Q.1. Why do organisms take food ?

Ans. All organisms need food for :

(a) their growth, (b) to build their bodies, (c) to repair and replace the damaged parts of the body, (d) to provide the energy to carry out all necessary life processes in the body.

Q. 2. Distinguish between a parasite and a saprotroph.

Ans.

Parasite	Saprotroph
(i) They feed on living organisms.	(i) They feed on dead and decaying matter.

(ii) They take ready made food from the host on which it feeds.	(ii) They convert the matter into solution and then absorb the nutrients from them.

Q. 3. How would you test the presence of starch in leaves ?

Ans. The Iodine test can be used to test the presence of starch in leaves. For this, first the leaves are boiled in alcohol to remove chlorophyll from them and then 2 drops of iodine solution are added to it. The colour changes to blue which indicates the presence of starch.

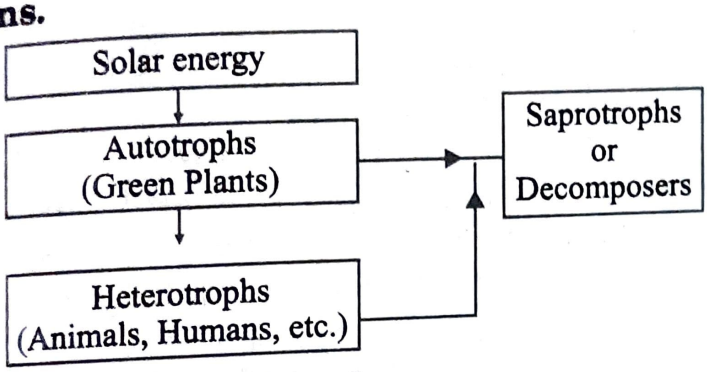
Q. 4. Give a brief description of the process of synthesis of food in green plants.

Ans. Synthesis of food in green plants takes place by the process of photosynthesis. During photosynthesis, chlorophyll containing cells of the leaves, in the presence of sunlight, using carbon dioxide and water to synthesise carbohydrates. During this process oxygen is released.

$$\text{Carbon dioxide} + \text{Water} \xrightarrow[\text{Chlorophyll (in leaves)}]{\text{Sunlight}} \text{Carbohydrate} + \text{Oxygen}$$

Q. 5. Show with the help of a sketch that plants are the ultimate source of food.

Ans.



Q. 6. Fill in the blanks :

(a) Green plants are called ..... since they synthesise their own food.

(b) The food synthesised by the plants is stored as ..... .

(c) In photosynthesis, solar energy is absorbed by the pigment called ..... .

(d) During photosynthesis, plants take in ..... and release ..... gas.

Ans. (a) autotrophs, **(b)** starch, **(c)** chlorophyll, **(d)** carbon dioxide, oxygen.

Q. 7. Name the following :

(a) A parasitic plant with yellow, slender and branched stem.

(b) A plant that is partially autotrophic.

(c) The pores through which leaves exchange gases.

Ans. (a) *Cuscuta,* **(b)** Insectivorous plant, **(c)** Stomata.

Q. 8. Tick the correct answer :

(a) *Cuscuta* (Amarbel) is an example of—

(i) autotroph (ii) parasite (iii) saprotroph (iv) host

(b) The plant which traps and feeds on insects is—

(i) *Cuscuta* (ii) china Rose (iii) pitcher plant (iv) rose.

Ans. (a) (ii) parasite (b) (iii) Pitcher plant.

Q. 9. Match the items given in column I with those in column II.

Column I	Column II
Chlorophyll	*Rhizobium*
Nitrogen	Heterotrophs
Cuscuta	Pitcher plant
Animals	Leaf
Insects	Parasite

Ans.

Column I	Column II
Chlorophyll	Leaf
Nitrogen	*Rhizobium*
Cuscuta	Parasite
Animals	Heterotrophs
Insects	Pitcher plant

Q. 10. Mark 'T' if the statement is true and 'F' if it is false.

(i) Carbon dioxide is released during photosynthesis. (T/F)

(ii) Plants which synthesise their food themselves are called saprotrophs. (T/F)

(iii) The product of photosynthesis is not a protein. (T/F)

(iv) Solar energy is converted into chemical energy during photosynthesis. (T/F)

Ans. (i) F, (ii) F, (iii) T, (iv) T.

Q. 11. Choose the correct option from the following :

Which part of the plant takes in carbon dioxide from the air for photosynthesis ?

(i) Root hair (ii) Stomata

(iii) Leaf veins (iv) Sepals

Ans. (ii) Stomata

Q. 12. Choose the correct option from the following :

Plants take carbon dioxide from the atmosphere mainly through their :

(i) roots **(ii)** stem

(iii) flowers **(iv)** leaves

Ans. (iv) leaves

Q. 13. Why do farmers grow many fruits and vegetable crops inside large green houses ? What are the advantages to the farmers ?

Ans. A green house is a framed structure covered with a transparent material sheets. Farmers grow many fruits and vegetable crops inside large green houses to provide best growing conditions to their crops. Advantages of green houses are :

1. Safety from open adverse environmental conditions.
2. Safety from pests, weeds and wild animals.
3. Crops can be grown even in off-season.
4. Prevention of water loss due to evaporation in open dried atmosphere.
5. Safety from too much cold and fog.