

**BHARATIYA VIDYA BHAVAN'S V.M.PUBLIC SCHOOL, VADODARA**  
**SESSION 2017-18**  
**Question Bank**

**LESSON-2**

**SEXUAL REPRODUCTION IN FLOWERING PLANTS**

**VERY SHORT ANSWER QUESTIONS (1 marks each)**

- Q1. How many nuclei are present in a fully developed male gametophyte of flowering plants?  
Q2. Name the kind of pollination in maize.  
Q3. What features of flowers facilitate pollination by birds?  
Q4. What technical term is applied to fruits formed without fertilisation?  
Q5. What nuclei fuse to give rise to endosperm?  
Q6. What is double fertilisation?  
Q7. What is shield shaped single cotyledon of monocots called?  
Q8. Who discovered double fertilisation in angiosperms?  
Q9. Name a triploid tissue in the seed.  
Q10. Name a plant where dichogamy is found.  
Q11. Name a plant which produces cleistogamic flowers.  
Q12. Name the two nuclei found in a pollen grain.  
Q13. Name the tissue present in the fertilised ovules of angiospermic plants that supplies food and nourishment to the developing embryo.  
Q14. Which technical term is used when the pollen grains are transferred from one flower to stigma of the same flower?  
Q15. Which technical term is used when pollen grains are transferred from anther of a flower to the stigma of another flower of another plant?  
Q16. What is the site of microsporogenesis?  
Q17. What is the site of megasporogenesis?  
Q18. Which cell of male gametophyte produces the male gamete?  
Q19. What is the function of tapetum?  
Q20. Define parthenocarpy.

**SHORT ANSWER TYPE QUESTIONS (2 marks each)**

- Q1. Draw a labelled diagram of the L.S. of an ovule just before fertilisation.  
Q2. Mention any two contrivances by which plants are able to prevent self-pollination in bisexual flower?  
Q3. Draw a diagram of L.S. of an anatropous ovule of an angiosperm and label the following parts?  
Q4. Write two differences between parthenogenesis and parthenocarpy in plants?  
Q5. Give the technical term for the following:  
(i) Pollination by wind (ii) pollination by water (iii) pollination by animals, (iv) Pollination by birds  
(v) Pollination by bat (vi) Pollination by insects.  
Q6. What is geitonogamy? Give its one similarity to (a) autogamy and xenogamy.  
Q7. Draw a diagram of fully developed male gametophyte  
Q8. Give two examples of each:  
i. Wind pollinated plants (anemophilous)  
ii. Water pollinated plants (hydrophilous)  
iii. Insect pollinated plants (entomophilous)  
iv. Bird pollinated plants (ornithophilous)  
Q9. What is emasculation? Explain its importance in hybridisation.  
Q10. What are the constituents of egg apparatus? Site its location in the flower/ovule?  
Q11. What will be the ploidy of the cells of the nucellus, microspore mother cell, the functional megaspore and female gametophyte?  
Q12. What is filiform apparatus? What is its function?  
Q13. What is apomixis? What is its importance?  
Q14. What is pericarp? Mention its function.  
Q15. Draw a labelled diagram of V.S. (L.S.) of an apple.  
Q16. Draw a diagram of typical dicot embryo and label any four parts including the reduced suspensor.

**SHORT ANSWER TYPE QUESTIONS (3 marks each)**

- Q1. Enumerate any six adaptive floral characteristics of a wind pollinated plant?  
Q2. Why do you think the exine should be hard? What is the function of germ pore?  
Q3. State the significance of pollination? List any four differences between wind pollinated and animal pollinated flower?

Q4 What is agamospermy? How is agamospermy different from parthenogenesis and parthenocarpy?

Q5 Trace the development of female gametophyte (embryo sac) from megaspore mother cell in a flower? Give a labelled diagram of the final stage of female gametophyte?

Q6 Given below is an enlarged view of one microsporangium of a mature anther?

(i) Name 'a', 'b' and 'c' wall layers?

(ii) Mention the characteristics and function of the cell forming wall layer 'c'.

Q7 Write briefly the role of pollination in the growth and development in an angiosperm.

**LONG ANSWER QUESTIONS (5 marks each)**

Q1. Draw a labelled diagram of the L.S. of embryo of grasses. How does it differ from that of bean?

Q2. Trace the events that would take place in a flower from the time the pollen grain of the same species falls on the stigma up to the completion of fertilisation.

Q3. a. With the help of a labelled diagram depict the organisation of a typical embryo sac just after double fertilization.

b. How are seeds advantageous to angiosperms?

Q4 Write the adaptations for water pollination/hydrophily.

Q5 Draw well labelled diagram of typical monocotyledonous embryo.

Q6 With the neat labelled diagram describe the parts of a typical angiosperm ovule.

Q7 With a neat diagram explain the 7-celled, 8-nucleate nature of the female gametophyte.

Q8 What are chasmogamous flowers? Can cross pollination occur in cleistogamous flowers? Give reasons for your answer