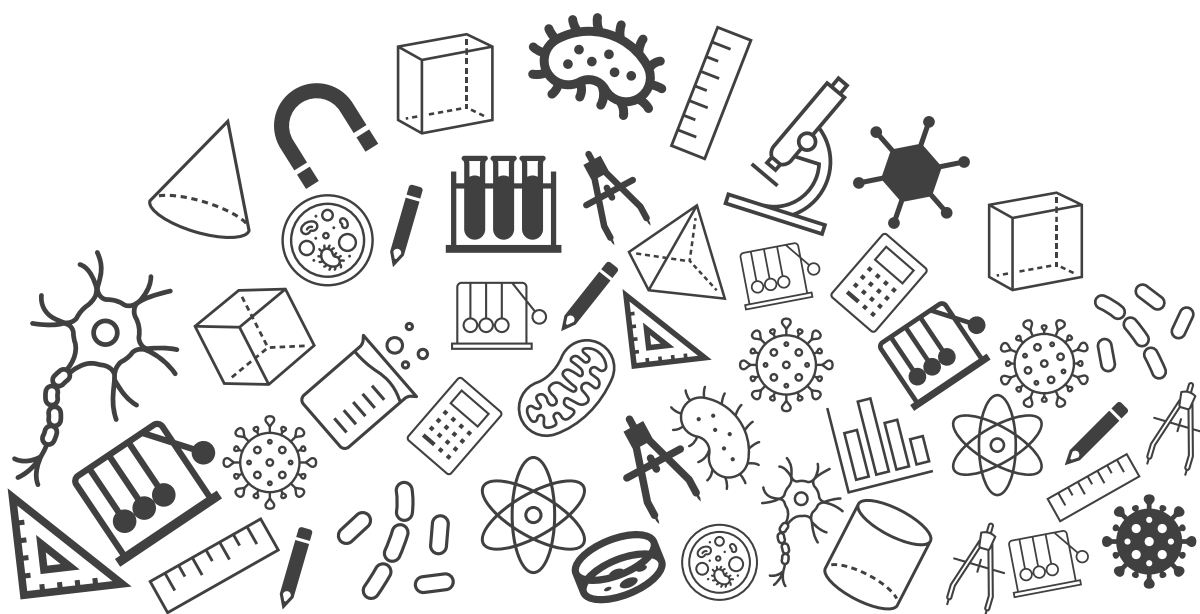




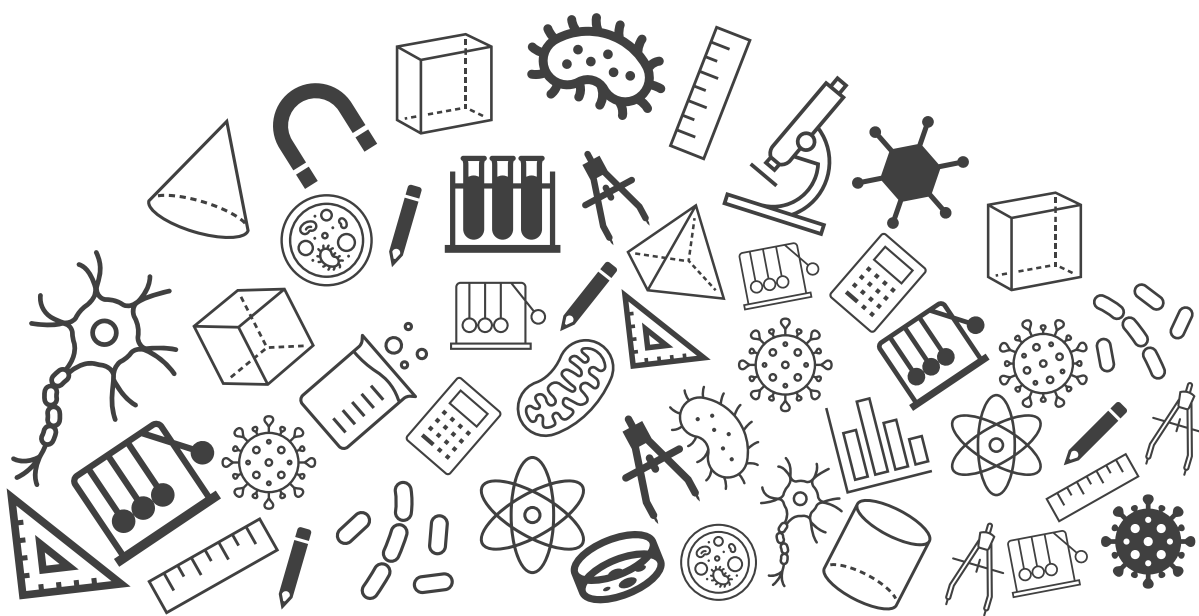
Grade 06 : Science

Exam Important Questions





Getting to Know Plants



Getting to Know Plants

Topic : Exam Important Questions

1. a) If the roots of a plant are removed and planted in a pot, will the plant survive? [1 mark]
 b) Give reasons for your answer. [2 marks]
 a) If the roots of a plant are removed and planted in a pot, the plant will not survive. (1 mark)
 b) The reasons are as follows: (2 marks)
 - The roots are the part of the plant which remain under the soil.
 - They absorb water and minerals from the soil.
 - Without the roots, the plant will not get the water and minerals and hence, will die eventually as water is essential for the plants to prepare food.
2. What are the two types of root systems? Give examples for each. (2 marks)

Solution:

The two types of root system are:

- Tap root system which consists of one main long and slender root with few lateral roots emerging out of it. Examples: Beetroot, Gram, etc (1 mark)
- Fibrous root system which is an intricate network of similar sized roots with tiny hair like structures called root hairs. Examples: Maize, Rice, etc.

3. What are creepers and climbers? Give examples. [2 marks]

Creepers:

- Plants with weak stems that cannot stand upright and spread readily on the ground are called creepers. (0.5 marks)
- For example: Pumpkin, watermelon, muskmelon, etc. (0.5 marks)

Climbers:

- Plants with weak stems that cannot stand upright but readily climb up the neighbouring mechanical support or a tree are called climbers. (0.5 marks)
- For example: Grapevine, pea plant, money plant, etc. (0.5 marks)

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4. Why does a white flower twig kept in ink-water turn colourful? [2 marks]

- Stem consists of specialised tissues which conduct water and minerals to different parts of the plant. (1 mark)
- When a white flower twig is kept in a ink-water, it changes its colour as stem conducts the ink-water to the flower. (1 mark)

5. Is it possible for you to find out whether a plant has taproot or fibrous roots by looking at the impression of its leaf on a sheet of paper? (2 marks)

Solution:

- Yes, by looking at the impression, we can know the type of venation and hence, the root system. (1 mark)
- If a plant has parallel venation, then the root would be a fibrous root. (0.5 marks)
- If the plant has reticulate venation, then the root would be a tap root. (0.5 marks)

6. Will a leaf taken from a potted plant kept in a dark room for a few days turn blue-black when tested for starch? Give reason for your answer. (2 marks)

- No, a leaf from a potted plant kept in dark will not turn blue-black when tested for the presence of starch. (0.5 marks)
- Plants perform photosynthesis only in the presence of sunlight. (0.5 marks)
- A leaf kept in dark for few days cannot perform photosynthesis and all the stored starch would have been used up by the leaf. (0.5 marks)
- No fresh starch would be present in the leaf. Hence, the leaf will not turn blue-black when tested for starch. (0.5 marks)

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7. Identify the wrong statements and correct them. [4 marks]

- (a) Anther is a part of the pistil.
- (b) The visible part of a bud are the petals.
- (c) Lateral roots are present in a tap root.
- (d) Leaves perform the function of transpiration only.

(a) The statement is wrong.

Correct statement - Anther is a part of the stamen.

- Stamens are the male reproductive part of a flower.
- It has two parts: Anther and filament.
- The part where pollen is produced is the anther.

(1

Mark)

(b) The statement is wrong.

Correct statement - The visible part of a bud are the sepals.

- Sepals are the green leaf-like structures enclosing the flower and protect them at the bud stage.

(1 Mark)

(c) The statement is correct.

- Lateral roots are present in a tap root.
- Taproot is the main root and the smaller roots are called lateral roots.

(1 Mark)

(d) The statement is wrong.

Correct statement - Leaves perform various functions other than transpiration, such as gaseous exchange, photosynthesis etc.

- In photosynthesis, leaves prepare food for plants by using water and carbon dioxide in the presence of sunlight.
- In transpiration, plants release excess water in the form of water vapour from their aerial parts through stomata.
- Leaves exchange oxygen and carbon dioxide through the tiny pores called stomata.

(1 Mark)

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8. What are the parts of a flower? [3 marks]

The parts of a flower are sepals, petals, stamens, and pistil.

(1 mark)

- **Sepals:** Sepals are green leafy parts present under petals and they protect the flower buds from damage. (0.5 marks)
- **Petals:** It is the colourful part of a flower which attracts insects and birds to it. (0.5 marks)
- **Stamens:** This is the male part of a flower that consists of two parts, namely anther and filament. (0.5 marks)
- **Pistil:** This is the female part of a flower that consists of stigma, style, and ovary. (0.5 marks)

9. Which of the following plant is a shrub?

- ☒ A. Rose
- ☐ B. Coriander
- ☐ C. Pumpkin
- ☐ D. Apple

The correct answer is (a) Rose.

- **Shrubs :** These are the medium-sized plants with hard and woody stems. For Example : Rose, Hibiscus, Lemon, etc.
- **Trees :** These are big and tall plants. They have a single, hard, and woody stem called a trunk. For Example : Apple, Mango, Jackfruit, etc.
- **Herbs :** These are small plants with soft and non-woody stems that are green in colour. For Example : Coriander, Mint, Rosemary, etc.
- **Creepers:** These are plants with weak and thin stems that cannot stand upright and spread readily on the ground. For Example : Pumpkin, Watermelon, Strawberry etc.

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10. Match the following:

	Column I		Column II
A.	Lamina	1	Transports water & food
B.	Petiole	2	Absorbs sunlight
C.	Veins	3	Connects to the stem

☐ A. A:3; B:1; C:2

☐ B. A:2; B:1; C:3

☐ C. A:1; B:3; C:2

☒ D. A:2; B:3; C:1

Therefore, the correct answer is (d) A:2; B:3; C:1

- Lamina is also called the leaf blade. It absorbs sunlight.
- Petiole is the stalk that connects leaf to the stem of the plant.
- Veins transport water and food to all the cells in the leaf.