where is the food prepared in these plants? [NCERT Exemplar]
Anwer:
In both the plants, shoot system and leaves are above ground. They prepare food through photosynthesis and transport it to the underground part for storage.

Question 2.
Plants prepare their food using a different mode of nutrition than us. What is it?
Answer:
The mode of nutrition in plant is autotrophic, i.e. they synthesise their own food.

Question 3.
Photosynthesis requires chlorophyll and a few other raw materials. Add the missing raw materials to the list given below:
Water, minerals, (a) ..... (b) .....
Answer:
(a) Sunlight
(b) Carbon dioxide

Question 4.
The tiny openings present on the leaf surface. What are they called?
Answer:
Stomata are the tiny pores present on the surface of leaves through which gaseous exchange takes place in plants.

Question 5.
What is the function of guard cells of stomata?
Answer:
Guard cells help in controlling the opening and closing of stomata for gaseous exchange.

Question 6.
Which parts of the plant are called food factories of the plant?
Answer:

Leaves are referred to as food factories of plants. This is because, leaves synthesise food by the process of photosynthesis.

Question 7.
A carbohydrate is produced by plants as food source. It is constituted from which molecules?
Answer:
Carbohydrates are composed of carbon, hydrogen and oxygen.

Question 8.
Why do some plants feed on insects?
Answer:
Insectivorous plants grow in soil which lack nitrogen, therefore they eat insects to fulfill their need of nitrogen.

Question 9.
Define parasites.
Answer:
Parasites they are those organisms which grow on other plants or animals for their food, e.g. Cuscuta.

Question 10.
Name the bacteria that can fix atmospheric nitrogen.
Answer:
Rhizobium is the bacterium which can fix atmospheric nitrogen.

Question 11.
Except plants, why can't other living organisms prepare their food using CO_2, water and minerals? [HOTS]
Answer:
Our body does not contain chlorophyll for absorbing solar energy which is necessary for preparing food using air, water, etc.

Question 12.
A leguminous plant can restore the soil's concentration of mineral nutrients. Can you give examples of some such plants?
Answer:
Plants such as gram, pulses and beans are leguminous.

Question 13.
Algae are green in colour. Why?
Answer:
Algae contain chlorophyll which imparts green colour to them.

Question 14.
what do you understand by nutrition?
Answer:
The process of utilising nutrients like carbohydrates, proteins, fats, etc., to generate energy is called nutrition.

Question 15.
Fungus can be harmful and useful. Give an example showing both of these traits of fungus.
Answer:
Fungus produces antibiotics like penicillin used to treat diseases and fungus can also harm us by causing fungal infections on skin and hair.

Question 16.
A unique feature in leaves allows them to prepare the food while other parts of plants cannot. Write the possible reason for this. [HOTS]
Answer:
Leaves contain chlorophyll which is essential for food preparation and is absent in other parts of plant.

Question 17.
Algae and fungi form a unique association sharing benefits from each other. What is the name of association between them?
Answer:
Lichens.

Question 18.
In a plant, photosynthesis occurs in a part other than leaf. Name that plant and the part where photosynthesis occurs.
Answer:
Cactus, the part where photosynthesis occurs are stem and branches which are green.

Question 19.
Why is Cuscuta, categorised as a parasite?
Answer:
Cuscuta derives its nutrition using an association where it deprives its host of all valuable nutrients and absorbs them itself. Hence, it is called a parasitic plant.

Question 20.
Plant cannot use the nitrogen present in the soil directly. Why?
Answer:
Plants can use nitrogen only in soluble form while in soil nitrogen is present in inorganic form.

Question 21.
Why are insectivorous plants called partial heterotrophs?
Answer:
Insectivorous plants are autotrophs, i.e. they prepare their own food. They are partial heterotrophs as they eat insects for obtaining nitrogen.

Question 22.
What is the stored food form in sunflower seeds?
Answer:
In sunflower seeds, glucose is stored in the form of oils (fats).

Question 23.
What do you understand by saprotrophic mode of nutrition?
Answer:
The mode of nutrition in which organisms take their nutrients from dead and decaying matter is called saprotrophic mode of nutrition.

Question 24.
A mutually beneficial relationship that occurs between two plants. It is known by what name? Give an example.
Answer:
Symbiosis is the mutually benefitting association between two plants, e.g. lichens.

Question 25.
For testing the presence of starch in leaves, a boiled leaf is used. Why?
Answer:
Boiling the leaf remove chlorophyll/green colour from the leaves.

Question 26.
Mosquitoes, bed bugs, lice and leeches suck our blood. Can they be called as parasites? [HOTS]
Answer:
Yes, these animals/insects are parasites as they harm the hosts while they suck blood.

Question 27.
Insectivorous plants have one or the other specialised organs to catch their prey. What is that organ?
Answer:
Leaves of insectivorous plants catches the prey.

Question 28.
Farmers spread manure of fertilisers in the field or in gardens, etc. Why are these added to the soil?

Answer:
Plants absorb mineral nutrients from soil. Thus, declining their concentration in soil fertilisers and manures enhance or add these essential nutrients back in soil.

Question 29.
A cell is formed of many sub-components. Identify different constituents of the cell. Are animal and plant cells similar?
Answer:
A cell contains nucleus, cytoplasm, vacuole, cell organelles like chloroplast, mitochondria, etc. No, animal cells are different from plant cells.

Question 30.
A goat eats away all the leaves of a small plant (balsam). However, in a few days, new leaves could be seen sprouting in the plant again. How did the plant survive without leaves? [NCERT Exemplar; HOTS]
Answer:
The plant of balsam survived on the food stored in the stem and roots.