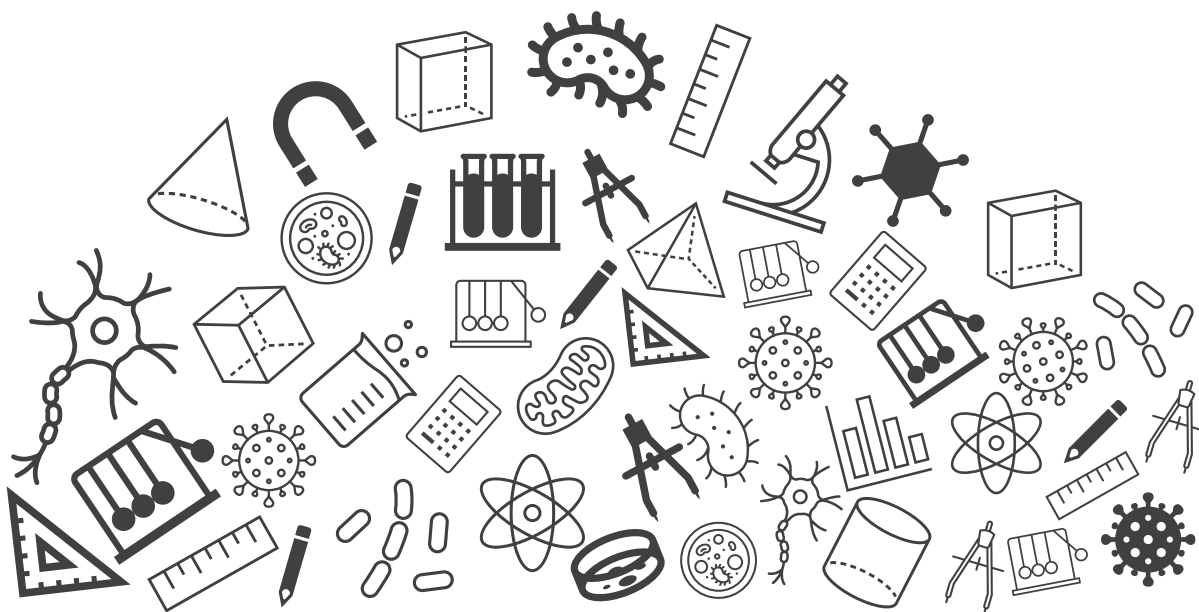




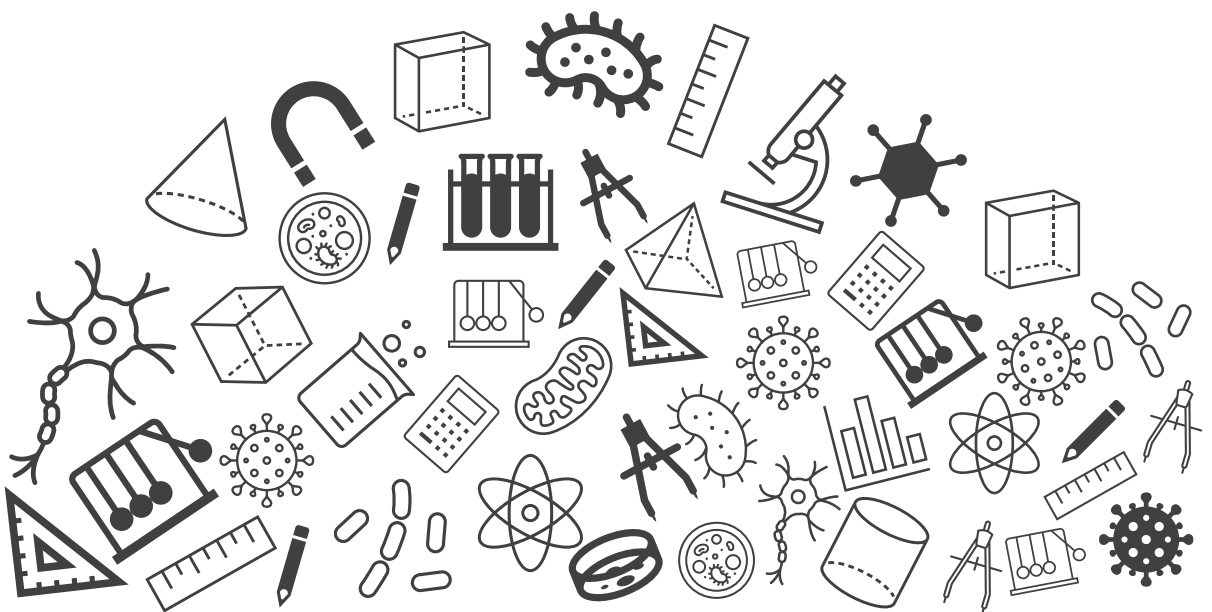
Grade 07 : Science

Exam Important Questions





Nutrition in Plants

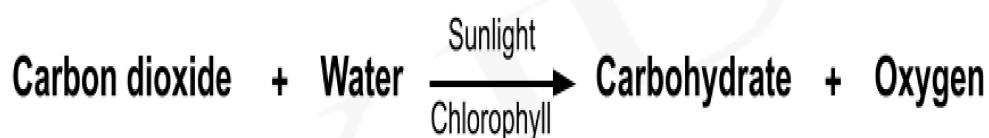


Exam Important Questions : Nutrition in Plants

1. Give a brief description of the process of synthesis of food in green plants.
[2 marks]

Solution:

- Photosynthesis is the process by which plants prepare their own food in the presence of sunlight, water, carbon dioxide, and chlorophyll. (1 mark)
- The leaf is known as the kitchen of the plant as it produces food and stores it in the form of starch.



(1 mark)

2. How would you test the presence of starch in leaves?
[3 marks]

Solution:

The following steps are to be followed while testing for starch:

- Take a leaf in a beaker. (0.5 marks)
- Boil the leaf in water. (0.5 marks)
- Boil the leaf in alcohol. (0.5 marks)
- Wash it in cold water and place it on a watch glass. (0.5 marks)
- Pour some iodine solution and observe. (0.5 marks)
- Leaf will turn blue-black indicating the presence of starch. (0.5 marks)

Exam Important Questions : Nutrition in Plants

3. Distinguish between a parasite and a saprotroph.
[2 marks]

Solution:

Parasite :

- Organisms that derive nutrition from the body of other living organisms (hosts) are known as parasites.
- Examples: *Cuscuta*, *Rafflesia* etc. (1 mark)

Saprotroph :

- Organisms that derive nutrition from dead and decaying organisms are known as saprotrophs.
- Examples: Mushroom, Yeast etc. (1 mark)

4. 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?
[1 mark]

Solution:

The plant survived on the food stored in the stem and roots. Plants prepare food themselves through the process known as photosynthesis. The synthesis of food in plants occurs in their leaves. (1 mark)

Exam Important Questions : Nutrition in Plants

5. Sunlight, chlorophyll, carbon dioxide, water and minerals are raw materials essential for photosynthesis. Do you know where they are available? Fill in the blanks with the appropriate raw materials.

(a) Available in the plant: ____

(b) Available in the soil: ____, ____

(c) Available in the air: ____

(d) Available during day: ____

[2 marks]

Solution:

(a) Available in the plant: Chlorophyll. (0.5 marks)

(b) Available in the soil: Water, minerals. (0.5 marks)

(c) Available in air: Carbon dioxide. (0.5 marks)

(d) Available during day: Sunlight. (0.5 marks)

6. Pitcher plant traps insects because it _____.

(a) is a heterotroph.

(b) grows in soils which lack in nitrogen.

(c) does not have chlorophyll.

(d) has a digestive system like human beings.

[1 mark]

Solution:

The correct answer is option (b). (1 mark)

Insectivorous plants such as pitcher plant tend to grow in places where the soil lacks in nitrogen, thus they trap insects for their nitrogen requirements.

Exam Important Questions : Nutrition in Plants

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.

[3 marks]

Solution:

- A) *Cuscuta* (1 mark)
- B) Pitcher plant (1 mark)
- C) Stomata (1 mark)

8. Match the items given in Column I with those in Column II:

<i>Column I</i>	<i>Column II</i>
<i>Chlorophyll</i>	<i>Bacteria</i>
<i>Nitrogen</i>	<i>Heterotrophs</i>
<i>Amarbel</i>	<i>Pitcher plant</i>
<i>Animals</i>	<i>Leaf</i>
<i>Insects</i>	<i>Parasite</i>

[2.5 marks]

Solution:

(0.5 marks each)

<i>Column I</i>	<i>Column II</i>
<i>Chlorophyll</i>	<i>Leaf</i>
<i>Nitrogen</i>	<i>Bacteria</i>
<i>Amarbel</i>	<i>Parasite</i>
<i>Animals</i>	<i>Heterotrophs</i>
<i>Insects</i>	<i>Pitcher plant</i>