

BIOLOGY

BOOKS - TRUEMAN'S BIOLOGY (ENGLISH)

SEXUAL REPRODUCTION IN FLOWERING PLANTS

Multiple Choice Questions

1. Anthesis is a phenomenon which refers to

- A. (a) formation of pollen
- B. (b) development of anther

C. (c) opening of flower bud

D. (d) reception of pollen by stigma

Answer: C



Watch Video Solution

2. Amphimixis is

A. (a) reaction of antifertilizin and fertilizin

B. (b) fusion of male and female pronuclei

C. (c) formation of reception cone by ovum

D. (d) penetration of sperm into ovum

Answer: B



[Watch Video Solution](#)

3. A.T.S. of dithecous anther shows

- A. endothecium inner to middle layers
- B. tapetum just below endothecium
- C. middle layers between endothecium and tapetum
- D. tapetum below epidermis

Answer: C



[Watch Video Solution](#)

4. Stamen represents

A. pollen grains

B. palmas

C. flowers

D. fruits

Answer: A



Watch Video Solution

5. The nutritive layer of pollen sac/microsporangium is

A. gametangium

B. endothecium

C. tapetum

D. sporangium

Answer: C

 [Watch Video Solution](#)

6. Ubisch bodies are connected with the development of

A. sporogenous tissue

B. tapetum just below endothecium

C. endothecium

D. exothecium

Answer: B

 [Watch Video Solution](#)

7. Ubisch bodies are connected with the development of

A. exine of pollen grain

B. endothecium

C. pollen tube

D. all of these

Answer: A



Watch Video Solution

8. Ubisch granules are secreted

A. pollen grains

B. tapetum cels

C. Ovules

D. insect legs

Answer: B



Watch Video Solution

9. In angiosperms, all the four microspores of a tetrad are covered by a layer formed by

A. cellulose

B. sporopollenin

C. pectose

D. callose

Answer: D

 [Watch Video Solution](#)

10. Pollen grain is related to embryo sac as

A. sperm to egg

B. male gametophyte to female gametophyte

C. male gametophyte to egg

D. sperm to female gametophyte

Answer: B



[Watch Video Solution](#)

11. A typical anther of an angiosperm is

- A. monothealous, bisporangiate
- B. monothealous, tetrasporangiate
- C. dithealous, bisporangiate
- D. dithealous, tetrasporangiate

Answer: D



[Watch Video Solution](#)

12. Endothecium layer present below epidermis in anther bears fibrous thickenings and helps in

- A. dehiscence of anthers
- B. nutrition of spores
- C. formation of sporopollenin
- D. absorption of water

Answer: A



Watch Video Solution

13. The number of pollen grains, produced by each head inflorescence of family Asteraceae having 10 actinomorphic

flowers (if each anther produces 20 pollen grains), are

A. 300

B. 500

C. 800

D. 1000

Answer: D



Watch Video Solution

14. Pollen sac corresponds to which part

A. microsporangium

B. gametophyte

C. megasporangium

D. microspore

Answer: A



Watch Video Solution

15. Pollen tube is made up of

A. (a) cutin

B. (b) sporopollenin

C. (c) pectocellulose

D. (d) pectin

Answer: C



[Watch Video Solution](#)

16. The intine of a pollen grain is mainly made up of

- A. cellulose and pectin
- B. lipid and pectin
- C. pectin and lignin
- D. lignin and cutin

Answer: A



[Watch Video Solution](#)

17. In angiosperm pollen grains are dehisced at

A. (a) 4 celled stage

B. (b) mostly at 2 and sometimes at 3 called stage

C. (c) 3 called stage

D. (d) pollen tube stage

Answer: B



Watch Video Solution

18. In dicots, at how many places exine is absent in the pollen grain ?

(a) 2

(b) 3

(c) 1

(d) more than 3

A. 2

B. 3

C. 1

D. more than 3

Answer: B



Watch Video Solution

19. Which one is larger nucleus in pollen grain ?

A. generative nucleus

B. vegetative nucleus

C. male gamete nucleus

D. prothallial nucleus

Answer: B



Watch Video Solution

20. The exine of a pollen grain is composed of one of the most resistant biological material by which pollen grains are able to withstand extremes of temperature and dessication and cannot be degraded by any enzyme is

A. lignocellulose

B. sporopollenin

C. cellulose and lignin

D. pectin and cellulose

Answer: B

 [Watch Video Solution](#)

21. Genotypically the pollen grain produced inside the anther belong to

A. one type

B. two types

C. many types

D. all the above

Answer: C



Watch Video Solution

22. Germ pore is the area where exine is

- A. (a) absent
- B. (b) thick
- C. (c) thick & uniform
- D. (d) uniform

Answer: A



Watch Video Solution

23. A plant root has 16 chromosomes , so

- A. (a) gamete has 16 chromosomes
- B. (b) gamete has 8 chromosomes
- C. (c) endosperm has 8 chromosomes
- D. (d) endosperm has 16 chromosomes

Answer: B

 [Watch Video Solution](#)

24. Sculpturing of exine of pollen is important in

- A. mitotic studies
- B. physiological studies

C. taxonomic studies

D. medicinal studies

Answer: C



Watch Video Solution

25. Ovule is technically equivalent to

A. (a) megasporangium with one megaspore

B. (b) integumated indehiscent megasporangium

C. (c) megagametangium

D. (d) integumented female gameteophyte

Answer: B



[Watch Video Solution](#)

26. Ovule is attached to the placenta by a stalk known as

A. funicle

B. petiole

C. pedicel

D. hilum

Answer: A



[Watch Video Solution](#)

27. Collar like outgrowth arising from the base of ovule and forming is a sort of third integument is known as (A) caruncle (B) Aril (C) Coma (D) Operculum

A. caruncle

B. aril

C. coma

D. operculum

Answer: B



Watch Video Solution

28. In tenuinucellate type of ovule

- A. nucellus is small
- B. nucellus is large
- C. nucellus does not develop
- D. ovule is vestigial

Answer: A

 [Watch Video Solution](#)

29. Crassinucellate ovule shows:

- A. Developed nucellus
- B. Partically development nucellus
- C. Well developed nucellus

D. No nucellus

Answer: C

 [Watch Video Solution](#)

30. When ovule is straight with funiculus, embryo sac, chalaza and micropyle lying in a straight vertical line, it is known as

A. orthotropous

B. anatropous

C. campylotropous

D. amphitropous

Answer: A



Watch Video Solution

31. Ovule is inverted (resupinates at 180°) with body fused to funicle, micropyle lying close to hilum and side by side with funicle facing the placent and is most common in Angiosperms. It is

- A. hemitropous
- B. orthotropous
- C. anatropous
- D. campylotropous

Answer: C



[Watch Video Solution](#)

32. Ovule of *Opuntia* is coiled and turn at more than 360° angle, is called

A. circinotropous

B. anatropous

C. hemitropous

D. amphitropous

Answer: A



[Watch Video Solution](#)

33. Female gametophyte (megagametophyte of angiosperms) is represented by

- A. ovule
- B. embryo sac
- C. megaspore mother cell
- D. megasporophyll

Answer: B

 [Watch Video Solution](#)

34. The female gametophyte of a typical dicot at the time of fertilisation is

- A. (a) 8-nucleated and 7-celled
- B. (b) 7-nucleated and 8-celled
- C. (c) 4-nucleated and 4-celled
- D. (d) 8-nucleated and 8-celled

Answer: A



Watch Video Solution

35. Number of chromosomes is 24 in nucellus. Number of chromosomes in microspore mother cell would be

- (a) 36
- (b) 24

(c) 30

(d) 12

A. 36

B. 24

C. 30

D. 12

Answer: B



Watch Video Solution

36. Base of nucellus from which integument arises is

A. hilum

B. funicle

C. chalaza

D. micropyle

Answer: C



Watch Video Solution

37. The megasporangium of the angiosperms on maturation gives rise to

A. (a) fruit

B. (b) seeds

C. (c) embryo

D. (d) cotyledons

Answer: B

 [Watch Video Solution](#)

38. Megasporophyll of Pinus is equivalent to angiospermic

A. (a) carpel

B. (b) ovule

C. (c) pedicel

D. (d) placenta

Answer: A

 [Watch Video Solution](#)

39. What do you think is the correct sequence of the development of the embryo sac ?

A. Archesporium → megaspore mother cell →
megaspore → embryo sac

B. Archesporium → measpore → megaspore
mother cell → embryo sac

C. Arcehsporium → megasporangium → embryo
sac → embryo

D. Archesporium → nucellus → embryo sac →
megaspore

Answer: A



Watch Video Solution

40. Embryo sac develops from megaspore mother cell through

- A. two meiotic and two mitosis divisions
- B. one meiotic and three mitosis divisions
- C. two meiotic divisions
- D. one meiosis and two mitotic divisions

Answer: B



Watch Video Solution

41. The plant part which consists of two generations one within the other, is

- A. (a) germinated pollen grains
- B. (b) seed
- C. (c) embryo
- D. (d) unfertilized ovule

Answer: D



Watch Video Solution

42. Function of guiding and attracting pollen tube towards egg is done by

- A. egg cell
- B. filiform apparatus
- C. anitpodal cell
- D. polar nuclei

Answer: B



Watch Video Solution

43. In flowering plants archesporium gives rise to

- A. wall and the tapetum
- B. only tapetum and sporogenous cells
- C. only the wall of the sporangium

D. both wall and the sporogenous cells

Answer: D

 [Watch Video Solution](#)

44. The number of chromosomes in leaf tip cell of plant is 6. The number of chromosomes in each of the 4 cells of its pollen tetrad would be

A. 3

B. 6

C. 12

D. 24

Answer: A



Watch Video Solution

45. In angiosperms, a mature male gametophyte is formed from a pollen mother cell through

- A. (a) three times mitosis
- B. (b) one meiosis and two mitosis
- C. (c) two times meiosis
- D. (d) one meiosis

Answer: B



Watch Video Solution

46. The filiform apparatus is present in

- A. (a) synergids
- B. (b) egg
- C. (c) anther wall
- D. (d) antipodal cells

Answer: A



Watch Video Solution

47. The haploid cell which divides by mitosis to form embryosac is

- A. megaspore mother cell

- B. microspore mother cell
- C. functional megaspore
- D. non-functional megaspore

Answer: C



Watch Video Solution

48. Which of the cells in the Polygonum type of embryo sac which degenerate after fertilization

- A. antiploid
- B. synergids
- C. secondary nucleus

D. central cell

Answer: D



Watch Video Solution

49. The number of cells in the Polygonum type of embryo sac which degenerate after fertilization

A. 2

B. 7

C. 5

D. 8

Answer: C



Watch Video Solution

50. In 82% of angiosperm families, ovule is

A. anatropous

B. orthotropous

C. amphitropous

D. circinotropous

Answer: A



Watch Video Solution

51. Which of the following statements is/are correct ?

(i) Endothecium lies below epidermis

(ii) Fusion of egg with male gamete is called apogamy

(iii) Synergids are haploid.

(iv) The point at which funicle touches the ovule is raphe.

A. a and d

B. a and b

C. a and c

D. only a

Answer: C



Watch Video Solution

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

A. 3+3+2

B. 2+3+3

C. 3+2+3

D. 2+4+2

Answer: C



Watch Video Solution

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

A. Egg

B. Pollen grain

C. Microspore mother cell

D. Male gamete

Answer: C



Watch Video Solution

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

A. vegetative cell

B. microspore mother cell

C. microspore

D. generative cell

Answer: D



Watch Video Solution

55. Increased asthmatic attacks in certain seasons are related to

A. inhalation of seasonal pollen

B. low temperature

C. hot and humid environment

D. eating fruits preserved in tin containers

Answer: A



Watch Video Solution

56. Pollination occurs when a pollen grain

- A. releases its sperm nuclei
- B. lands on stigma
- C. matures and has 3 nuclei
- D. releases its sperm nuclei and fertilize the egg and polar nuclei

Answer: B



Watch Video Solution

57. Anemophily is pollination through

A. animals

B. air

C. birds

D. insects

Answer: B



Watch Video Solution

58. Emasculation is

A. pollination between flowers of different plants

B. pollination between flower of the same plants

C. removal of the anthers from the flower bud

D. artificial pollination before opening of flower

Answer: C



Watch Video Solution

59. When anthers and stigma mature at the same time it is called

A. allogamy

B. dichogamy

C. homogamy

D. dicliny

Answer: C

 [Watch Video Solution](#)

60. Self pollination (autogamy) is obligatory in closed bisexual flowers (e.g., Commelina, Ground nut). It is known as

A. cleistogamy

B. allogamy

C. geitonogamy

D. dicliny

Answer: A



Watch Video Solution

61. Wind pollinated plants differ from insects pollinated plants in having

- A. coloured petal and large pollen
- B. no coloured petals and light pollen
- C. small petals and sticky pollen
- D. small coloured petals and heavy pollen

Answer: B



Watch Video Solution

62. The process whereby a perfect flower is pollinated by its pollen is called

- A. allogamy
- B. autogamy
- C. xenogamy
- D. hydrogamy

Answer: B

 [Watch Video Solution](#)

63. The term used when anthers and stigmas of intersexual or perfect

- A. bud pollination
- B. immature pollination
- C. cross pollination
- D. cleistogamy

Answer: A



Watch Video Solution

64. Maturation of gynoecium before anthers of the same flower of

- A. protogyny
- B. protandry

C. heterogamy

D. autogamy

Answer: A



Watch Video Solution

65. Cross pollination in crop plant is known as

A. allogamy

B. autogamy

C. chasmogamy

D. cleistogamy

Answer: A



[Watch Video Solution](#)

66. Hydrophily occurs in

- A. Nymphaea and Nelumbo
- B. Vallisneria and Zostera
- C. Eichhornia and Aristolochia
- D. all of the

Answer: B



[Watch Video Solution](#)

67. Lever mechanism or turn pipe mechanism of pollination is found in

A. Antirrhinum

B. Ficus

C. salvia

D. homogamy

Answer: D



Watch Video Solution

68. The type of pollination found in Viola is

A. Chasmogamy

B. cleistogamy

C. bud pollination

D. homogamy

Answer: B



Watch Video Solution

69. The pollination in Vallisneria is

A. epihydrophilous

B. hypohydrophilous

C. anemophilous

D. entomophilous

Answer: A



Watch Video Solution

70. Hypohydrophilous pollination occurs in

A. Vallisneria

B. Ceratophyllum

C. Hydrilla

D. Lotus

Answer: B



Watch Video Solution

71. The presence of exserted stamens is a character of

- A. wind pollination
- B. water pollination
- C. insect pollination
- D. homogamy

Answer: A



Watch Video Solution

72. The presence of inserted stamens is a character of

- A. anemophily
- B. entomophily

C. hydrophily

D. none of these

Answer: B



Watch Video Solution

73. Sepals and petals are indistinguishable or absent in case of

A. entomophilous plants

B. anemophilous plants

C. ornithophilous plants

D. myrmechophilous plants

Answer: B



Watch Video Solution

74. In ornithophilous plants

- A. nectar is not secreted
- B. nectar is secreted in abundance
- C. flowers are dull-coloured
- D. flowers are inconspicuous

Answer: B



Watch Video Solution

75. Callistemon undergoes

A. entomophily

B. hydrophily

C. ornithophily

D. malacophily

Answer: C



Watch Video Solution

76. The plants with flowers having strong odour, abundant nectar and pollen grain show

A. (a) ornithophily

B. (b) chiropterophily

C. (c) entomophily

D. (d) anemophily

Answer: B



Watch Video Solution

77. Night blooming flowers are generally

A. brightly coloured

B. odourless

C. light in weight

D. white and bloom in clusters

Answer: D

 [Watch Video Solution](#)

78. In *Rafflesia*, pollination is brought about by

- A. (a) elephant
- B. (b) carrion flies
- C. (c) birds
- D. (d) snakes

Answer: B

 [Watch Video Solution](#)

79. In chasmogamy, the sex organs come in contact with each other by growth/bending/folding but flowers are always

A. open

B. close

C. fragrant

D. bright coloured

Answer: A



Watch Video Solution

80. A close mutualistic association between flower and pollinating agent is found in

A. Yucca and Yucca moth (Pronuba)

B. Fig and Blastophaga wasp

C. Ophrys and male Colpa wasp

D. All of the above

Answer: D



Watch Video Solution

81. Pollination in Lotus is carried out by

A. water

B. insects

C. wind

D. all of these

Answer: B

 [Watch Video Solution](#)

82. Brightly coloured , odourless, pendent flowers (e.g.,
Bignoia /Pyrostegia) are likely to be poillinated by

A. Bats

B. Humming birds

C. Snails

D. Flies

Answer: B



Watch Video Solution

83. In Cannabis, pollination is carried out by

A. insects

B. wind

C. birds

D. bats

Answer: B



Watch Video Solution

84. Insect pollinated (entomophilous) flowers are characterised by

- A. large number of pollens
- B. dry and smooth of pollens
- C. sticky pollens
- D. exserted stigmas

Answer: C



Watch Video Solution

85. Hair present on the cob of corn are

Or

Long filamentous threads protruding at the end of young cob of maize are

A. ovaries

B. hairs

C. anthers

D. styles

Answer: D

 [Watch Video Solution](#)

86. Anemophily type of pollination is found in :

A. Salvia

B. Bottle brush

C. Vallisneria

D. Coconut /DatePalm

Answer: D



Watch Video Solution

87. Upon fertilization, while ovule develops into seed, what structure develops from carpel ?

A. (a) Tegmen

B. (b) Perisperm

C. (c) Testa

D. (d) Pericarp (fruit)

Answer: D



Watch Video Solution

88. The process whereby the male gametes are brought to the egg by a pollen tube is called

A. porogamy

B. siphonogamy

C. syngamy

D. calazogamy

Answer: B



[Watch Video Solution](#)

89. The pollen tubes grow through the solid style by separating their cell through the secretion of

- A. (a) lipase
- B. (b) protease
- C. (c) amylase
- D. (d) pectinase

Answer: D



[Watch Video Solution](#)

90. External water is not required for fertilization of

- A. Cryptogams
- B. Bryophytes
- C. Petridophytes
- D. Spermatophytes

Answer: D



Watch Video Solution

91. In angiosperms, triple fusion produces

- A. polar nucleus

- B. secondary nucleus
- C. zygotic nucleus
- D. primary endosperm nucleus

Answer: D

 [Watch Video Solution](#)

- 92.** In angiosperm, syngamy or true fertilization refers to
- A. fusion of a sperm with secondary nucleus of form zygote
 - B. fusion of sperm with oosphere

C. fusion of one sperm with egg and other with secondary nucleus

D. fusion of one of the sperm with a synergid

Answer: B

 [Watch Video Solution](#)

93. Movement of pollen tube towards embryo sac is

A. thigmotactic

B. thermotactic

C. chemotropic

D. phototropic

Answer: C



Watch Video Solution

94. Germination of pollen grain on the stigma is

- A. gemination in situ
- B. germination in vivo
- C. germination of vitro
- D. autogamy

Answer: B



Watch Video Solution

95. At the time of entering embryo sac the pollen tube contains

- A. two male gametes
- B. two male nuclei
- C. four male gametes
- D. three male gametes

Answer: A

 [Watch Video Solution](#)

96. Double fertilization is fusion of

- A. one egg with two sperms

B. sperm nucleus with egg nucleus as well as with polar nuclei

C. one male gamete with egg and other male gamete with synergid

D. one male gamete with egg with other male gamete with secondary nucleus

Answer: D

 [Watch Video Solution](#)

97. Route used by pollen tube for entering ovule is

A. integument

B. micropyle

C. chalaza

D. any of the above

Answer: D



Watch Video Solution

98. The significance of double fertilization is that it

A. provides stimulus to resume growth of embryo sac

B. ensures the formation of endosperm only after fertilization

C. provides some characters of male plants to endosperm

D. all the above

Answer: D



Watch Video Solution

99. The second fertilization in angiosperms is known as

A. generative fertilization

B. vegetative fertilization

C. there is no second fertilization

D. secondary fertilization

Answer: B



Watch Video Solution

100. Entry of pollen tube through micropyle while reaching the embryo sac is called

- A. chalazogamy
- B. mesogamy
- C. porogamy
- D. pseudogamy

Answer: C



Watch Video Solution

101. When pollen tube enters by integuments then the process is called

- A. (a) porogamy
- B. (b) mesogamy
- C. (c) chalazomany
- D. (d) syngamy

Answer: B



Watch Video Solution

102. In angiosperms, pollen tube liberates its male gametes into

A. (a) central cell

B. (b) egg cell

C. (c) synergids

D. (d) antipodal cells

Answer: C



Watch Video Solution

103. Total number of nuclei involved in double fertilization is

A. 2

B. 3

C. 4

D. 5

Answer: D



Watch Video Solution

104. Pollen tube enters the embryo sac usually

A. by penetrating egg cell

B. through one degenerated synergid

C. by destroying antipodal cells

D. between persistent synergid and central cell

Answer: B



[Watch Video Solution](#)

105. Development of embryo in angiosperm is

- A. holoblastic
- B. meroblastic
- C. eusporangiate
- D. leptosporangiate

Answer: B



[Watch Video Solution](#)

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

- A. scutellum
- B. epiblast
- C. tigellum
- D. aleurone

Answer: A



Watch Video Solution

107. Pollination is stimulus necessary for the fruit development. It can be replaced mainly by

A. ethylene

B. 2, 4-D

C. cytokinin

D. auxins

Answer: D



Watch Video Solution

108. Ovule integument gets transformed into

A. seeds

B. pericarp

C. seed coat

D. cotyledons

Answer: C

 [Watch Video Solution](#)

109. Endosperm in angiosperms is formed from secondary nucleus

- A. (a) after fertilization but prior to embryo formation
- B. (b) before fertilization but after but after embryo formation
- C. (c) after embryo formation
- D. (d) during fertilization

Answer: A



Watch Video Solution

110. Endosperm of angiosperms is different from that of gymnosperms because

- A. angiosperms have fats
- B. endosperm is formed before fertilization
- C. endosperm is not formed before fertilization
- D. it is diploid

Answer: C



Watch Video Solution

111. The most common type of development of endosperm is

- A. cellulose and pectin
- B. helobial
- C. nuclear
- D. perispermic

Answer: C



Watch Video Solution

112. Coconut has

- A. central liquid multinucleated endosperm

B. helobial endosperm

C. both (1) and (2)

D. exalbuminous endosperm

Answer: A



Watch Video Solution

113. When only the first division is followed by cytokinesis, the development of endosperm is called

A. cellular

B. nuclear

C. ruminant

D. helobial

Answer: D

 [Watch Video Solution](#)

114. Endosperm is hard/stony in

- A. Areca nut
- B. Date palm
- C. Ivory palm
- D. all of these

Answer: D

 [Watch Video Solution](#)

115. Endosperm is hemicellulose in Date palm and oily in Coconut. What type of endosperm is found in cereals ?

A. Proteinaceous

B. Starchy

C. Fatty

D. Cellulosic

Answer: B



Watch Video Solution

116. A homogamous tall pistillate plant (TT) is crossed with homogamous dwarf staminate plant (tt). What is the genotype of endosperm?

A. TTT

B. TTt

C. Ttt

D. ttt

Answer: B



Watch Video Solution

117. Milky water of green Coconut is

A. liquid chalaza

B. liquid nucellus

C. degenerated liquid free nuclear endosperm

D. liquid female gametophyte

Answer: C



Watch Video Solution

118. Number of chromosomes is 12 in endosperm. What shall be the number in megaspore mother cell .

A. 8

B. 36

C. 12

D. 18

Answer: A



Watch Video Solution

119. The cell of endosperm have 24 chromosomes. What will be the number of chromosomes in the gametes?

A. 8

B. 16

C. 72

D. 24

Answer: A



Watch Video Solution

120. How many meiosis are required to produce 50 seeds of tobacco?

(a) 62

(b) 100

(c) 63

(d) 50

A. 62

B. 100

C. 63

D. 50

Answer: C

 [Watch Video Solution](#)

121. The number of chromosomes in radicle is 16. What will be number of chromosomes in pollen tube nucleus, antipodals , secondary nucleus of endosperm respectively ?

A. 8,8,16,24

B. 8,8,16,16

C. 16,16,32,48

D. 8,8,16,48

Answer: A



Watch Video Solution

122. The male gamete is x and egg is $3x$. The ploidy level in embryo and endosperm will be

- A. $4x$ in embryo and $4x$ in endosperm
- B. $4x$ in embryo and $7x$ in endosperm
- C. $4x$ in embryo and $6x$ in endosperm
- D. $6x$ in embryo and $12x$ in endosperm

Answer: B



Watch Video Solution

123. Perisperm is

- A. persistent/remnants of nucellus
- B. degenerated secondary nucleus
- C. degenerated synergids in seed
- D. remains of endosperm

Answer: A



Watch Video Solution

124. The term 'self sterility' implies

- A. when pollen grains are sterile

B. when pollen grains do not germinate

C. when ovules are not fertile

D. when flowers are neuter

Answer: B



Watch Video Solution

125. Female plant is diploid and male plant is tetraploid.

Find out the correct match

A. Embryo ($3n$), endosperm ($4n$), integuments ($2n$),

egg (n) and pollen grain ($2n$)

B. Embryo ($2n$), endosperm ($6n$), integuments ($2n$), egg ($4n$) and pollen grain ($4n$)

C. Embryo ($2n$), endosperm ($3n$), integuments ($2n$), egg (n) and pollen grain (n)

D. Embryo ($6n$), endosperm ($4n$), integuments ($3n$), egg (n) and pollen grain ($2n$)

Answer: A

 [Watch Video Solution](#)

126. Following components are haploid, diploid or triploid

(A) oosphere (B) microsphere (C) sunergids (D) antipodals

(E) oospore (F) nucellus (G) placenta (chalaza) (I)

endosperm (J) tapetum

Which of following groups show the correct sequence of the ascending order of ploidy in ovule/seed ?

A. C,B,D

B. A,E,I

C. E,F,G

D. J,E,H

Answer: B



Watch Video Solution

127. Which of the following have double endosperm?

A. Raphanus

B. Coconut

C. Zea mays

D. Betel nut

Answer: B



Watch Video Solution

128. Conifers differ from grasses in the

A. absence of pollen tubes

B. formation of endosperm before fertilization

C. production of seeds from ovules

D. lack of xylem tracheids

Answer: B

 [Watch Video Solution](#)

129. Parthenocarpic fruits are produced by

A. (a) treating plants with PMA

B. (b) treating plants with low concentration of auxin
and gibberellins

C. (c) removing anthers from flowers before release of
pollen grain

D. (d) raising plants from vernalised seeds

Answer: B



Watch Video Solution

130. What does self incompatibility provides for a plant ?

A. Means of transferring pollen to another plant

B. Means of coordinating the fertilization of egg with
the development of store before if fertilize the egg
cell

C. A mean of destroying foreign pollen before it
fertilizes the egg cell

D. A biological block to self fertilization so that cross fertilization is assured

Answer: D



Watch Video Solution

131. One meiosis produces how many male gametes ?

A. 4

B. 1

C. 2

D. 8

Answer: D



Watch Video Solution

132. If number of chromosomes in root cell of male plant is 40 and in leaf cell of female plant is 60, what will be number of chromosomes in their endosperm ?

A. 50

B. 120

C. 70

D. 80

Answer: D



Watch Video Solution

133. Raphe is

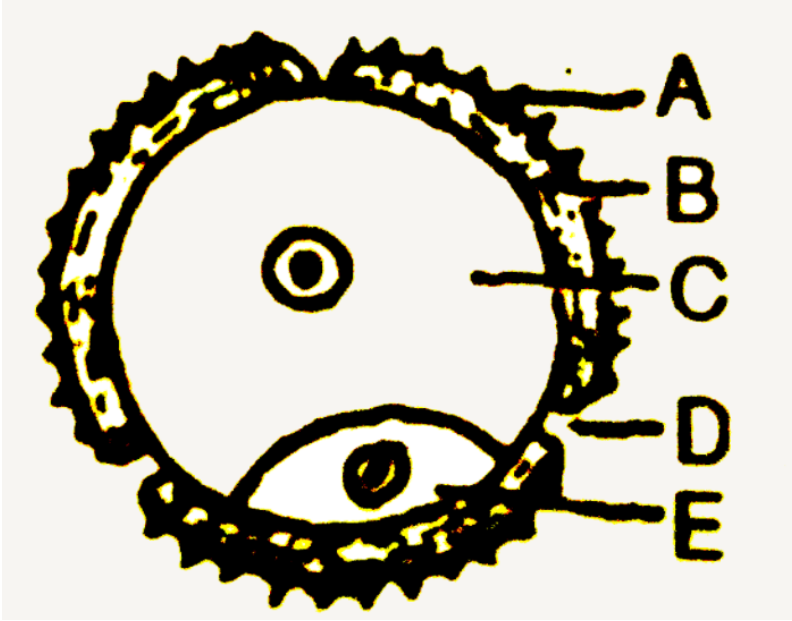
- A. part of flower
- B. nucellus
- C. ridge formed by funicle
- D. funicle attached to ovule

Answer: C



Watch Video Solution

134. In the given diagram name the parts A, B, C and D and E .



A. A-germ pore, B-generative cell, C - intine , D-exine, E-vegetative cell

B. A-germ pore , B- generative cell, C-axine, D-intine , E-vegetative cell

C. A-intine, B-exine, C-germ pore, D-generative cell. E-vegetative cell

D. A-exine, B-intine, C-vegetative cell, D-germ pore, E-generative cell

Answer: D

 [Watch Video Solution](#)

135. Identify the wrong statement regarding post fertilisation development

A. the ovary wall develops into pericarp

B. the outer integument of ovule develops into tegman

C. the fusion nucleus (triple nucleus) develops into endosperm

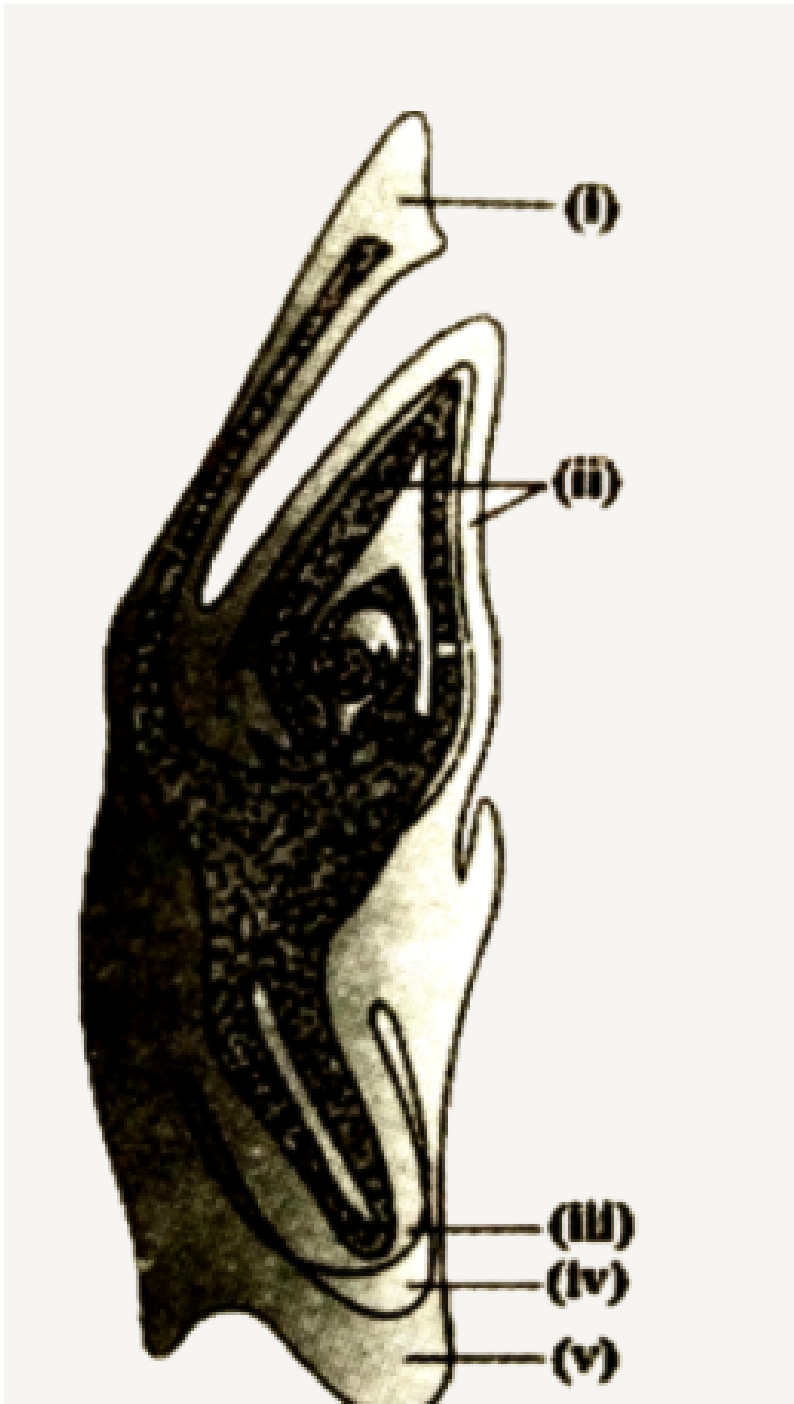
D. the ovule develops into seed

Answer: B



Watch Video Solution

136. Go through this figure of L.S. of an embryo of grass



A. A - Root cap, B - Coleoptile, C - Scutellum, D - Coleorhiza, E - Epiblast, F - Shoot apex

B. A - Shoot apex, B - Epiblast, C - Coleorhiza, D - Scutellum, E - Coleoptile, F - Radicle

C. A - Epiblast, B - Scutellum, C - Coleoptile, D - Radicle, E - Coleorhiza, F - Shoot apex

D. A - Epiblast, B - Radicle, C - Coleoptile, D - Scutellum, E - Coleorhiza, F - Shoot apex

Answer: C



Watch Video Solution

137. Which one of the following shows the last diploid stage in the life cycle of angiosperms ?

A. Pollen grain

B. Nucellus

C. Zygote

D. Microspore mother cell

Answer: D



Watch Video Solution

138. In angiosperms , which one of the following processes does not involve an unequal division ?

- A. Formation of microspores
- B. Formation of generative cell
- C. Zygotic embryogenesis
- D. All of the above

Answer: A



Watch Video Solution

139. In a cross between a tetraploid female plant and a diploid male plant of mulberry, the endosperm would be

- A. Hexaploid
- B. Triploid

C. Tetraploid

D. Pentaploid

Answer: D



Watch Video Solution

140. What is true about cleistogamy?

A. It occurs in unisexual flowers

B. It produces assured seed-set even in the absence of
pollinators

C. it leads to introduction of new useful characters

D. It is a method of geitonogamy

Answer: B



Watch Video Solution

141. Find out the correct statement

- A. The plant *Strobilanthes kunthiana* flower only once every year
- B. Monkeys and apes show cyclical changes during reproduction called oestrous cycle
- C. Bomboo species flower only once in their life time
- D. All of the above

Answer: C

 [Watch Video Solution](#)

142. Flower with a feathery and sticky stigma, numerous light pollen, reduced petals is characteristically

- A. Moth pollinated flowers
- B. Bird pollinated flower
- C. Bee pollinated flower
- D. Wind pollinated flower

Answer: D

 [Watch Video Solution](#)

143. The fruits showing edible thalamus are

- A. Apple, custard, apple , guava
- B. Apple , straberry , pear
- C. Apple , pineapple, strawberry
- D. Jackfruit, guava, pineapple

Answer: B



Watch Video Solution

144. Which one of the following structure found in dicot seed will be genetically identical with its maternal plant ?

- A. Testa

B. Radicle

C. Plumule

D. Cotyledon

Answer: A



Watch Video Solution

145. After pollination which of the following events is crucial for fertilization to occur in flowering plants ?

A. Sperm swim to the egg and the polar nuclei

B. Petals close around the reproductive parts

C. Meiosis occurs within the pollen grain

D. A pollen tube grows from the stigma to the ovule

Answer: D



Watch Video Solution

146. Given below are certain combinations. Select the correct ones.

(i) Ceratophyllum - Epihydrophyly

(ii) Maize - Anemophily

(iii) Aristolochia - Zoophily

(iv) Adansonia- Chiropterophily

(v) Salvia - Hypohydrophyly

(vi) Arisaema (snake plant) - Malacophily

(vii) Kigelia - Entomophily

A. (a) (i), (ii), (iii), (vi)

B. (b) (i), (iii), (iv), (vi) , (vii)

C. (c) (ii), (iii), (iv), (vi)

D. (d) (ii), (iii), (iv), (vii)

Answer: C



Watch Video Solution

147. If a leaf cell of gymnosperm plant had 24 chromosomes, then its endosperm cell would contain

A. 24 chromosomes

B. 36 chromosomes

C. 12 chromosomes

D. 48 chromosomes

Answer: C



Watch Video Solution

148. The proteinaceous substance involved in sporophytic incompatibility and stored in the exine is derived from

A. Tapetum

B. Microspore

C. Anther locule

D. Stigmatic papillae

Answer: A



Watch Video Solution

149. Adventive embryony in Citrus is due to

- A. (a) Integuments
- B. (b) Nucellus
- C. (c) Synergids
- D. (d) Zygotic embryo

Answer: B



Watch Video Solution

150. A pistillate flower of tetraploid angiosperm is pollinated by pollen from staminate flower of diploid plant. What would be the ploidy in endosperm of seeds thus formed ?

A. $3n$

B. $4n$

C. $5n$

D. $6n$

Answer: C



Watch Video Solution

151. In a guava fruit there were 300 seeds. How many meiotic divisions must have been involved in the development of this fruit ?

A. 75

B. 300

C. 375

D. 450

Answer: C



Watch Video Solution

152. Vegetative propagation in mint occurs by

A. Rhizome

B. Sucker

C. Runner

D. Offset

Answer: B



Watch Video Solution

153. Examine the figures (A-D) given below and select the right option out of 1-4 in which all the four structure

A,B,C,D are identified correctly



A	B	C	D
(1) Rhizome	Sporangiophore	Polar cell	Globule
(2) Runner	Archegoniophore	Synergid	Antheridium
(3) Offset	Antheridiophore	Antipodals	Oogonium
(4) Sucker	Seta	Megasporocyte	Gemma cup

A. `{"A","B","C","D"},("Rhizome","Sporangiophore","Polar cell","Globule");`

B.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
Runner	Archegoniophore	Synergid	Antheridium

C.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
Offset	Antheridio	Antipodals	Oogonium

D.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
Sucker	Seta	Megaspre mother cell	Gemma cup

Answer: C



Watch Video Solution

154. Vegetative propagation in Pistia occurs by

A. Stolen

B. Offset

C. Runner

D. Sucker

Answer: B



Watch Video Solution

155. 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](#)

156. Wind pollinated flowers are

- A. Small, producing nectar and dry pollen
- 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](#)

157. In angiosperms, functional megaspore develops into

- A. Embryo sac
- B. Ovule
- C. Endosperm
- D. Pollen sac

Answer: A



Watch Video Solution

158. Nucellar polyembryony is reported in species of

- A. Citrus

B. Gossyplum

C. Triticum

D. Brassica

Answer: A



Watch Video Solution

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

A. 42

B. 63

C. 84

D. 21

Answer: B

 [Watch Video Solution](#)

160. Selaginella and Salvinia are considered to represent a significant step toward evolution of seed habit because

A. female gametophyte is free and evolution dispersed like seeds

B. female gametophyte lack archegonia

C. megaspores possess endosperm and embryo

surrounded by seed coat

D. embryo develops in female gametophyte which

retained on parent sporophyte

Answer: D



Watch Video Solution

161. Wind pollination is common in

A. Legumes

B. Lilies

C. Grasses

D. Orchids

Answer: C

 [Watch Video Solution](#)

162. What is common between vegetative reproduction and Apomixis

- A. Both are applicable to only dicot plants
- B. Both bypass the flowering phase
- C. Both occur round the year
- D. Both produce progeny identical to the parent

Answer: D



[Watch Video Solution](#)

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

- A. Birds
- B. Wind
- C. Bees
- D. Butterflies

Answer: B



[Watch Video Solution](#)

164. Which one of the following statement is wrong ?

- A. Pollen grains in some plants remain viable for months
- B. Intine is made up of cellulose and pectin
- C. When pollen is shed at two-celled state, double fertilization does not take place
- D. Vegetative cell is larger than generative cell

Answer: C



Watch Video Solution

165. What is the function of germ pore?

- A. Initiation of pollen tube
- B. Release of male gametes
- C. Emergence of radicle
- D. Absorption of water for seed germination

Answer: A



Watch Video Solution

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

- A. Zostera
- B. Salvia

C. Fig

D. Commelina

Answer: D



Watch Video Solution

167. Both, autogamy and geitonogamy are prevented in

A. Cucumber

B. Castor

C. Maize

D. Papaya

Answer: D



[Watch Video Solution](#)

168. Product of sexual reproduction generally generates

- A. New genetic combination leading to variation
- B. Large biomass
- C. Longer viability of seeds
- D. Prolonged dormancy

Answer: A



[Watch Video Solution](#)

169. Perisperm differs from endosperm in

A. Being a diploid tissue

B. Its formation by fusion of secondary nucleus with several sperms

C. Being a haploid tissue

D. Having no reserve food

Answer: A



Watch Video Solution

170. Advantage of cleistogamy is

A. No dependence on pollinators

B. Vivipary

C. Higher genetic variability

D. More vigorous offspring

Answer: A



Watch Video Solution

171. Megasporangium is equivalent to

A. Nucellus

B. Ovule

C. Embryo sac

D. Fruit

Answer: B



[Watch Video Solution](#)

172. Which one of the following statement is correct ?

- A. Endothecium produces the microsores
- B. Tapetum nourishes the developing pollen
- C. Hard outer layer of pollen is called intine
- D. Sporogenous tissue is haploid

Answer: B



[Watch Video Solution](#)

173. Geitonogamy involves

A. Fertilization of a flower by the pollen from a flower of another plant belonging to a distant population.

B. Fertilization of a flower by the pollen from another flower of the same plant.

C. Fertilization of a flower by the pollen from the same flower.

D. Fertilization of a flower by the pollen from a flower of another plant in the same population

Answer: A::B



Watch Video Solution

174. Function of filiform apparatus is to :-

- A. Guide the entry of pollen tube
- B. Recognize the suitable pollen at stigma
- C. Stimulate division of generative cell
- D. Produce nectar

Answer: A



Watch Video Solution

175. Pollen tablets are available in the market for

- A. Ex situ conservation

- B. In vitro fertilization
- C. Breeding programmes
- D. Supplementing food

Answer: D



Watch Video Solution

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

- A. Xenogamy
- B. Apogamy
- C. Cleistogamy

D. Geitonogamy

Answer: D



Watch Video Solution

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

- A. Pollen grains of some plants cause severe allergies and bronchitis affections in some people
- B. The flowers pollinated by flies and bats secrete foul odour to attract them
- C. Honey is made by bees by digesting pollen collected from flowers

D. Pollen grains are rich in nutrients and they are used in the form of tablets and syrups

Answer: C

 [Watch Video Solution](#)

178. The hilum is a scar on the :

- A. fruit, where it was attached to pedicel
- B. fruit, where style was present
- C. seed, where micropyle and present
- D. seed, where funicle was attached

Answer: D



[Watch Video Solution](#)

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

- A. Nectar and pollen grains
- B. Floral fragrance and calcium crystals
- C. Protein pellicle and stigmatic exudates
- D. Colour and large size of flower

Answer: A



[Watch Video Solution](#)

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

- A. epiblast
- B. coleorrhiza
- C. scutellum
- D. coleoptile

Answer: C



Watch Video Solution

181. Filiform apparatus is characteristic feature of :

- A. generative cell

B. nucellar embryo

C. aleurone cell

D. synergids

Answer: D



Watch Video Solution

182. In angiosperms, microsporogenesis and megasporogenesis

A. occur in anther

B. form gametes without further divisions

C. involve meiosis

D. occur in ovule

Answer: C

 [Watch Video Solution](#)

183. Coconut water from a tender coconut is:

- A. immature embryo
- B. free nuclear endosperm
- C. innermost layers of the seed coat
- D. degenerated nucellus

Answer: B

 [Watch Video Solution](#)

184. Which of the following statements is not correct

A. Insects that consume pollen or nectar without bringing about pollination are called pollen/nectar robbers

B. Pollen germination and pollen tube growth are regulated by chemical components of pollen interacting with those of the pistill

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

D. Pollen grains of many species can germinate on the stigma of a flower, but only one pollen tube of the

same species grows into the style

Answer: D



Watch Video Solution

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

- A. Budding
- B. Somatic hybridisation
- C. Apomixis
- D. Sporulation

Answer: C



[Watch Video Solution](#)

186. Which of the following statement is not true ?

- A. Exine of pollen grains is made up of sporopollenin
- B. Pollen grains of many species cause severe allergies
- C. Stored pollen in liquid nitrogen can be used in the crop breeding programmes
- D. Tapetum helps in the dehiscence of anther

Answer: D



[Watch Video Solution](#)

187. In majority of angiosperms:

- A. egg has a filiform apparatus
- B. there are numerous antipodal cells
- C. reduction division occurs in the gaspore mother cells
- D. a small central cell is present in the embryo sac

Answer: C



Watch Video Solution

188. Pollination in water 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

189. Ovule is technically equivalent to

A. megasporangium with one megaspore

B. megasporophyll

C. megaspore mother cell

D. megaspore

Answer: A



Watch Video Solution

190. 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](#)

191. Functional megaspore in an angiosperm develops into

- A. ovule
- B. endosperm
- C. embryo sac
- D. embryo

Answer: C



[Watch Video Solution](#)

192. Double fertilization is exhibited by

A. Gymnosperms

B. Algae

C. Fungi

D. Angiosperms

Answer: D



Watch Video Solution

193. A dioecious flowering plant prevents both

A. autogamy and xenogamy

B. autogamy and geitonogamy

C. geitonogamy and xenogamy

D. cleistogamy and xenogamy

Answer: B

 [Watch Video Solution](#)

194. Attractants and reward are required for

A. anemophily

B. entomophily

C. hydrophily

D. cleistogamy

Answer: B

 [Watch Video Solution](#)

195. Which of the following has proved helpful in preserving pollen of fossils

- A. Sporopollenin
- B. Oil content
- C. Cellulose intine
- D. Pollenkitt

Answer: A



Watch Video Solution

196. Offsets are produced by

A. Parthenogenesis

B. Parthenocarpy

C. Mitotic divisions

D. Meiotic divisions

Answer: C



Watch Video Solution

197. Winged pollen grains are present in

A. Pinus

B. Mango

C. Cycas

D. Mustard

Answer: A



Watch Video Solution

198. Double fertilization is

- A. Syngamy and triple fusion
- B. Fusion of two male gametes with one egg
- C. Fusion of one male gamete with two polar nuclei
- D. Fusion of two male gametes of a pollen tube with two different eggs.

Answer: A



Watch Video Solution

199. Pollen grains can be stored for several years in liquid nitrogen having a temperature of

A. $160^{\circ} C$

B. $-196^{\circ} C$

C. $-80^{\circ} C$

D. $-120^{\circ} C$

Answer: B



Watch Video Solution