BIOLOGY

BOOKS - NCERT BIOLOGY (HINGLISH)

SEXUAL REPRODUCTION IN FIOWERING PIANTS

Sexual Reproduction In Fiowering Piants

1. Among the terms listed below, those that are not technically correct names for a floral whorl are

(i) Andrecium (ii) Carpel

(iii) Corolla (iv) Sepal,

A. androcium

B. carpel

C. corolla

D. sepal

Answer: C

Watch Video Solution

2. Embryo sac is to ovule as_____is to an anther.

A. stamen

B. filament

C. pollen grain

D. androecium

Answer: C

Watch Video Solution

3. In a typical complete, bisexual and hypogynous flower the arrangement of floral whorls on the thalamus from the outermost to the innermost is

A. calyx, corolla, androecium and gynoecium

B. calyx, corolla, gynoecium and androecium

C. gynoecium, androecium, corolla and calyx

D. androecium, gynoecium, corolla and calyx

Answer: A

 Watch Video Solution

4. A dicotyledonous plant bears flowers but never produces fruits and seeds. The most probable cause for the above

situation is

A. plant is dioecidous and bears only pistillate flowers

B. plant is dioecious and bears both pistillate and staminate flowers

C. plant is monoecious

D. plant is dioecious and bears only staminate flowers

Answer: D

Watch Video Solution

5. The outermost and innnermost wall layers of microsporangium in an anther are respectively

A. Endothecium and tapetum

B. Epidermis and endodermis

C. Epidermis and middle layer

D. Epidermis and tapetum

Answer: D

Watch Video Solution

6. During microsporgenesis, meiosis occurs in

A. endothecium

B. microspore mother cells

C. microsopre tetrads

D. pollen grains

Answer: B

Watch Video Solution

7. From among the sets of terms given below, identify those that are associated with the gynoecium.

A. Stigma, ovule, embryo sac, placenta

B. Thalamus , pistil, style, ovule

C. Ovule , ovary, embryo sac, tapetum

D. Ovule, stamen, ovary , embryo sac

Answer: A

Watch Video Solution

8. Starting from the innermost part, the correct sequence of parts in an ovule are

A. egg, nucellus, embryos sac, integument

B. egg, embryo, sac, nucellus, integument

C. embryo, sac, nucellus, integument, egg

D. egg, integument, embryo sac, nucellus

Answer: B

Watch Video Solution

9. From the statements given below, choose the option that are true for a typical femal gametophyte of a flowering plant.

(i) It is 8-nucleate and 7-celled at maturity.

(ii) It is free-nuclear during the development.

(iii) It is situated inside the integument but outside the nucellus.

(iv) It has an egg apparatus situated at the chalazal end.

A. (i) and (iv)

B. (ii) and (iii)

C. (i) and (ii)

D. (ii) and (iv)

Answer: C

Watch Video Solution

10. Autogamy can occur in a chasmogamous flower if

A. pollen matures before maturity of ovule

B. ovules mature before maturity of pollen

C. both pollen and ovules mature simultaneously

D. both anther and stigma are of equal lengths

Answer: C

Watch Video Solution

11. Choose the correct statement from the following.

A. Cleistogamous flowers always exhibit autogamy.

B. Clasmogamous flowers always exhibit geitonogamy .

C. Cleistogamous flowers exhibit both autogamy and geitonogamy .

D. Chasmogamous flowers never exhibit autogamy.

Answer: A

Watch Video Solution

12. A particular species of plant produces light, non-sticky pollen in large numbers and its stigmas are long and feathery. These modifications facilitate pollination by

A. insects

B. water

C. wind

D. animals

Answer: C

Watch Video Solution

13. From among the situations given below, choose the one that prevents both autogamy and geitonogamy.

A. Monoecious plant bearing unisexual flowers.

B. Dioecious plant bearing unisexual flowers.

C. Monocious plant with bisexual flowers.

D. Dioecious plant with bisexual flowers.

Answer: B

Watch Video Solution

14. In a fertilised embryo sac, the haploid, diploid and triploid structures are

A. synergid, zygote and primary endosperm nucleus

B. synergid, antipodal and polar nuclei

C. antipodal, synergid and primary endosperm nucleus

D. synergid, polar nuclei and zygote

Answer: A

Watch Video Solution

15. In an embryo sac, the cells that degenerate after fertilisation are

A. synergids and primary endosperm cell

B. synergids and antipodals

C. antipodals and primary endosperm cell

D. egg and antipodals

Answer: B

Watch Video Solution

16. While planning for an artificfal hybridisation programmme involving dioecious plants, which of the following steps would not be relevent?

A. Bagging of female flower

B. Dusting of pollen on stigma

C. Emasculation

D. Collection of pollen

Answer: C

Watch Video Solution

17. In the embryos of a typical dicot and a grass, true homologous structures are

A. coleorrhiza and coleoptile

B. coleoptile and scutellum

C. cotyledons and scutellum

D. hypocotyl and radicle

Answer: C

Watch Video Solution

18. The phenomenon observed in some plants wherein parts of the sexual apparatus is used for forming embryos without fertilisation is called

A. parthenocarpy

B. apomixis

C. vegetative propagation

D. sexual reproduction

Answer: B

Watch Video Solution

19. In a flower, if the megaspore mother cell forms magaspores without undergoing meiosis and if one of the magaspores develops into an embryo sac, its nuclei would be

A. haploid

B. diploid

C. a few haploid and a few diploid

D. with varying ploidy

Answer: B

Watch Video Solution

Watch Video Solution

20. The phenomenon wherein, the ovary develops into a fruit without fertilisation is called

A. parthenocarpy

B. apomixis

C. asexual reproduction

D. sexual reproduction

Answer: A

Watch Video Solution

21. Name the component cells of the 'egg-apparatus' in an embryo sac.

Watch Video Solution

22. Name the part of gynoecium that determines the compatible nature of pollen grain.

Watch Video Solution

23. Name the common function that cotyledons and nucellus perform.

Watch Video Solution

24. Complete the following flow chart

A. Generative cell

B. Sporocyte

C. Male Gamete

D. tapetum

Answer: Generative Cell

Watch Video Solution

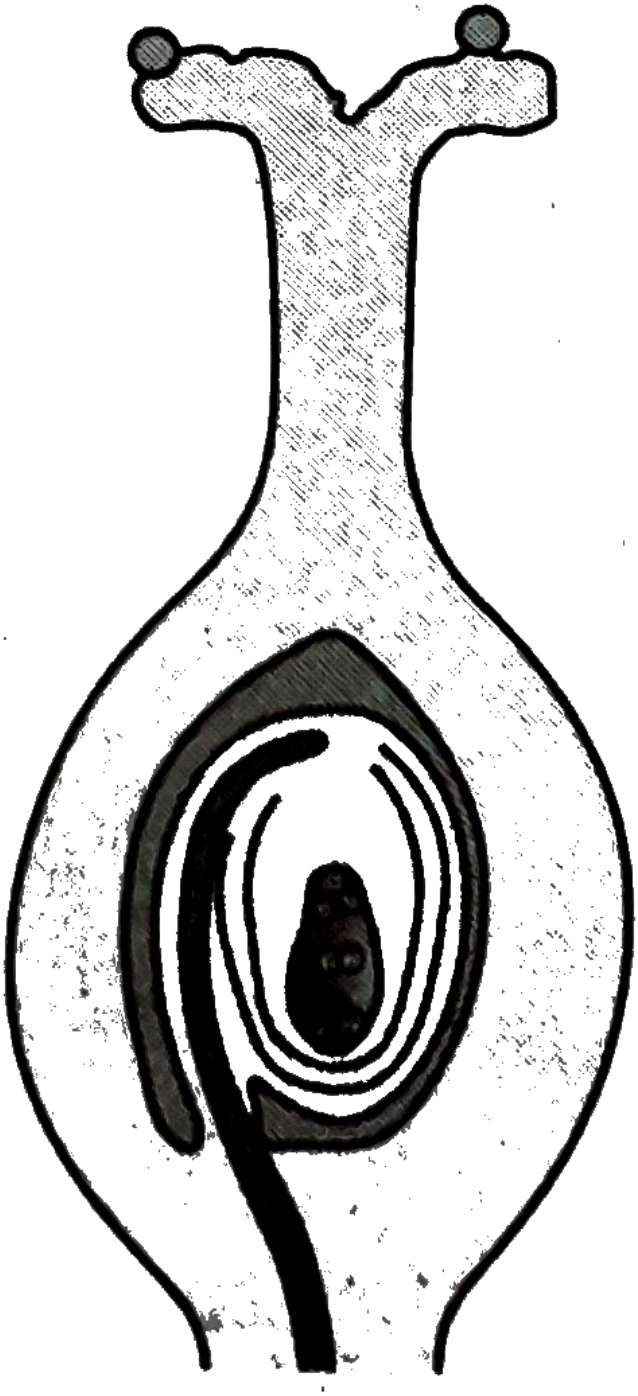
25. Indicate the stages where meiosis and mitosis occur (1, 2 or 3) in the flow chart.

$\text{Megaspore mother cell} \xrightarrow{1} \text{Megaspores} \xrightarrow{2} \text{Embryo sac} \xrightarrow{3} \text{Egg}$

Watch Video Solution

26. In the diagram given below, show the path of a pollen tube from the pllen on the stigma into the embryo sac, Name the

components of egg apparatus.



Watch Video Solution

27. Name the parts of pistil which develop into fruit and seeds.

A. ovule

B. Stigma

C. Ovary

D. Embryo sac

Answer: Ovary

Watch Video Solution

28. In a case of polyembryony if an embryo develops from the synergid and another from the nucellus, then the synergid embryo is $\underline{(i)}$ and nucellar embryo is $\underline{(ii)}$.

Watch Video Solution

29. Can an unfertilised, apomictic embryo sac give rise to diploid embryo ? If yes, then how ?

Watch Video Solution

30. The three cells found in a pollen grain when it is shed at 3-celled stage are

Watch Video Solution

31. What is self-incompatibility ?

View Text Solution

32. Name the type of pollination in self-incompatible plants.

Watch Video Solution

33. Draw the diagram of a mature embryo sac and show its eight -uncleate, seven-celled nature. Show the follwing parts- antipodals, synergids, egg, central cell, polar nuclei.

Watch Video Solution

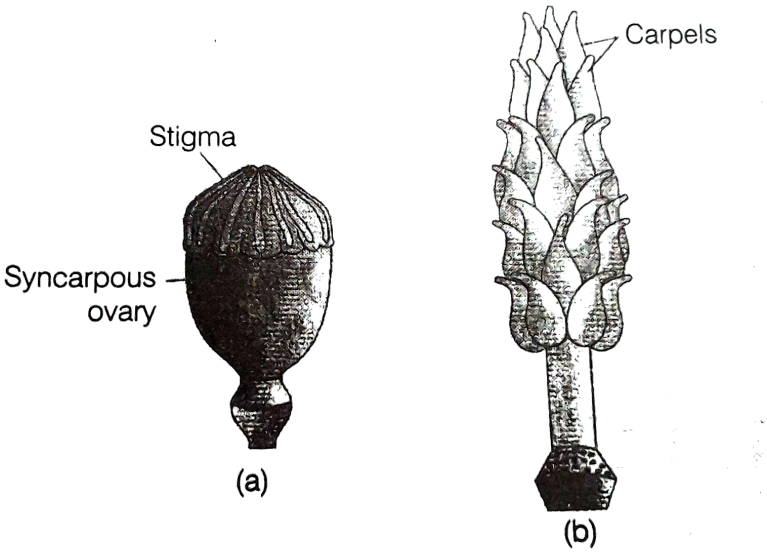
34. Which is the triploid tissue in a fertilised ovule? How is the triploid condition achieved?

Watch Video Solution

35. Are pollination and fertilisation necessary in apomixis? Give reasons.

Watch Video Solution

36. Identify the type of carpel with the help of diagrams given below



Watch Video Solution

37. How is pollination carried out in water plants?

Watch Video Solution

38. What is the function of the two male gametes produced by each pollen grain in angiosperms.

Watch Video Solution

39. List three strategies that a bisexual chasmogamous flower can evolve to prevent self-pollination (autogamy).

Watch Video Solution

40. Given below are the events that are observed in an artificial hybridisation programme. Arrange them in the correct sequential order and select the correct option.

1. Re-bagging 2.Selection of parents

3. Bagging 4. Dusting the pollen on stigma 5. Emasculation

6. Collection of pollen from male parent

Watch Video Solution

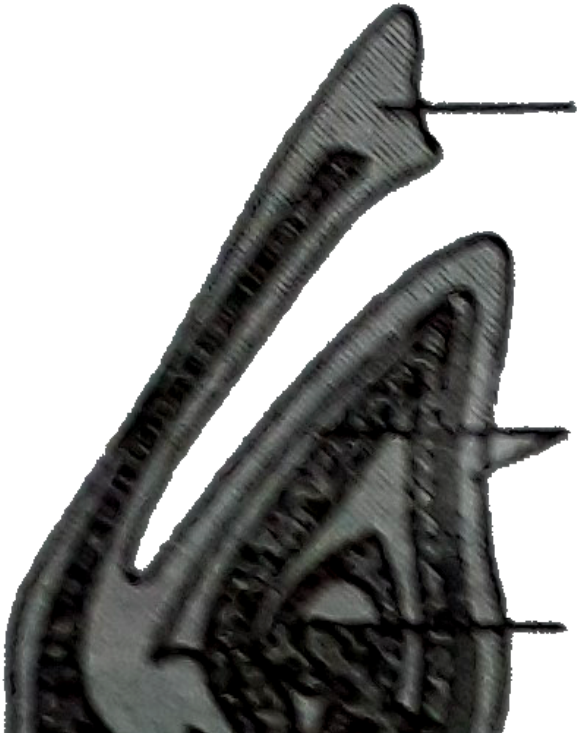
41. Vivipary automatically limits the number of offsprings in a litter. How?

Watch Video Solution

42. Does self-incompatibility impose any restrictions on autogamy? Give reasons and suggest the method of pollination in such plants.

View Text Solution

43. In the given diagram, write the names of parts shown with lines.



Watch Video Solution

44. What is polyembryony and how can it be commercially exploited?

Watch Video Solution

45. Are parthenocarpy and apomixis different phenomena ? Discuss their benefits .

Watch Video Solution

46. Why does the zygote begin to divide only after the division of primary Endosperm cell (PEC)?

Watch Video Solution

47. The generative cell of a two celled pollen divides in the pollen tube, but not in a three-celled pollen. Give reasons.

Watch Video Solution

48. In the figure given below label the following parts-male gametes, egg cell, polar nuclei, synergid and pollen tube

Watch Video Solution

49. Starting with the zygote, draw the diagrams of the different stages of embryo development in a dicot.

Watch Video Solution

50. What are the possible types of pollinators in chasmogamous flowers. Give reasons.

Watch Video Solution

51. With a neat, labelled diagram, describe the parts of a mature angiosperm embryo sac. Mention the role of synergids.

Watch Video Solution

52. Draw the diagram of a microsporangium and lable its wall layers.Write briefly about the wall layers?

Watch Video Solution

53. Can an unfertilised, apomictic embryo sac give rise to diploid embryo ? If yes, then how ?

 Watch Video Solution