



# BIOLOGY

## NEET & AIIMS

### SEXUAL REPRODUCTION IN FLOWERING PLANTS

#### Example

1. Which of the following statement for flower is wrong?

- A. Morphological and embryological  
marvels in angiosperms
- B. Sites of sexual reproduction
- C. Objects of aesthetic ornamental social  
recreation
- D. Calyx and gynoecium are essential  
whorls

**Answer:**



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2. Select the odd one (wr.t wall layer of microsporangium in flowering plants)

A. Endothecium

B. Tapetum

C. Hilum

D. middle layers

**Answer:**



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### 3. Exine of pollen grain

A. is pectolcellulose

B. Exhibits a fascinating array of pattern  
and designs

C. has micropyle

D. is degraded by enzymes

**Answer: B**



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4. Which of the following plant came into india as a contaminant with imported wheat ?

A. Zea mays

B. Mangifera

C. Rosa indica

D. Parthenium

**Answer:**



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5. Mark the odd one (q.r.t ploidy level)

A. Nucellus

B. Integument

C. Funicle

D. Embryo sac

**Answer:**



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6. Which of the following cell is binculeate in an embryo sac?

A. Antipodal cell

B. central cell

C. Female gamete

D. Synergid

**Answer:**



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7. Chasmogamous as well as cleistogamous  
both types of flowers are found in

- A. Commelina
- B. Arachis hypogea
- C. Mangifera indica
- D. Zea mays

**Answer:**



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8. Female flowers remain submerged in water and the pollen grains are released inside water in

A. Valisneria

B. Sea grasses

C. Water hyacinth

D. Water lily

**Answer:**



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9. Mark the odd one (w.r.t post fertilisation events )

A. ovules maturing into seed

B. Development of endosperm

C. Fruit maturing into ovary

D. Development of embryo

**Answer:**



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10. In adventive embryony embryo arises from

A. cells of nucellus

B. diploid embryo sac

C. cells of integument

D. more than one option is correct

**Answer:**



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**Try Yourself**

1. Give one word for the following

(i) The nutritonal layer of anther wall

(ii) End product of microsporogenesis is

\_\_\_\_\_



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2. Ploidy level of the cells in microspore tetrad

is \_\_\_\_\_



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### 3. Fill in the blanks

(i) The intine is made of \_\_\_\_\_ and \_\_\_\_\_

(ii) There are \_\_\_\_\_ meiotic division (s) and \_\_\_\_\_ mitotic divisions required to form two male gametes from a PMC

(iii) \_\_\_\_\_ is the most resistant organic material known on earth associated with pollen



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#### 4. State True or False

- (i) Shedding of pollen grains takes place at three celled stage in 60% of angiosperms
- (ii) Pollen viability period for rice is 30 minutes



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#### 5. Fill the blanks

- (i) The megasporocyte mother cell undergoes \_\_\_\_\_ and forms a linear tetrad of megaspores
- (ii) \_\_\_\_\_ embryo sac is most common in

angiospermic plants

(iii) Mature female gametophyte in angiosperms is \_\_\_\_\_celled and \_\_\_\_\_nucleated

(iv) \_\_\_\_\_are the vegetative cells of the embryo sac

(v) Filiform apparatus is present in \_\_\_\_\_of embryo sac



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**6.** State true or false and correct each false statement to make it true

(i) The ploidy level of female gametophyte is diploid in flowering plants

(ii) Integumented megasporangium is also called as ovary

(iii) The embryo sac lies at chalazal end of ovule



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## 7. Fill in the blanks

(i) An apocarpous gynorecium has several \_\_\_\_\_ carpels

(ii) During the life cycle of flowering plants male nad female gametes are formed in and \_\_\_\_\_ respectively



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## 8. Fill in the blanks

(i) Autogamy is obligatory in \_\_\_\_\_ floweres

(ii) The shedding of pollen grains occurs at \_\_\_\_\_ stage in 40% of angiosperms



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## 9. State True or False

(i) Light and non sticky pollen grains are characteristic of wind pollinated flowers

(ii) Dioecious condition in plants prevents xenogamy



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## 10. Fill in the blanks

(i) Double fertilization involves \_\_\_\_\_ and \_\_\_\_\_

(ii) The most common type of endosperm in angiosperms is \_\_\_\_\_

(iii) Perispermic seeds have persistent \_\_\_\_\_



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## 11. State true or false

(i) Single cotyledon of monocots is lateral in

postin and called as scutellum

(ii) Wall of the fruit is called pericarp



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## Exercise

1. A typical angiospermic anther is bilobed and tetragonal consisting of

A. Two microsporangia

B. Three microsporangia

C. Four microsporangia

D. Only one microsporangia

**Answer: C**



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2. Select the odd one out w.r.t wall layers of microsporangium in flowering plants

A. Endothecium

B. Middle layers

C. tapetum

D. integument

**Answer: D**



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**3. Prolen grains are well preserved as fossils**

because of the presence of:

A. sporopollenin

B. cellulose

C. pectin

D. carotenoids

**Answer: A**



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4. Which of the following option about tapetum is correct?

A. nutritive tissue

B. sporogenous tissue

C. protective and haploid tissue

D. external layer of microsporangium wall

**Answer: A**



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5. The prominent pollen grain apertures called germ pores are present on

A. vegetative cell

B. intine



C. exine

D. generative cell

**Answer: C**



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6. Which of the following ween has become a major cause of pollen allergy in india ?

A. pistia

B. myosotis

C. parthenium

D. mirabilis

**Answer: C**



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7.  $\alpha$  cellulose fibrous thickening is present in/on

A. epidermis

B. tapetum

C. outer tangential wall of endothecium

D. inner tangential wall of endothecium

**Answer: D**



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**8. Intine of pollen grain is made of**

A. sporopollenin

B. pecto cellulose

C. silica and cellulose

D. only cellulose

**Answer: B**



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9. Select the odd one out w.r.t the pollen grains

A. pollen grains are rich in nutrients

B. its consumption increases the performance of athletes and race horses

C. it can be stored for years in liquid nitrogen

D. pollen grains possess non sticky covering called pollen kit

**Answer: D**



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**10. Pollen viability for rice and wheat plant is**

A. 30 hours

B. several months

C. 1/2 hour

D. 30 seconds

**Answer: C**



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**11.** Two celled stage of pollen grains is the result of

A. Meiosis

B. symmetric mitosis

C. asymmetric mitosis

D. amitosis

**Answer: C**



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**12.** In most of the flowering plants pollination takes place at \_\_\_\_\_ celled stage

A. 2

B. 3

C. 4

D. 5

**Answer: A**



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**13. What is incorrect for generative cell ?**

A. floats in cytoplasm of vegetative cell

B. spindle shaped



C. having abundant food reserve

D. has dense cytoplasm and a nucleus

**Answer: C**



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**14.** Mature male gametophyte is made up of

A. one celled

B. two celled

C. one celled and two nucleate

D. three celled

**Answer: D**



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**15.** When the ovule is curved and embryo sac becomes horse shoe shaped, such an ovule is called

A. cirrcinotropous

B. amphitropous

C. hemianatropous

D. anatropus

**Answer: B**



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**16.** The point at which funiculus touches the ovule is

A. placenta

B. micropyle

C. integument

D. hilum

**Answer: D**



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**17. The gynoecium of michelia is**

A. monocarpellary

B. multicarpellary apocarpus

C. multicarpellary, syncarpous

D. bicarpelary syncarpous

**Answer: B**



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**18.** In 82% of angiosperm families, ovule is

A. anatropous

B. orthotropous

C. amphitropous

D. circintropous

**Answer: A**



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**19.** In which of the following plant the number of ovules in an ovary is one ?

A. mango

B. orchids

C. water melon

D. papaya

**Answer: A**



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**20.** A multicarpellary syncarpousgynoeciu is found in

A. papaver

B. michelia

C. hibiscus

D. more than one option is correct

**Answer: D**



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**21. Polygonum type of embryo sac is**

- A. 8 celled
- B. 15 nucleated
- C. haploid
- D. exosporic type

**Answer: C**





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22. Mark the odd option (w.r.t contrivances of autogamy)

A. homogamy

B. cleistogamy

C. dicliny

D. bud pollination

**Answer: C**



23. Which of the following pollination is common amongst abiotic agents ?

- A. hydrophily
- B. entomophily
- C. ornithophily
- D. anemophily

**Answer: D**



24. Epihydorphily is found in

A. tape grass

B. sea grass

C. lotus

D. alisma

**Answer: A**



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25. Mark the incorrect match (w.r.t pollination)

A. yucca - pronuba

B. ficus - anemophily

C. aristolochia - protogynous

D. arachis - cleistogynous

**Answer: B**



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26. Which of the following plant provide safe place to insect for laying eggs?

A. Sage plant

B. ophrys

C. centaurea

D. amorphophallus

**Answer: D**



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27. Pollination occurs by pseudocopulation mechanism in

A. ophrys

B. fig

C. mango

D. Zea mays

**Answer: A**



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28. Lemur a large animal acts as pollinator in

A. flax

B. ravenaela

C. capsella

D. hydrilla

**Answer: B**



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29. Which of the following type of pollination is present in santalum ?

A. ornithophily

B. ophiophily

C. malacophily

D. entomophily

**Answer: B**



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30. In entomophily floweres are

A. dull coloured

B. nectaries

C. with sticky pollen grains

D. small sized solitary

**Answer: C**



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**31.** In flowering plants the generative cell of pollen grain divides mitotically to give rise to the

A. 2 male gametes

B. 3 male gametes

C. 1 male gamete

D. 4 male gametes

**Answer: A**



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32. In porogamy, the pollen tube enters the ovule through

A. integument

B. chalaza

C. micropyle

D. funicle

**Answer: C**



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33. Entry of pollen tube in to the embryo sac is under \_\_\_\_\_ guidance

A. chemotropic

B. chemotactic

C. phototropic

D. thigmotropic

**Answer: A**



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34. The precautionary measures in artificial hybridisation is /are

- A. emasculation only
- B. bagging only
- C. both emasculation and bagging
- D. tagging

**Answer: C**



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35. Double fertilization was first discovered by Nawaschin (1898) in

- A. liliaceae and allium
- B. liliaceae and fritillaria
- C. zea mays and mangifera
- D. nigella and fritillaria

**Answer: B**



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**36.** The cells fo the endosperm are filled with reserve food material and are used for the nutrition of developing embryo is gernally a \_\_\_\_\_ in angiosperms

- A. triploid tissue
- B. diploid tissue
- C. haploid tissue
- D. hexaploid tissue

**Answer: A**



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**37. Scutellum is**

- A. single cotyledon in monocots
- B. radical sheath in monocots
- C. plumule covering in monocots
- D. cotyledons in dicots

**Answer: A**



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**38.** The most common type of development of endosperm is

A. helobial endosperm

B. cellular endosperm

C. nuclear endosperm

D. mosaci endosperm

**Answer: C**



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**39.** In embryogeny of dicot plants the suspensor cell undergoes transverse divisions forming suspensor which is

A. 6-10 celled

B. 1-5 celled

C. 11-15 celled

D. 16-21 celled

**Answer: A**



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**40.** The remains of second cotyledon occur in some grasses it is called

A. scutellum

B. hypocotyl

C. epicotyl

D. epiblast

**Answer: D**



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41. Select the incorrect option w.r.t endospemic seeds

A. Wheat

B. pea

C. castor

D. coconut

**Answer: B**



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42. Perisperm, is found in the seeds of

A. piper

B. barley

C. beans

D. groundnut

**Answer: A**



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**43.** Which of the following plant produces false fruits ?

A. apple

B. strawberry

C. cashewnut

D. more than one option is correct

**Answer: D**



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44. Which of the following change does not occur in ovary as a result of sexual reproduction ?

A. ovary wall - pericarp

B. ovary - fruit

C. ovule - fruit wall

D. integument - seed coat

**Answer: C**



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45. Seeds of which plant were discovered during the archeological excavation at King Herod's place near the Dead Sea?

A. rose

B. lupinus

C. phoenix

D. agave

**Answer: C**



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**46.** Recurrent agamospermy is seen in

A. banana

B. apple

C. pear

D. both 2 & 3

**Answer: D**



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47. Select the odd one out w.r.t polyembryony

A. onion

B. groundnut

C. mango

D. capsella

**Answer: D**



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**48.** Mark the structure which facilitates entry of oxygen and water in to the seed during germination

A. sprophytic budding

B. apogamy

C. apospory

D. diplospory

**Answer: C**



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**49.** The nucellar embryos are apomictic embryos developed by

1)hypocotyl

2)epicotyl

3) coleorhiza

4) radicle

A. hypocotyl

B. epicotyl

C. coleorhiza

D. radicle

**Answer: A**



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**50.** The portion of the embryonal axis above the level of cotyledons is

A. hypocotyl

B. epicotyl

C. coleorhiza

D. radicle

**Answer: B**



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## Assignment Section A

1. A typical angiosperm anther is:

- A. Bilobed tetrasporangiate
- B. bilobed , monosporangiate
- C. bilobed, bisporangiate

D. tetralobed ,monosporanglate

**Answer: A**



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2. The innermost wall layer of anther

A. is nutritive in function

B. helps in dehiscence of anther

C. is haploid and protective in function

D. forms microspores

**Answer: A**



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3. The process of formation of microspores from pollen mother cell (PMC) through meiosis is called

- A. megasprogenesis
- B. microsporogenesis
- C. megagametogenesis
- D. microgametogenesis



**Answer: B**



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**4. The pollen grain represents**

- A. male gamete
- B. male gametophyte
- C. microsporophyll
- D. microsporangium

**Answer: B**



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5. The most resistant organic material known which makes up the outermost layer of pollen wall is

A. pectin

B. cellulose

C. sporopollenin

D. lignin

**Answer: C**



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6. Choose the correct option w.r.t the function of the germ pore

- A. it allows growth of pollen tube
- B. it allows water absorption in seed
- C. it helps dehiscence of pollen grain
- D. more than one option is correct

**Answer: A**



7. The thin and continuous wall layer of pollen is

A. exine

B. intine

C. germ pore

D. endothecium

**Answer: B**



8. The two celled stage of mature pollen grain consists of

A. vegetative cell generative cell

B. vegetative cell one male gamete

C. two male gametes

D. generative cell male gamete

**Answer: A**



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9. In 40% angiosperms the pollen grains are shed at

- A. four celled stage
- B. three celled stage
- C. two celled stage
- D. five celled stage

**Answer: B**



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10. Pollen allergy is caused by pollens fo

A. rose

B. clematis

C. parthenium

D. sunflower

**Answer: C**



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11. The pollen viability period of rice and pea respectively is

- A. 30 minutes and several months
- B. several months and 30 minutes
- C. few days and few months
- D. few days in both the cases

**Answer: A**



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12. Integumented megasporangium is

A. ovule

B. pollen sac

C. pollen grain

D. embryo sac

**Answer: A**



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**13.** The nutritive tissue present in the ovule is called

A. nucellus

B. funicle

C. embryo

D. integuments

**Answer: A**



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14. The number of embryo sac in an ovule is generally

A. one

B. many

C. four

D. three

**Answer: A**



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15. The role of triple fusion in angiosperms is to produce

A. cotyledons

B. pen

C. endocarp

D. seed

**Answer: B**



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16. The ploidy level of nucellus and female gametophyte respectively is

A.  $n, n$

B.  $n, 2n$

C.  $2n, n$

D.  $2n, 2n$

**Answer: C**



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17. The number of nuclei in a mature embryo sac are

A. eight

B. seven

C. six

D. four

**Answer: A**



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**18.** The largest cell of the mature embryo sac is

A. antipodal cells

B. synergids

C. central cell

D. egg cell

**Answer: C**



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**19.** The structures which guide the pollen tube into synergid is

A. antipodals

B. germ pore

C. aril

D. filiform apparatus

**Answer: D**



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20. Geitonogamy is

- A. genetically autogamous
- B. ecologically atutogamous
- C. genetically allogamous
- D. functionally autogamous

**Answer: A**



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21. Which of the following plant provide safe place to insect for laying eggs?

A. sage plant

B. amorphosphallus

C. phyrs

D. mango

**Answer: B**



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22. Production of seed without fertilization is called

- A. parthenocarpy
- B. parthenogenesis
- C. apomixis
- D. apogamy

**Answer: C**



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23. Examples of water pollinated flowers are

A. zosteria lotus water lily

B. lotus vallisneria hydrilla

C. ptoamogeton vallisneria lotus

D. vallisneria hydrellia zosteria

**Answer: D**



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24. The central cell after triple fusion becomes the

A. pec

B. pen

C. endosperm

D. embryo

**Answer: A**



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25. Which of the following is not a characteristic feature of insect pollinated flowers ?

A. fragrance

B. nectaries

C. foul odour

D. mucilaginous covering on pollen grains

**Answer: D**



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## 26. Pollen robber

A. consume pollen or nectar

B. are effective in bringing about  
pollination

C. do not visit flowers for pollen

D. take pollen from other insects

**Answer: A**



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27. Dioecious condition prevents

A. autogamy

B. geitonogamy

C. xenogamy

D. both 1 & 2

**Answer: D**



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28. The diploid and triploid product of double fertilization respectively are

- A. zygote and primary endosperm nucleus
- B. endosperm and cotyledons
- C. embryo and perisperm
- D. zygote and scutellum

**Answer: A**



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29. Double endosperm is found in

A. wheat

B. rice

C. pea

D. coconut

**Answer: D**



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30. Exalbuminos seeds are of

A. wheat pea groundnut

B. castor pea groundnut

C. pea groundnut beans

D. wheat castor rice

**Answer: C**



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**31. The single cotyledon in monocots is**

A. scutellum which is lateral in position

B. aleurone layer which is terminal in position

C. scutellum which is centrally placed

D. epiblast which is halpid and lateral in position

**Answer: A**



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32. The sheath enclosing plumule and radicle respectively in monocot seed are

- A. coleoptile and coleorhiza
- B. coleorhiza and coleoptile
- C. scutellum and epiblast
- D. aleurone layer and pericarp

**Answer: A**



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**33.** Perispermic seeds are

- A. castor sunflower
- B. black pepper beet
- C. maize beet
- D. barely maize

**Answer: B**



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**34.** Adventure polyembryony is common in

A. wheat

B. apple

C. mango

D. orobanche

**Answer: C**



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**35.** Which of the following is a partheocarpic fruit ?

A. banana

B. apple

C. strawberry

D. pomegranate

**Answer: A**



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**Assignment Section B**



1. Pollen grains are generally \_\_\_\_\_ in outline measuring \_\_\_\_\_ micrometers in diameter

A. spherical 25-50

B. oblong 25-50

C. oval 10-25

D. spehrical 75-100

**Answer: A**



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2. The vegetative cell is

A. small has large irregularly shaped nucleus

B. large has large irregularly shaped nucleus

C. large with spindle shaped nucleus

D. small spindle shaped nucleus

**Answer: B**



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3. Cryopreservation means storing of products in

A. liquid nitrogen

B. liquid oxygen

C. liquid hydrogen

D. liquid helium

**Answer: A**



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4. Choose the odd one w.r.t gynoecium

A. gynoecium represents the female reproductive part of flower

B. the gynoecium may be syncarous and apocarpous

C. the number of ovules in papaya and mango is one

D. the ovules are attached to placenta

**Answer: C**

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5. The number of mitotic generations required to form a mature embryo sac in most of the flowering plants is

A. one

B. two

C. three

D. four

**Answer: C**



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6. The types of flowers which always produce seed even in the absence of pollinators

A. chasmogamous flowers

B. cleistogamous flowers

C. bisexual flowers

D. unisexual flowers

**Answer: B**



7. The type of pollination which brings genetically different types of pollen on the stigma is

- A. autogamy
- B. xenogamy
- C. geitonogamy
- D. cleistogamy

**Answer: B**



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8. Feathery stigma and versatile anthers are characteristic of

- A. wind pollinated flowers
- B. insect pollinated flowers
- C. water pollinated flowers
- D. bat pollinated flowers

**Answer: A**



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9. Hydorphy is limited to 30 genera which are mostly

A. gymnosperms

B. monocots

C. dicots

D. more than one option is correct

**Answer: B**



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10. common floral reward provided by plants to pollinator are

- A. nectar and pollen
- B. pollen and enzymes
- C. hormones and nectar
- D. all the these

**Answer: A**



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11. Pollne pistil interactin is

- A. chemically mediated process
- B. dynamic process
- C. genetically controlled process
- D. more than one option is correct

**Answer: D**



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## 12. Emasculation

- A. prevent self pollination in female parent
- B. prevent cross pollination in female parent
- C. prevent self pollination in male parent
- D. prevent cross pollination in male parent

**Answer: A**



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13. The cylindrical portion below the level of cotyledons on embryonal axis is

A. epicotyl

B. hypocotyl

C. radicle

D. plumule

**Answer: B**



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14. Suitable environmental conditions for seed germination are

A. adequate moisture light anaerobic conditions

B. adequate moisture low temperaturee light

C. adequate moisture suitable temperature and oxygen

D. light water absence oxygen

**Answer: C**



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**15. Pericarp is dry in**

- A. guava mango mustard
- B. mango groundnut orange
- C. groundnut mustard
- D. orange guava mango

**Answer: C**



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16. Mark the incorrect statement

- A. outer three layers of anther wall are protective in function
- B. sporogenous tissue occupies the centre of each microsporangium
- C. cell of tapetum and endothecium show increase in DNA contents by endomitosis and polyteny



D. ploidy level of microspore tetrad is  
haploid

**Answer: C**



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**17.** Which of the following statement is applicable for all flowering plants ?

I Each cell of sporogenous tissue in anther is capable of giving rise to microspore tetrad

II The pollen grain represent male

gametophyte

III Pollen grains are usually triangular and 10-15  $\mu m$  in diameter

IV Sporopollenin is one of the most resistant organic material which can be destroyed only by strong acids and alkali

A. monosiphonous pollen tube

B. non motile and morphologically dissimilar gametes

C. presence of pollinium

D. division of generative cell after  
pollination

**Answer: B**



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**18. Which statement is incorrect?**

- A. I,II are incorrect but III IV are correct
- B. III IV are incorrect but I II are correct
- C. I III are incorrect but II IV are correct

D. II IV are correct but I III are incorrect

**Answer: B**



**View Text Solution**

**19. Which statement is incorrect?**

A. intine is the inner wal of pollen grain  
and exhibit fascinating array of pattern  
and designs

- B. the mature pollen grains has two cells  
the bigger is vegetative cell and the  
smaller is generative cell which floats in  
cytoplasm of vegetative cell
- C. carrot grass pollens cause pollen allergy
- D. pollen grains of pea and rose maintain  
viability for months

**Answer: A**



**Watch Video Solution**

20. In papaya male and female flowers are present on different plants it permits

A. autogamy

B. geitonogamy

C. both autogamy and geitonogamy

D. xenogamy

**Answer: D**



**Watch Video Solution**

21. Select incorrect statement regarding microporogenesis in an anther

A. large number of microspore mother cells differentiate in one pollen sac

B. each microsporogenesis involves one meiosis and two mitosis

C. microspore tetrads may be tetrahedral or isobilateral

D. it consumes tapetum and middle layer

**Answer: B**



Watch Video Solution

22. In castor proliferation of the outer integumentary cells at micropylar region

- A. lacks hygroscopic ability
- B. attract ants and bees in myrmecophily
- C. is called epiblast
- D. stores sugary substances

**Answer: D**





23. An angiospermic plant is having 24 chromosomes in its leaf cells. The number of chromosomes present in synergid pollen grain, nucellus & endosperm will be respectively

A. 12,12,12,72

B. 8,8,12,36

C. 12,12,24,36

D. 12,12,12,36

**Answer: C**



**Watch Video Solution**

**24.** The devices to discourage self pollination are

A. pollen release and stigma receptivity is not synchronised

B. anther and stigma are placed at different position

C. rejection of pollen by stigma of the same  
flowers

D. all the these

**Answer: D**



**Watch Video Solution**

**25.** In monoecious plant like castor and maize

A. autogamy and allogamy are not  
prevented

B. geitonogamy is prevented

C. autogamy is not prevented

D. geitonogamy is not prevented

**Answer: D**



**Watch Video Solution**

**26.** Select incorrect statement (w.r.t artificial hybridisation )

A. emasculation is removal of anther in their mature condition from bisexual flower

B. emasculation is not required in male sterile plants

C. unisexual female flower is bagged in bud condition to prevent contamination

D. emasculated flowers are bagged in bud condition

**Answer: D**



Watch Video Solution

27. Pick out wrong statement

A. double fertilization is unique to angiosperms

B. sequoia a gymnosperm is one of the tallest tree

C. exine has apertures where sporopollenin is present

D. exine of pollen grains is made up of  
sporopollenin

**Answer: c**



**Watch Video Solution**

**28.** Choose the correct option from the following

I Dehydration and dormancy of mature seed are crucial for seed storage  
II Seed of *Lupinus arcticus* is the oldest one which

germinated after 2000 year

III orchid seed is one of largest seed in plant kingdom

IV seeds of parasitic plants *Orobanchaceae* and *Stigmatalia* are tiny seeds

A. I,II are correct but III,IV are incorrect

B. I,IV are correct but II ,III are incorrect

C. III ,IV are correct but I,II are incorrect

D. II ,III are correct but I,IV are incorrect

**Answer: B**





29. Select the correct statement from the following

A. hanging drop method as in vivo

germination of pollen grain

B. obturator directs the growth of pollen

tube towards micropyle of seed

C. there are many embryos of different

sized and shapes in the seeds of orange

D. embryo arises parthenogenetically from the diploid egg in adventive embryony

**Answer: A**



**Watch Video Solution**

**30.** Choose the correct option from the following statements

I Apomixis is form of asexual reproduction which mimics sexual reproduction

II in Apomixis seeds develop either from diploid

egg cell or form cells nucelluys

III Seeds collected form hybrids plant  
maintaint hybrid character for a longer times

IV In apomoxis there is segregation of  
character

- A. all are correct
- B. all are incorrect
- C. only I and II ar correct
- D. only II IV are correct

**Answer: C**



## Assignment Section C

1. A dioecious flowering plant prevents both

A. autogamy

B. autogamy and geitonogamy

C. geitonogamy and xenogamy

D. cleistrogamy and xenogamy

**Answer: B**

2. Functional megaspore in an angiosperm develops into

A. ovule

B. endosperm and cotyledons

C. embryo sac

D. embryo

**Answer: C**

3. Attractants and reward are required for

- A. anemophily
- B. entomophily
- C. hydrophily
- D. cleistogamy

**Answer: B**



**Watch Video Solution**

4. Flowers which have single ovule in the ovary and are packed into inflorescence are usually pollinated by

A. water

B. bee

C. wind

D. bat

**Answer: C**



**Watch Video Solution**

5. Double fertilization is exhibited by

A. gymnosperms

B. algae

C. fungi

D. angiosperms

**Answer: D**



**Watch Video Solution**



6. In majority of angiosperms

A. egg has a filiform apparatus

B. there are numerous antipodal cells

C. reduction division occurs in the  
megaspore mother cells

D. a small central cell is present in the  
embryo sac

**Answer: C**



**Watch Video Solution**

7. Pollination in water by hyacinth and water lily is brought about by the agency of:

A. water

B. insects or wind

C. birds

D. bats

**Answer: B**



**Watch Video Solution**

8. the ovule of an angiosperm is technically equivalent to

A. megasporangium

B. megasprophyll

C. megaspore mother cell

D. megaspore

**Answer: A**



**Watch Video Solution**

9. Which one of the following statements is not true ?

A. stored pollen in liquid nitrogen can be used in the crop breeding programmes

B. tapetum helps in the dehiscence of anther

C. exine of pollen grains is made up of sporopollenin

D. pollen grains of many species cause severe allergies

**Answer: B**



**Watch Video Solution**

**10.** Proximal end of the filament of stamen is attached to the

A. thalamus or petal

B. anther

C. connective

D. placenta

**Answer: A**



**Watch Video Solution**

**11.** The coconut water from tender coconut represents

A. Free Nuclear Endosperm

B. Endocarp

C. Fleshy Mesocarp

D. Free nuclear proembryo

**Answer: A**



**Watch Video Solution**

**12.** Which of the following statements is not correct?

A. Some reptiles have also been reported as pollinators in some plant species

B. Pollen grains of may species can germinate on the stigma of flower but

only one pollen tube of the same species  
grows into the style

C. Insects that consume pollen or nectar  
without bringing about pollination are  
called pollenectar robbers

D. Pollen germination and pollen tube  
growth are guided by chemical  
components of interacting with those of  
the pistil

**Answer: B**





Watch Video Solution

**13.** Seed formation without fertilization in flowering plants involves the process of

- A. apomixis
- B. sporulation
- C. budding
- D. somatic hybridization

**Answer: A**



14. Male gametophyte in angiosperms produces:

- A. three sperms
- B. two sperms and a vegetative cell
- C. single sperm and a vegetative cell
- D. single sperm and two vegetative cells

**Answer: B**



15. Coconut water from a tender coconut is:

A. degenerated nucellus

B. immature embryo

C. free nuclear endosperm

D. innermost layers of the seed coat

**Answer: C**



**Watch Video Solution**

16. The filiform apparatus is present in

- A. Synergids
- B. generative cell
- C. nucellar embryo
- D. aleurone cell

**Answer: A**



**Watch Video Solution**

17. The wheat grain/maize grain has an embryo with one, large, shield shaped cotyledon known as:

A. coleoptile

B. epiblast

C. colerrrihiza

D. scutellpm

**Answer: D**



**Watch Video Solution**

18. Which one of the following fruits is parthenocarpic

A. banana

B. brinjal

C. apple

D. jackfruit

**Answer: A**



**Watch Video Solution**

**19.** In angiosperms, microsporogenesis and megasporogenesis

A. occur in ovule

B. occur in anther

C. form gametes without further divisions

D. involve meiosis

**Answer: D**



**Watch Video Solution**

20. Which one of the following statement is not true ?

A. honey is made by bees by digesting pollen collected from flowers

B. pollen grains are rich in nutrients and they are used in the form of tablets and syrups

C. pollen grains of some plants cause severe allergies and bronchial affections



in some people

D. The flowers poolinated by files and bats  
secrete foul odour to attrract them

**Answer: A**



**Watch Video Solution**

**21.** The hilum is a scar on the :

A. seed where mricroplyle was present

B. seed where funicle was attached

C. fruit where it was attached to pedicel

D. fruit where style was present

**Answer: B**



**Watch Video Solution**

22. Which one of the following may require pollinators but is generatically similar to autogamy

A. cleistogamy

B. geitonogamy

C. xenogamy

D. apogamy

**Answer: B**



**Watch Video Solution**

**23.** Which of the following are the important floral rewards to the animal pollinators

A. protei pellice cand stigamic exudates

B. colour and large size of flower

C. nectar and pollen grains

D. floral fragrance and calcium crystals

**Answer: C**



**Watch Video Solution**

**24.** Transmission tissue is characteristic feature of

A. wet stigma

B. hollow style

C. solid style

D. dry stigma

**Answer: C**



**Watch Video Solution**

**25. Geitonogamy involves**

A. fertilization of a flower by the pollen from  
another flower of the same plant

B. fertilization of a flower by the pollen from  
the same flower

C. fertilization of a flower by the pollen from  
a flower of another plant in the same  
population

D. fertilization of flower by the pollen from a  
flower of another plant belonging to a  
distant population

**Answer: A**



**Watch Video Solution**

26. Pollen tablets available in market are for

- A. in vitro fertilization
- B. breeding euisetum
- C. supplementing food
- D. ex situ conservation

**Answer: C**



**Watch Video Solution**

27. Function of filiform apparatus is to :-

- A. recognize the suitable pollen at stigma
- B. stimulate division of epidermal cell
- C. produce nectar
- D. guide the entry of pollen tube

**Answer: D**



**Watch Video Solution**

28. Perisperm differs from endosperm in



- A. having no reserve food
- B. being a diploid tissue
- C. its formation by fusion of secondary nucleus with several sperms
- D. being a haploid tissue

**Answer: B**



**Watch Video Solution**

**29. Megasporangium is equivalent to**

A. fruit

B. nucellus

C. ovule

D. embryo sac

**Answer: C**



**Watch Video Solution**

**30. Advantage of cleistogamy is**

A. more vigorous offspring

B. no dependence on pollinators

C. vivipary

D. higher genetic variability

**Answer: B**



**Watch Video Solution**

**31.** Which one of the following statements is correct

A. Sporogenous tissue is protective in function

B. Endothecium produces the microspores

C. Tapetum nourishes the developing pollen

D. Hard outer layer of pollen is called intine

**Answer: C**



**Watch Video Solution**

32. Most resistance biological material is

Or

An organic substance that can withstand environmental extremes and cannot be degraded by any enzyme is

A. lignin

B. cellulose

C. cuticle

D. sporopollenin

**Answer: D**



Watch Video Solution

**33.** The coconut water and the edible part of coconut are equivalent to or the morphological nature of the edible part of coconut is

A. mesocarp

B. embryo

C. endosperm

D. Endocarp

**Answer: C**



**Watch Video Solution**

**34.** The gynoecium consists of many free pistils in flowers of

A. papaver

B. michelia

C. aloe

D. tomato

**Answer: B**



**Watch Video Solution**

**35.** Both, autogamy and geitonogamy are prevented in

A. castor

B. maize

C. paaya

D. cucumber



**Answer: C**



**Watch Video Solution**

**36.** Even in absence of pollinating agents seed-setting is assured in

A. salvia

B. fig

C. commenllina

D. zostera

**Answer: C**



**Watch Video Solution**

**37. What is the function of germ pore**

A. emergence of radicle

B. absorption of water for seed  
germination

C. initiation of pollen tube

D. release of male gametes

**Answer: C**



**Watch Video Solution**

**38.** Which one of the following statements is wrong

A. when pollen is shed at two celled stage

double fertilization does not take place

B. vegetative cell is larger than generative cell

cell

C. pollen grains in some plants remains  
viable for months

D. intine is made up of cellulose and pectin

**Answer: A**



**Watch Video Solution**

**39.** Plants with ovaries having only one or a few ovules are generally pollinated by

A. bees

B. butterflyes

C. birds

D. wind

**Answer: D**



**Watch Video Solution**

**40.** Nucellar polyembryony is reported in species of

A. brassica

B. citrus

C. gossypium

D. triticum

**Answer: B**



**Watch Video Solution**

**41.** Filiform apparatus is characteristic feature of :

A. zygote and primary endosperm nucleus

B. suspensor

C. egg

D. synergid

**Answer: D**



**Watch Video Solution**

**42.** Wind pollination is common in

A. orchids

B. legumes

C. lilies

D. grasses

**Answer: D**



**Watch Video Solution**

**43.** In which pollination is autogamous

A. cleistogamy

B. geitonogamy

C. xenogamy



D. chasmogamy

**Answer: A**



**Watch Video Solution**

**44.** In angiosperms functional megaspore develops into

A. endosperm

B. pollen sac

C. embryo sac

D. ovule

**Answer: C**



**Watch Video Solution**

**45.** What is common between vegetative reproduction and Apomixis

A. both occur round the year

B. both produces progeny identical to the parent

C. both are applicable to only dioct plants

D. both bypass the flowering phase

**Answer: B**



**Watch Video Solution**

**46.** What would be the number of chromosomes of the aleurone cells of a plant with 42 chromosomes in its root tip cells?

A. 21

B. 42

C. 63

D. 84

**Answer: C**



**Watch Video Solution**

**47.** Transfer of pollen grains from anther to the stigma of another flower on the same plant is called

A. autogamy

B. xenogamy

C. geitonogamy

D. karyogamy

**Answer: C**



**Watch Video Solution**

**48.** Wind pollinated flowers are

A. samll producing nectar and dry polen

B. small brightly coloured producing large number of pollen grains

C. small producing large number of dry pollen grains

D. large producing abundant nectar and pollen

**Answer: C**



**Watch Video Solution**

**49.** Apomictic embryos in citrus arise from

A. diploid egg

B. synergids

C. maternal sporophytic tissue in ovule

D. antipodal cells

**Answer: C**



**Watch Video Solution**

50. Which one of the following pairs of plant structures has haploid number of chromosomes

A. egg nucleus and secondary nucleus

B. megaspore mother cell and antipodal cells

C. egg cell and antipodal cells

D. nucleus and antipodal cells

**Answer: C**







51. What does the filiform apparatus do at the entrance into or Function of filiform apparatus is to

A. it guides pollen tube from a synergid to

egg

B. it helps in the entry of pollen tube in to

a synergid

C. it prevents entry of more than one  
pollen tube into the embryo sac

D. it brings about opening of the pollen  
tube

**Answer: B**



**Watch Video Solution**

**52. Unisexuality of flowers prevents**

A. autogamy and geitonogamy

B. autogamy but not geitonogamy

C. both geitonogamy and xenogamy

D. geitonogamy but not xenogamy

**Answer: B**



**Watch Video Solution**

**53.** Which one of the following is resistant action

A. leaf cuticle

B. cork

C. wood fibre

D. pollen exine

**Answer: D**



**Watch Video Solution**

**54.** Male gametes in angiosperms are formed by the division of

A. microspore mother cell

B. microspore

C. generative cell

D. vegetative cell

**Answer: C**



**Watch Video Solution**

**55.** Which one of the following is surrounded by a callose wall

A. pollen grain

B. microspor mother cell

C. male gamete

D. egg

**Answer: B**



**Watch Video Solution**

**56.** What would be the number of chromosomes in the cell of the aleurone layer in a plant species with 8 chromosomes in its synergids

A. 16

B. 24

C. 32

D. 8

**Answer: B**



**Watch Video Solution**

**57.** Long filamentous threads protruding at the end of a young cob of maize are-

A. anthers

B. styles

C. ovaries

D. hairs

**Answer: B**



**Watch Video Solution**

**58.** The arrangement of the nuclei in a normal embryo sac in the dicot plants is



A.  $2+4+2$

B.  $3+2+3$

C.  $2+3+3$

D.  $3+3+2$

**Answer: B**



**Watch Video Solution**

**59.** In a cereal grain the single cotyledon of embryo is represented by

A. coleorhiza

B. scutellum

C. prophyll

D. coleoptile

**Answer: B**



**Watch Video Solution**

**60.** In a type of apomixis known as adventitious embryony embryos develop directly from the

A. nucellus or integuments

B. synergids or antipodal s in an embryo  
sac

C. accessory embryo sacs in the ovule

D. zygote

**Answer: A**



**Watch Video Solution**

**61.** Through which cell of the embryo sac does the pollen tube enter the embryo sac?

A. egg cell

B. central cell

C. persistent synergid

D. degenerated synergid

**Answer: D**



**Watch Video Solution**

62. Which one of the following represents an ovule, where the embryo sac becomes horse-shoe shaped and the funiculus and micropyle are close to each other -

A. circinotropous

B. anatropous

C. amphitropous

D. atropous

**Answer: C**



**Watch Video Solution**

63. Which one of the following statement is correct

A. geitonogamy involves the pollen and stigma of flower of different plants

B. cleistogamous flowers are always autogamous

C. xenogamy occurs only by wind pollination

D. chasmogamous flower do not open at all

**Answer: B**



**Watch Video Solution**

**64.** Megaspores are produced from megaspore mother cells after

- A. meiotic division
- B. mitotic division
- C. formation fo thick wall
- D. differntitation

**Answer: A**



**Watch Video Solution**

**65.** Animal vectors are required for pollination  
in

A. maize

B. vallisneria

C. mubery

D. cucumber



**Answer: D**



**Watch Video Solution**

**66.** Which of the following statement is correct ?

A. sporopollenin can withstand high

temperauture but not strong acids

B. sporopollenin can be degraded by

enzymes

C. sporopollenin is made up of inorganic materials

D. sporopollenin can withstand high temperature as well as strong acids and alkalis

**Answer: D**



**Watch Video Solution**

**67.** Albuminous seeds store their reserve food mainly in

A. perisperm

B. endosperm and cotyledons

C. cotyledons

D. hypocotyl

**Answer: B**



**Watch Video Solution**

68. The embryo in sunflower has

- A. two cotyledons
- B. many cotyledons
- C. no cotyledon
- D. one cotyledon

**Answer: A**



**Watch Video Solution**

**69.** Endosperm is consumed by the developing embryo in

A. maize

B. coconut

C. castor

D. pea

**Answer: D**



**Watch Video Solution**

70. In a flowering plant the pollen tube first arrives in

A. egg

B. an antipodal cell

C. a synergid

D. central cell

**Answer: C**



**Watch Video Solution**

71. Which of the following statement is wrong?

A. pollen grains remain viable for several months because their outer covering is made of sporopollenin

B. no enzyme can degrade sporopollenin

C. pollen grains are well represented in fossil strata due to sporopollenin

D. pollen wall has cavities containing proteins

**Answer: A**



**Watch Video Solution**

**72.** Long ribbon like pollen grains are seen in some

- A. aquatic plants
- B. wind pollinated grasses
- C. gymnosperms
- D. bird pollinated flowers



**Answer: A**



**Watch Video Solution**

**73.** Which one of the following pairs of plant structures has haploid number of chromosomes

A. egg nucleus and secondary nucleus

B. megaspore mother cell and antipodal cells

C. egg cell and antipodal cells

D. nucellus and antipodal cells

**Answer: C**



**Watch Video Solution**

**74.** Embryo sac represents

A. megasporophyte

B. megagametophyte

C. megasporophyll

D. megagamete

**Answer: B**



**Watch Video Solution**

**75.** If an angiospermic male plant is diploid and female plant tetraploid, the ploidy level of endosperm will be

- A. tetraploid
- B. pentaploid
- C. haploid
- D. triploid

**Answer: B**



**Watch Video Solution**

**76.** The role of double fertilization is to produce:

A. cotyledons

B. endocarjyp

C. endosperm

D. integuments

**Answer: C**



**Watch Video Solution**

77. An interesting modification of flower shape for insect pollination occurs in some orchids in which a male insect mistakes the pattern on the orchid lower for the females species and tries to copulate with it thereby pollinating the flower this phenomenon is called

A. pseudo pollination

B. pseudo parthenocarpy

C. mimicry

D. pseudo copulation

**Answer: D**



**Watch Video Solution**

**78.** Endosperm is formed during the double fertilization by

A. two polar nuclei and one male gamete

B. one polar nuclei and one male gamete

ovum and male gamete

C. ovum and male gamete

D. two polar nuclei and two male gametes

**Answer: A**



**Watch Video Solution**

**79.** Anemophily type of pollination is found in :

A. salvia

B. bottle brush

C. vallisneris

D. coconut

**Answer: D**



**Watch Video Solution**

**80.** What is the direction of micropyle in anatropous ovule?

A. upward



B. downward

C. right

D. left

**Answer: B**



**Watch Video Solution**

**81.** In angiosperm, all 4 microspores of tetrad are covered by a layer which is formed by

A. pectocellulose

B. callose

C. cellulose

D. sprorpollenin

**Answer: B**



**Watch Video Solution**

**82.** In Angiosperms pollen tube liberate their male gametes into the :

A. central cell

B. antipodal cells

C. egg cell

D. antipodal cells

**Answer: D**



**Watch Video Solution**

**83.** An ovule which becomes curved so that the nucellus and embryo sac lie at right angles to the funicle is

A. hemitropous

B. campylotropous

C. anatropous

D. orthotropous

**Answer: A**



**Watch Video Solution**

**84.** When a diploid female plant is crossed with a tetraploid male, the ploidy level of endosperm cells in the resulting seed is:

A. tetraploidy

B. pentaploidy

C. diploidy

D. triploidy

**Answer: A**



**Watch Video Solution**

**85.** Polyembryony commonly occurs in

A. tomato

B. potato

C. cirus

D. turmeric

**Answer: C**



**Watch Video Solution**

**86.** Eight nucleated embryosac is

A. only monosporic

B. only bisporic

C. only tetrasporic

D. any of these

**Answer: D**



**Watch Video Solution**

**87.** Adventive embryony in Citrus is due to

A. nucellus

B. integuments

C. zygotic embryo

D. fertized egg

**Answer: A**



**Watch Video Solution**

**88.** In flowering plants archesporium gives rise to

A. only the wal of the sprorangium

B. both wall and the sprorogenous cells

C. wall and the tapetum



D. only tapetum and sporogenous cells

**Answer: B**



**Watch Video Solution**

**89.** In a type of apomixis known as adventitious embryony embryos develop directly from the

A. nucellus or integuments

B. zygote

C. synergids or antipodals in an embryo sac

D. accessory embryo sacs in the ovule

**Answer: A**



**Watch Video Solution**

**90.** Function of filiform apparatus is to :-

A. Recognize the suitable pollen at stigma

B. stimulate division of gerative cell

C. produce nectar

D. guide the entry of pollen tube

**Answer: D**



**Watch Video Solution**

## Assignment Section D

1. A: Each cell fo the sporogenous tissue is capable of giving rise to a microsproe tetrads

R: Most abundant microspore tetrads is the product of simultaneous cytokinesis

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: B**



**Watch Video Solution**

2. A: In sporoderm pectocellulosic layer is surrounded by sporopollenin

R: Exine is differentiated into outer ectexine and inner endexine

A. if both assertion A reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: B**



**Watch Video Solution**

**3. A:** The gerative cell comes to lie freely in the cytoplasm of the tube cell

**R:** Cellulosic wall around generative cell is dissolved

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: C**



**Watch Video Solution**

**4. A:** Restitutional nucleus can be observed in endothecium cells

**R:** Endothecium cells are usually triploid



A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: D**



**Watch Video Solution**

5. A: chalazal vacuole is present in the help cell  
of embryo sac

R: Polarity of synegid cytoplasm is opposite to  
egg cell

A. if both assetion A reason are ture and  
the reason is the correct explanation of  
the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: B**



**Watch Video Solution**

**6. A:** Formation of mature male gametophyte requires one meiotic and one mitotic division in 60% of the angiosperms

**R:** Pollination occurs in three celled condition in majority of angiosperms

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation

of the assertion then mark

C. if assertion is true statement but reason

is false then mark

D. if both assertion and reason are false

statements then mark

**Answer: D**



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7. A: filiform apparatus guides the pollen tube into the synergids

R: It is special cellular thickening at microphyllar tip to secrete chemotropic stimulus

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: A**



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8. A: Geitonogamy helps in maintaining homozygosity and superiority of the race indefinitely

R: It is functionally, ecologically and genetically cross pollination

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark



D. if both assertion and reason are false statements then mark

**Answer: C**



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**9. A:** Initial growth of pollen tube takes place on expenditure of food present in the stigma and style

**R:** Pollen tube travels intracellularly and chemotactically

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: D**



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**10. A:** Eight cells of octant stage in dicot embryogeny are made by 2 vertical and one transverse divisions in embryonal cell

**R:** These cells are arranged in epibasal and hypobasal tier

A. if both assertion A reason are true and the reason is the correct explanation of

the assertion then mark

B. if both assertion & reason are true and

the reason is not the correct explanation

of the assertion then mark

C. if assertion is true statement but reason

is false then mark

D. if both assertion and reason are false

statements then mark

**Answer: B**



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**11. A:** Triple fusion is associated with the sexual reproduction in all spermatophytes

r: It is required to form definitive nucleus as nutritive tissue

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation

of the assertion then mark

C. if assertion is true statement but reason

is false then mark

D. if both assertion and reason are false

statements then mark

**Answer: D**



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**12. A:** Anatropous ovule is resupinate ovule

**R:** The body of ovule is completely bent with hilum close to micropylar end

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: A**



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**13. A:** More than one pollen tubes can enter an embryo sac

**R:** Double fertilization can occur by



contributing of gametes from different pollens

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: B**



**View Text Solution**

14. A: hybrid seed have to eb produced every year because seeds collected form hybrid plnats if sown subsequently do not maintain hybrid charcters

r: Hybrid seeds show segregation of traits

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: A**



**Watch Video Solution**

**15. A:** Growth of male gametophyte is completed over the female reproductive organ

**R:** 2-celled stage of partial male gametophyte is developed in situ

A. if both assertion A reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: B**



**Watch Video Solution**

**16. A:** certain proteins of pollen origin identifies the compatible stigma

r: Compatibility proteins are found located in exine

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: A**



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**17. A:** Tetraploid gametophyte can be produced from tetraploid sporophyte by means of

## apogamy

R:L Apogamy involves fertilisation not meiosis

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark



D. if both assertion and reason are false statements then mark

**Answer: D**



**View Text Solution**

**18.** A: continued self pollination checks  
inbreeding depression

R: pollen release and stigma receptivity are  
synchronised

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: D**



**Watch Video Solution**

**19. A:** Complete radicle is not produced by hypobasal tier of octant embryo during cruciferad development

R" Hypophysis cell of suspensor contributes the tip of radicle in this type of development

A. if both assertion A reason are true and the reason is the correct explanation of

the assertion then mark

B. if both assertion & reason are true and

the reason is not the correct explanation

of the assertion then mark

C. if assertion is true statement but reason

is false then mark

D. if both assertion and reason are false

statements then mark

**Answer: A**



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**20. A:** Apomictic embryo is asexual mode of reproduction

**R:** it prevents the segregation of traits

A. if both assertion & reason are true and the reason is the correct explanation of the assertion then mark

B. if both assertion & reason are true and the reason is not the correct explanation of the assertion then mark

C. if assertion is true statement but reason is false then mark

D. if both assertion and reason are false statements then mark

**Answer: B**



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