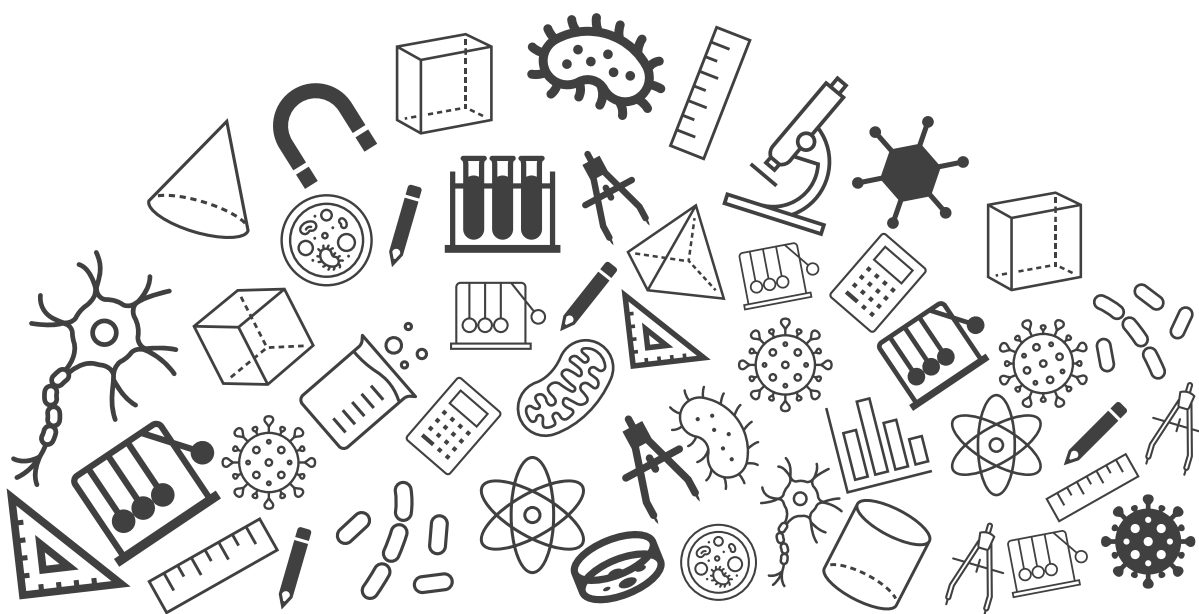




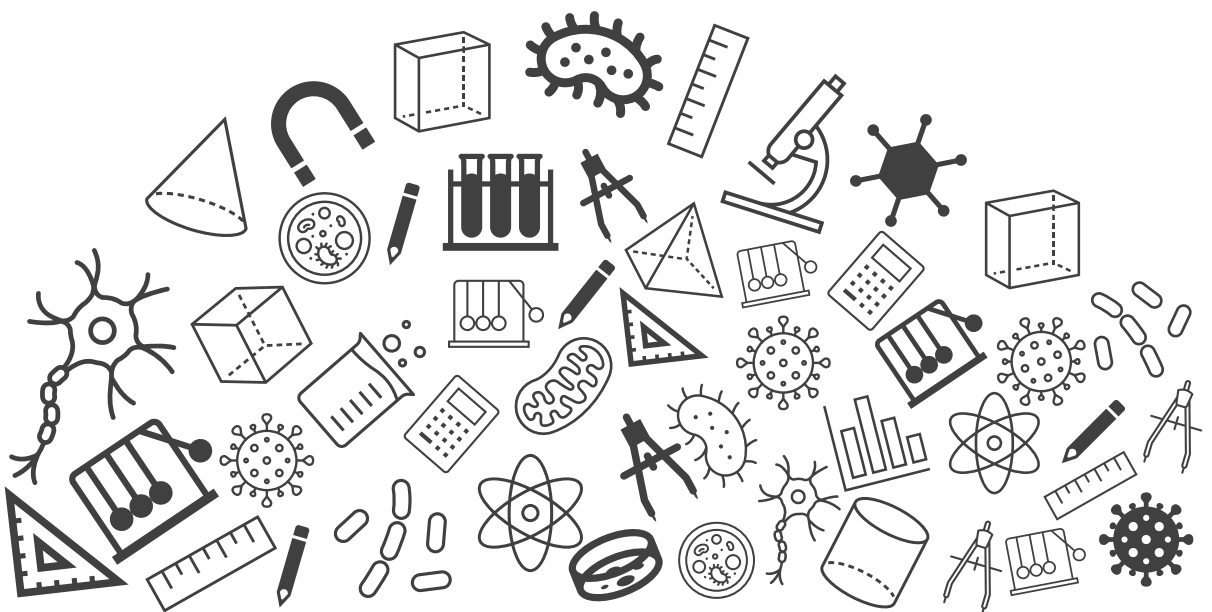
# **Grade 07 : Science**

## **Exam Important Questions**





# Reproduction in Plants



# Reproduction in Plants

## Topic : Exam Important Questions

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1. A spore is

- ☒ A. a broken off piece of the parent organism
- ☒ B. a new daughter cell arising from splitting of the parent cell
- ☒ C. a thick-walled resistant structure
- ☒ D. an outgrowth in the parent body

A spore is a thick-walled resistant structure produced in some organisms. Spores can survive in harsh climatic conditions such as dry weather or extreme temperatures. When suitable conditions return, it germinates to form a new organism.

2. Seed dispersal helps the plants to

- ☐ A. grow faster
- ☒ B. prevent overcrowding
- ☒ C. invade new habitats
- ☐ D. attract plants and animals

Seed dispersal prevents competition between the plant and its own seedlings for sunlight, water and minerals. It also enables the plants to invade new habitats for wider distribution.

## Reproduction in Plants

3. **Statement I:** Bisexual flowers have either stamen or pistil.

**Statement II:** Pollination in bisexual flowers occurs mostly through self pollination.

- ☐ A. Both the statements are true.
- ☐ B. Both the statements are false.
- ☐ C. Statement I is true while statement II is false.
- ☒ D. Statement I is false while statement II is true.

Bisexual flowers have both male and female reproductive parts in a flower. A unisexual flower has a male or female reproductive part. Bisexual flowers can pollinate both by cross pollination as well as self pollination.

4. Which among the following statements are true for sexual reproduction in flowering plants?

- (i) It requires two types of gametes.
- (ii) Fertilisation is a compulsory event.
- (iii) It results in the formation of zygote.
- (iv) Offsprings formed are clones.

- ☐ A. (i) and (iv) only
- ☐ B. (i), (ii), and (iv) only
- ☒ C. (i), (ii), and (iii) only
- ☐ D. (i), (iii), and (iv) only

Fertilisation is defined as the fusion of the male and the female gametes which gives rise to the formation of a new offspring which have similarities and variations from both its parents. Whereas, clones are identical to the parent plant and are formed in case of asexual reproduction.

## Reproduction in Plants

5. Which of the following is not an advantage of vegetative reproduction?

- ☒ A. Plants which produce non-viable seeds can be grown.
- ☒ B. It is an easier method than sowing seeds.
- ☒ C. Such plants produce seeds and fruits much earlier than plants produced from other methods.
- ☒ D. It is the best method to introduce new genetic traits in the species.

Vegetative propagation does not involve fusion of gametes, thus recombination of characters from different sources (parents) does not occur. Hence, it cannot be used to introduce good genetic traits in the species.

6. Which of these conditions can a spore easily withstand?

- ☒ A. Unavailability of nutrients
- ☒ B. Extremely high temperature conditions
- ☒ C. Dry environment
- ☒ D. Low temperature conditions

Spores are the way fungi and some non-seed plants (ferns and mosses) reproduce. Spore can survive in unfavourable conditions as they are covered by a hard protective cover. Due to their small size and light weight, they can be dispersed easily.

## Reproduction in Plants

7. Describe the various ways by which seeds are dispersed.

[3 marks]

[NCERT Textbook Q8]

[Seed Dispersal]

Solution:

Following are the various ways by which seeds are dispersed with examples.

**(a) Dispersal by wind:** Seeds of some plants are light-weight and some have hair-like or wing-like structures present on them. Such seeds can be carried along with the wind and are thus dispersed by wind. Example: Maple, drumstick, etc. (1 mark)

**(b) Dispersal by water:** Dispersal by water takes place in some plants that grow near water bodies. The coconut seed has a tough fibrous covering which has plenty of air inside. This helps the coconut seeds to float on water. (1 mark)

**(c) Dispersal by animals:** Some seeds have spine-like structures on them. They get stuck on the fur of animals and thus get dispersed to different places. Examples: *Xanthium*. Some seeds are swallowed by birds and animals along with fruits. These seeds get dispersed by birds or as animal droppings. (1 mark)

8. Differentiate between pollination and fertilisation. [1 mark]

- The difference between pollination and fertilisation is as following: (1 mark)

Pollination	Fertilisation
The transfer of pollen grains from the anther to the stigma of a flower.	The fusion of male and the female gamete to form a zygote.

## Reproduction in Plants

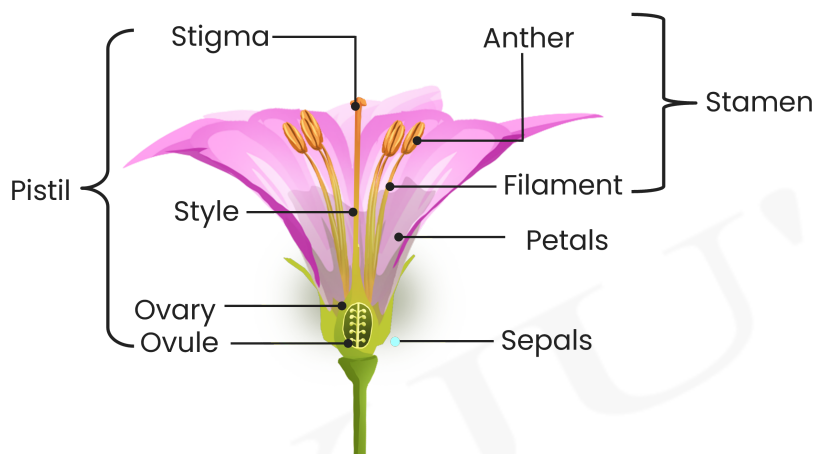
9. Sketch the reproductive parts of a flower.

[3 marks]

[NCERT Textbook Q5]

[Sexual Reproduction in Plants]

Solution:



(2 marks)

- The reproductive parts of a flower are stamen and pistil. The stamen of a flower includes anther and filament. The pistil of a flower includes stigma, style and ovary. (1 mark)

10. Name the following parts of the flower from the statements given below-

- The part which contains pollen grains.
- The part where the female gamete is formed.
- The part where pollen grains germinate.
- The colourful part of the flower which attracts insects.

[2 marks]

The name of the different parts of the flower based on the statements given about them are:

- Anther (0.5 marks)
- Ovary (0.5 marks)
- Stigma (0.5 marks)
- Petals (0.5 marks)