

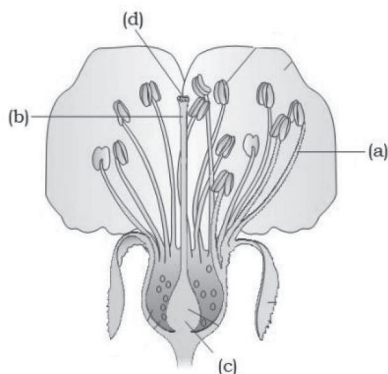
Chapter Sexual Reproduction in Flowering Plant

MULTIPLE CHOICE QUESTIONS

1. The end products of sexual reproduction in Phanerogamiae are
- (a) Fruit (b) Seeds
(c) Flower (d) A & B both

Topic	Flower
1	

2. Floriculture deals with the cultivation of –
- (a) Flower (b) Seed culture
(c) Fruit (d) Both B & C
- 3.



a	b	c	d	
A	Style	Filament	Stigma	Ovary
B	Filament	Style	Ovary	Stigma
C	Filament	Style	Thalamus	Anther
D	Style	Filament	Stigma	Ovule

Topic	The Pistil, Megasporangium and Embryosac
2	

4. Choose incorrect statement –
- (a) Several hormonal & structural changes are initiated which lead to redifferentiation and further development of the floral primordium.
(b) Inflorescences are formed which bear the floral buds and then the flower
(c) In the flower male and female reproductive structures, the androecium and the gynoecium differentiate and develop
(d) None of these
5. Reproductive organ of flower doesnot comprises
- (a) Androecium (b) Stamen
(c) Gynoecium (d) Tepals

Topic	Stamen, Microsporangium & Pollen grains
3	

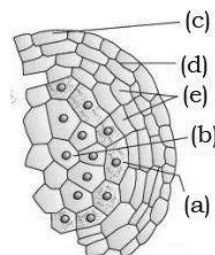
6. When pollen grain mature –
- (a) It consist of two cell that are two male gamete only.
(b) It consist of two cell that are generative & vegetative cell
(c) It consist of two cell that are two male gamete arise from vegetative cell and one generative cell
(d) It consist of three cell that are two male gamete develop meiotically from generative cell and one vegetative cell

7. Choose incorrect statement among following:
 (a) In over 60% of angiosperm, pollen grains are shed at 3 – cell stage
 (b) In over 60% of angiosperm, pollen grains are shed at 2 – cell stage
 (c) Both A & B
 (d) None of these
8. Pollen allergy is not correlated with-
 (a) Cause of parthenium
 (b) Cause chronic respiratory disorder
 (c) Carrot grass that come into india as a contaminant with imported rice
 (d) None of these
9. Pollen grain of rice is viable upto-
 (a) 30 min
 (b) Several month
 (c) Same as in sonaceae
 (d) Both B & C
10. Which temperature is correct to store semen for artificial insemination-
 (a) 196°C (b) -196°C
 (c) 34°C (d) 4°C
11. A typical angiosperm anther is _____ with each lobe having _____ theca i.e they are _____
 (a) Bilobed, two, ditheous
 (b) Ditheous, two, bilobed
 (c) Bilobed , four, ditheous
 (d) Ditheous, four, bilobed
12. Often theca is separated by
 (a) Transverse groove (b) Longitudinal groove
 (c) Diagonal groove (d) All of these
13. The ditheous consist of _____ microsporangia located at the corners, _____ in each lobe.
 (a) Two, one (b) Two, two
 (c) Four, two (d) Both A & C
14. Arrange microsporangial wall in sequence of outside to inside
 (a) Epidermis, middle layer, endothecium, tapetum

- (b) Epidermis, endothecium, middle layer, tapetum
 (c) Epidermis, middle layer, tapetum, endothecium
 (d) Endothecium, middle layer, tapetum, epidermis

15. How many of microsporangial wall perform function of protection and help in dehiscence of anther to release pollen
 (a) 1 (b) 2 (c) 3 (d) 4
16. _____ is responsible for nourishment of pollen grain.
 (a) Tapetum (b) Endothecium
 (c) Epidermis (d) Middle layer
17. Which of the following undergo meiotic division to form microspore tetrad
 (a) Sporogenous tissue (b) Generative tissue
 (c) Microspore (d) A and B

18.



	a	b	c	d	e
A	Tapetum	Microspore mother cell	endothecium	epidermis	Middle layer
B	Tapetum	Microspore mother cell	epidermis	endothecium	Middle layer
C	Tapetum	Middle layer	Microspore mother cell	endothecium	epidermis
D	epidermis	Middle layer	Microspore mother cell	endothecium	Tapetum

19. Microsporogenesis –
 (a) Process of formation of microspore
 (b) Development of pollen grain from pollen mother cell
 (c) It involve meiosis
 (d) All of these
20. Pollen grain represents –
 (a) Male gametophyte (b) Male sporophyte
 (c) Female gametophyte (d) Female sporophyte
21. Choose correct about pollen grain wall
 (i) It has two layered prominent wall
 (ii) Hard outer layered prominent wall
 (iii) Exine is composed of sporopollenin
 (iv) Sporopollenin form continuous exine
 (a) i, ii, iii, iv (b) i, ii, iii
 (c) i, iii (d) i & iv
22. Sporopollenin is absent in –
 (a) Intine (b) Germ pore
 (c) Exine (d) A & B both
23. Pollen grains are well preserved as fossil because of
 (a) Presence of intine
 (b) Presence of germ pore
 (c) Presence of sporopollenin
 (d) All of these
24. Sporopollenin is degraded by –
 (a) Engyme
 (b) High temperature
 (c) Strong acid & alkali
 (d) None of these
25. Inner wall of pollen grain is –
 (a) Intine, made up of cellulose & lignin
 (b) Thin discontinuous intine
 (c) Both A & B
 (d) None of these

Topic	Pre-Fertilization: Structure and Events
4	

26. Papaver show
 (i) Multicarpellary

- (ii) Apocarpous
 (iii) Syncarpous
 (iv) Monocarpellary
 (a) i, ii (b) i, iii
 (c) iv, ii (d) iv, iii

27. Given diagram is of –

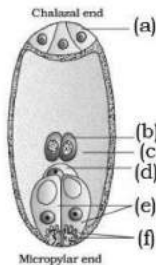


- (a) Multicarpellary apocarpous gynoecium of michelia
 (b) Multicarpellary syncarpous gynoecium of michelia
 (c) Multicarpellary syncarpous gynoecium of papaver
 (d) Multicarpellary apocarpous gynoecium of papaver
28. Which of following serves as a landing platform for pollen grain?
 (a) Stigma (b) Style
 (c) Anther (d) Filament
29. Choose correct statement:
 (a) Inside the ovary is the ovarian cavity, also known as lodicule
 (b) Megasporangia is commonly called ovules
 (c) The placenta is located outside ovarian cavity
 (d) A & C both
30. Choose incorrect statement –
 (a) The number of ovules in an ovary is one in paddy
 (b) The number of ovules in an ovary is many in papaya
 (c) The number of ovules in an ovary is one in orchid

- (d) Wheat mango consist of one ovule
31. Ovule is attached to placenta by –
 (a) Funicle (b) Integument
 (c) Hilum (d) Nucellus
32. Hilum represents the junction between
 (a) Ovule & ovary
 (b) Ovule & funicle
 (c) Ovule & integument
 (d) None of these
33. Chalaza end represent –
 (a) Basal part of ovule
 (b) Apical part of ovule
 (c) Basal part of ovary
 (d) Apical part of ovary
34. Female gametophyte of angiosperm represented by –
 (a) Nucellus (b) Embryosac
 (c) Integument (d) Both A & B
35. An ovule generally has _____ embryo sac formed from a megaspore through _____ division
 (a) Single, equational
 (b) Single, reductional
 (c) Four, meiotic
 (d) Four, mitotic
36. Megasporogenesis is not related to –
 (a) Formation of megaspore from megaspore mother cell
 (b) MMC undergoes meiotic division for megaspore
 (c) Formation of microspore
 (d) Both A & C
37. Ovules generally differentiate a single megaspore mother cell in –
 (a) Chalazal end (b) Micropylar region
 (c) Both A & B (d) Integument
38. In a majority of flowering plants
 (a) One of the megaspore is functional while other three degenerate
 (b) All four megaspore can develop into female gametophyte in almost all angiosperm
- (c) Three megaspore is functional while other one degenerated
 (d) Both A & B
39. Monosporic embryo development involve –
 (a) One functional megaspore
 (b) One haploid cell formed in egg apparatus
 (c) Four functional megaspore
 (d) None of these
40. Choose correct statement –
 (a) The nucleus of the functional megaspore divides mitotically to form two nuclei which move to the opposite poles, forming the 2-nucleate embryo sac
 (b) Two more sequential mitotic nuclear division in 2-nucleate embryo sac result in formation of 4-nucleate
 (c) Mitotic division in embryo sac formation upto 8-celled is strictly free nuclear
 (d) All of these
41. How many of eight nuclei of typical embryosac is surrounded by cell wall
 (a) 2 (b) 4
 (c) 6 (d) 7
42. Central cell of typical embryosac is situated –
 (a) Below egg apparatus
 (b) Above egg apparatus
 (c) At chalazal end
 (d) None of these
43. Choose the correct about egg apparatus of typical embryosac
 (a) Situated at micropylar end
 (b) Consist of three cells
 (c) Both A & B
 (d) Consist of all cells having special cellular thickening at micropylar tip
44. Typical embryo-sac of angiosperm at maturity is –
 (a) 8 celled, 8 nucleate
 (b) 7 celled, 8 nucleate

- c) 8 celled, 7 nucleate
d) 7 celled, 7 nucleate

45.



	a	b	c	d	e	f
A	Antipodal	Polar nuclei	Central cell	Egg	Synergid	Filiform apparatus
B	Antipodal	Polar nuclei	Embryo sac	Egg	Synergid	Filiform apparatus
C	Antipodal	Polar nuclei	Egg	Embryo sac	Filiform apparatus	Synergid
D	Antipodal	Central cell	Polar nuclei	Egg	Filiform apparatus	Synergid

Topic
5

Pollination

46. Pollination is-
(a) transfer of motile pollen to stigma
(b) transfer of non-motile anther to stigma
(c) transfer of motile anther to stigma
(d) transfer of non-motile pollen to stigma
47. Transfer of pollen from anther to stigma of same flower is called-
(a) Autogamy (b) Geitonogamy
(c) Xenogamy (d) None of these
48. Read the given statements-
(i) Autogamy cannot occur in open flower.
(ii) Geitonogamy cannot occur in closed flower.
Choose the appropriate answer-
(a) (i) is correct but (ii) is wrong

- (b) (i) is wrong but (ii) is correct
(c) (i) and (ii) are both correct
(d) (i) and (ii) are both wrong

49. Complete autogamy is rare in-

- (a) Closed flower
(b) Open flower
(c) Both open and closed flower
(d) Neither open nor closed flower

50. Flowers that do not open at all are called

- (a) Chasmogamous (b) Polygamous
(c) Cleistogamous (d) Xenogamous

51. Oxalis produce-

- (a) Cleistogamous flowers
(b) Chasmogamous flowers
(c) Both (a) and (b)
(d) Can't say

52. How many of the given characters are necessarily present in cleistogamous flower.

- (i) Anther and stigma lie close to each other.
(ii) There is synchrony in pollen release and stigma receptivity.
(iii) Lengths of anther and stigma are very different.
(iv) Flower is necessarily dioecious.
(v) Assured seed-set even without pollinators.
(a) 1 (b) 2
(c) 3 (d) 4

53. Geitonogamy is-

- (a) Functionally self-pollination and genetically cross-pollination
(b) Genetically self-pollination and functionally cross-pollination
(c) Cross-pollination both genetically and functionally
(d) Self-pollination both genetically and functionally

54. Xenogamy is-

- (a) Functionally self-pollination and genetically cross-pollination
(b) Genetically self-pollination and functionally cross-pollination

- (c) Cross-pollination both genetically and functionally
 (d) Self-pollination both genetically and functionally

55. Autogamy is-

- (a) Functionally self-pollination and genetically cross-pollination
 (b) Genetically self-pollination and functionally cross-pollination
 (c) Cross-pollination both genetically and functionally
 (d) Self-pollination both genetically and functionally

56. Genetically different type of pollen is brought to stigma by-

- (a) Autogamy only
 (b) Geitonogamy only
 (c) Xenogamy only
 (d) More than one options

57. A. Pollination by abiotic agents is a chance factor.

B. Pollen is produced in enormous amount as compared to number of ovules.

Choose the best answer.

- (a) A and B are correct and B is the reason for A
 (b) A and B are correct and A is the reason for B
 (c) A is incorrect and B is correct
 (d) B is incorrect and A is correct

58. Which is more common abiotic agent for pollination-

- (a) Wind (b) Insect
 (c) Water (d) Animal

59. The pollen grains in wind pollinated plants should be-

- (a) Heavy and sticky
 (b) Heavy and non-sticky
 (c) Light and sticky
 (d) Light and non-sticky

60. Wind pollinated flowers often have ____ in each ovary and flowers are after ____.

	(i)	(ii)
(a)	Single	Single
(b)	Multiple	Single
(c)	Single	packed in inflorescence
(d)	Multiple	packed in inflorescence

61. The tassels in corn cob are-

- (a) Filaments of anthers
 (b) Stigma and style
 (c) Reduced leaf
 (d) Stalk of ovule

62. Match the columns.

Column-I		Column-II	
(i)	Wind pollination	(a)	Maize
(ii)	Water pollination	(b)	Hydrilla
(iii)	Biotic pollination	(c)	Monocots
(iv)	Freshwater pollination	(d)	Amorphophallus

- (a) (i)-d, (ii)-b, (iii)-d, (iv)-c
 (b) (i)-c, (ii)-d, (iii)-a, (iv)-b
 (c) (i)-a, (ii)-c, (iii)-d, (iv)-b
 (d) (i)-b, (ii)-a, (iii)-c, (iv)-d

63. (a) Distribution of some bryophytes & pteridophytes is limited. (r) Transport of male gamete in bryophytes & pteridophyte is dependent on water. Choose the correct options.

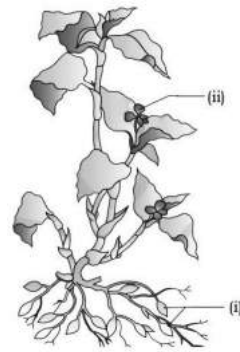
- (a) a and r are correct but r is correct explanation for a
 (b) a and r are correct but r is not correct explanation for a
 (c) Both a and r are incorrect
 (d) A is correct but r is incorrect

64. Aquatic plants pollinated by water are given, except-

- (a) Zostera
 (b) Hydrilla
 (c) Water hyacinth
 (d) More than one option

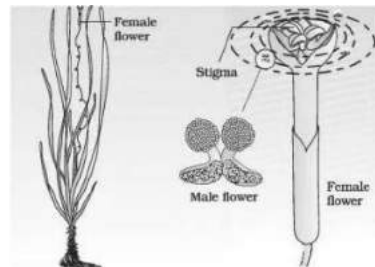
65. Pollination in water lily occurs by-
 (a) Water (b) Wind
 (c) Insects (d) Both B and C
66. Choose the correct statements for pollination in sea grasses-
 (i) Female flower reach surface of water.
 (ii) Female flower remain submerged.
 (iii) Pollen released on water surface.
 (iv) Pollen release inside water.
 (v) Pollen grains are carried passively by water.
 (vi) Pollen grains are carried actively in water.
 (vii) Most of the pollen reach stigma.
 (viii) Some of the pollen reach stigma.
 (a) (i), (iii), (v), (vii)
 (b) (ii), (iv), (vi), (vii)
 (c) (ii), (iv), (v), (vii)
 (d) (ii), (iv), (v), (viii)
67. Choose correct statements for pollination in vallisneria-
 (i) Female flower reach surface of water.
 (ii) Female flower remain submerged.
 (iii) Pollen released on water surface.
 (iv) Pollen release inside water.
 (v) Pollen grains are carried passively by water.
 (vi) Pollen grains are carried actively in water.
 (vii) Most of the pollen reach stigma.
 (viii) Some of the pollen reach stigma.
 (a) (i), (iii), (v), (vii)
 (b) (ii), (iv), (vi), (vii)
 (c) (i), (iii), (v), (viii)
 (d) (ii), (iv) (v), (viii)
68. Requirement for pollen of water pollinated plants are-
 (i) Light pollen
 (ii) Pollen with mucilaginous cover
 (iii) Non-sticky pollen
 (iv) Long ribbon-like pollen
 (a) (i) and (iii) (b) (iii) and (iv)
 (c) (i) and (ii) (d) (ii) and (iv)
69. Majority of angiosperms use ____ for pollination-
 (a) Wind (b) Water
 (c) Animals (d) Both A and B

70. Identify the given labels-



	(i)	(ii)
a)	Chasmogamous, autogamy	Cleistogamous, al-logamy
b)	Chasmogamous, al-logamy	Cleistogamous, au-togamy
c)	Cleistogamous, au-togamy	Chasmogamous, al-logamy
d)	Cleistogamous, al-logamy	Chasmogamous, autogamy

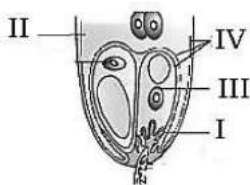
71. The figure shows



- (a) Wind pollination in freshwater Vallisneria
 (b) Water pollination in marine Hydrilla
 (c) Water pollination in marine Losteria
 (d) Water pollination in freshwater Vallineria
72. Dominant biotic pollinating agents are-
 (a) Bees (b) Birds
 (c) Butterflies (d) Ants
73. How many of the following may act as pollinators-? Bees, butterflies, wasps, beetles, leopard, bats, pigeon

- (a) 5 (b) 4
(c) 3 (d) 2
- 74.** Insect-pollinated flowers are-
(a) Large, colourful, rich in nectar
(b) Large, colourless, rich in nectar
(c) Small, clustered, fragrant, sticky
(d) More than one option is correct
- 75.** Floral rewards are-
(a) Nectar (b) Pollen grains
(c) Both B and A (d) None of these
- 76.** Floral reward in *Amorophallus* is-
(a) Nectar
(b) Safe place to lay-eggs
(c) Colourful petals
(d) Fragrance to attract insects
- 77.** Which of the statements is true about
(a) *Ponuba* moth and (b) *Yucca* plant?
(a) (a) is dependent on (b) for life cycle but the opposite is not true
(b) (b) is dependent on a for life cycle but the opposite is not true
(c) Both (a) and (b) are interdependent on each other for their life cycle
(d) Both (a) and (b) are independent of each other for life cycle
- 78.** Outbreeding devices are used to prevent-
(a) Self-fertilization
(b) Cross-pollination
(c) Both self and cross pollination
(d) Xenogamy
- 79.** Inbreeding depression is a result of-
(a) Self-fertilization followed by crossfertilization
(b) Cross-fertilization followed by selffertilization
(c) Continued cross-fertilization
(d) Continued self-fertilization
- 80.** Self-pollination can be prevented by separation of anther and stigma in-
(a) time (maturity) (b) place (position)
(c) none of these (d) both of these
- 81.** Self-incompatibility is not-
(a) Genetic mechanism
(b) Positional separation of anther and stigma
(c) Prevention for geitonogamy
(d) More than one option
- 82.** Production of unisexual flowers on a plant assures prevention of-
(a) Autogamy only
(b) Autogamy and geitonogamy
(c) Geitonogamy only
(d) Autogamy and Xenogamy
- 83.** Monoecious plants prevents-
(a) both autogamy and geitonogamy
(b) only autogamy but not geitonogamy
(c) both autogamy and xenogamy
(d) only geitonogamy and xenogamy
- 84.** Dioecious plants assures-
(a) no autogamy
(b) no autogamy and geitonogamy
(c) no autogamy and xenogamy
(d) no geitonogamy and xenogamy
- 85.** If a wrong pollen (from other species or self-incompatible) lands on stigma-
(a) Pollen germinates but pollen tube cannot grow in style
(b) Pollen germinates, grows in style but cannot enter ovary
(c) Does not germinate at all
(d) Both A and C
- 86.** When pollen grain germinates and produce pollen tubes
(a) Content of pollen grain is distributed uniformly
(b) Content of pollen grain move into pollen tube
(c) Content of pollen grain is distributed non-uniform, more in pollen grain
(d) Content of pollen grain is distributed non-uniformly, more in pollen tube
- 87.** Filiform apparatus is present at-
(a) Micropylar part of synergid

- (b) Chalazal part of synergid
(c) Micropylar part of antipodal
(d) Chalazal part of antipodal
88. Emasculation is done in-
(a) Male parent
(b) Female parent
(c) Both male and female parent
(d) Depends on the project
89. The emasculated flowers are bagged to-
(a) Protect flower from strong sunlight
(b) Protect flower from rain
(c) Protect flower from unwanted pollen
(d) Protect flower from insects
90. If female parent produces unisexual flowers, there is-
(a) no need of emasculation & bagging
(b) need of emasculation & bagging
(c) no need of emasculation but bagging is needed
(d) no need of bagging but emasculation is needed
91. Identify the filiform apparatus in given figure-



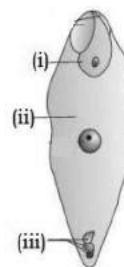
- (a) I (b) II
(c) III (d) IV

Topic Double Fertilization

6

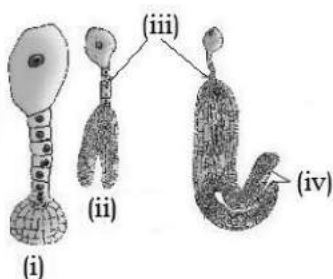
92. Pollen tube release male gametes into-
(a) Cytoplasm of Egg cell
(b) Nucleus of Egg cell
(c) Cytoplasm of Synergids
(d) Cytoplasm of Antipodals

93. Which of the following is incorrect about double fertilization?
(a) One male gamete fuses with nucleus of egg cell
(b) Syngamy results into dyad of cells
(c) Second male gamete move toward polar nuclei
(d) Triple fusion results into PEN
94. Triple fusion is-
(a) Fusion of third male gamete with polar nuclei
(b) Fusion of three haploid cells
(c) Fusion of second male gamete with egg cell
(d) Fusion of three haploid nuclei
95. Which of these is correct?
(a) Syngamy = Triple fusion + Double fertilization
(b) Double fertilization = Syngamy + Triple fusion
(c) Triple fusion = Double fertilization – Syngamy
(d) More than one option is correct
96. Central cell after double fertilization becomes-
(a) Zygote (b) PEN
(c) PEC (d) Embryo
97. Identify the correct labels.



	(i)	(ii)	(iii)
(a)	Zygote	PEN	Degenerating antipodals
(b)	Zygote	PEC	Degenerating antipodals
(c)	Zygote	PEN	Degenerating synergids
(d)	Zygote	PEC	Dengenerating synergids

98. Identify the correct labels.



	(i)	(ii)	(iii)	(iv)
A	Globular embryo	Heart-shaped embryo	Suspensor	Cotyledon
B	Heart-shaped embryo	Globular embryo	Cotyledon	Suspensor
C	Globular embryo	Heart-shaped embryo	Cotyledon	Suspensor
D	Heart-Shaped embryo	Globular embryo	Suspensor	Cotyledon

99. The figure shows stages in-



- (a) Embryo development in dicot
- (b) Embryo development in monocot
- (c) Embryo development in gymnosperm
- (d) Both A and B

Topic 7	Post Fertilization : Structure and Events
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100. Post fertilization includes how many of the following events-
- (i) endosperm development
 - (ii) zygote formation

(iii) embryo development

(iv) seed formation

(v) fruit formation

- (a) 5
- (b) 4
- (c) 3
- (d) 2

101. Select correct statement-

- (a) Endosperm development proceeds embryonic development
- (b) Endosperm development precedes embryo development
- (c) Embryo development precedes endosperm development
- (d) More than one option is correct

102. Endosperm tissue is-

- (a) Haploid
- (b) Diploid
- (c) Triploid
- (d) Tetraploid

103. In free-nuclear endosperm-

- (a) PEN undergoes successive nuclear divisions
- (b) PEC undergoes successive cellular divisions
- (c) PEN undergoes successive cellular divisions
- (d) More than one option is correct

104. Cells of endosperm tissue are filled with-

- (a) reserve food materials for plant cells
- (b) reserve food material for embryo
- (c) reserve food material for developing zygote
- (d) more than one option is correct

105. Coconut water from tender coconut is ____ and white kernel is ____.

	(i)	(ii)
(a)	Cellular endosperm	Free-nuclear endosperm
(b)	Free nuclear endosperm	Cytoplasmic endosperm
(c)	Free-nuclear endosperm	Cellular endosperm
(d)	Cytoplasmic endosperm	Cellular endosperm

106. Endosperm is completely consumed by developing embryo before seed maturation in-

- (a) Groundnut
- (b) Castor
- (c) Coconut
- (d) All of these

107. Endosperm persists in mature seeds in-

- (a) Castor
- (b) Pea
- (c) Beans
- (d) More than one option is correct

Topic**Embryo****8****108.** Embryo develops at

- (a) micropylar end
- (b) chalazal end
- (c) either micropylar or chalazal end
- (d) neither microplar nor chalazal end

109. Choose the correct order of embryo development in dicots-

- (i) Zygote
 - (ii) Heart-shaped embryo
 - (iii) Mature embryo
 - (iv) Proembryo
 - (v) Globular embryo
- (a) i-iv-ii-v-ii (b) i-iv-ii-v-iii
(c) i-iv-iii-ii-v (d) ii-iv-v-ii-iii

110. How many of the given parts are present in dicot embryo-Embryonal axis, Cotyledons, Scutellum, Hypocotyl, Root cap

- (a) 5 (b) 4
(c) 3 (d) 2

111. How many of the given parts are present in monocot embryo-Cotyledon, scutellum, Coleoptile, Radicle, Root cap

- (a) 5 (b) 4
(c) 3 (d) 2

112. Hypocotyl terminates in-

- (a) Plumule
- (b) Radicle
- (c) Root tip
- (d) More than one option is correct

113. (i) In dicot embryo, root tip is covered by root cap.

(ii) In dicot embryo, scutellum is situated towards one side of embryonal axis.

(iii) Cylindrical portion below the level of

cotyledons is hypocotyl in dicots embryo.

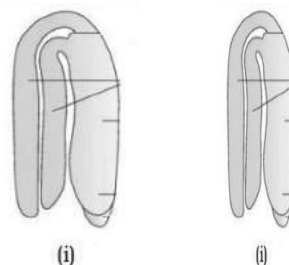
(iv) In dicot embryo, epicotyl terminates with stem tip.

How many of the above statements is incorrect?

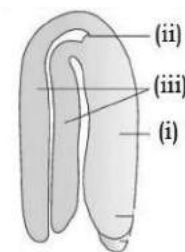
- (a) Zero (b) One
(c) Two (d) Three

114. In grass family, the scutellum is-

- (a) Cotyledon (b) Root tip
(c) Epiblast (d) Shot tip

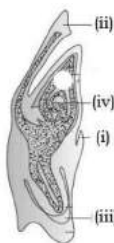
115. Identify the given figures

- (a) (i) is embryo of grass
(b) (ii) is embryo of dicots
(c) (ii) is embryo of monocot
(d) More than one option is correct

116. Identify the correct labels-

(i)	(ii)	(iii)	
(a)	Cotyledon	Plumule	Hypocotyl
(b)	Radicle	Cotyledon	Plumule
(c)	Hypocotyl	Plumule	Cotyledon
(d)	Cotyledon	Plumule	Epicotyl

117. Identify the correct labels-



	(i)	(ii)	(iii)	(iv)
A	Epiblast	Scutellum	Coleoptile	Root cap
B	Scutellum	Epiblast	Shoot apex	Radicle
C	Epiblast	Scutellum	Root cap	Shoot apex
D	Scutellum	Epiblast	Radicle	Coleoptile

- 118.** Coleoptile is-
 (a) hollow structure
 (b) solid structure
 (c) sometimes hollow and sometimes solid structure
 (d) semi-solid
- 119.** Coleorhiza is-
 (a) hollow structure
 (b) foliar structure
 (c) undifferentiated sheath
 (d) more than one option is correct

Topic	Seed
9	

- 120.** Read the following statements-
 (i) Seed is final product of sexual reproduction in plant.
 (ii) Seed is fertilized ovule.
 (iii) Seed is formed inside fruit.
 (iv) Seed consists of seed coat(s), cotyledon(s) and embryo axis.
 How many of the statements is incorrect?
 (a) Zero (b) One
 (c) Two (d) Three
- 121.** Non-albuminous seeds-
 (a) have residual endosperm
 (b) retain a part of endosperm
 (c) is found in castor

(d) None of these

- 122.** Groundnut is-
 (a) Albuminous
 (b) Non-albuminous
 (c) Has residual endosperm in mature seed
 (d) More than one option is correct
- 123.** Perisperm is-
 (a) Persistent nucleus
 (b) Found in beet
 (c) Residual endosperm
 (d) More than one option
- 124.** Integument of ovules mature into-
 (a) Ovary wall (b) Pericarp
 (c) Seed coat (d) Perisperm
- 125.** Micropyle is-
 (a) Absent in seed (b) Present inside seed
 (c) Present on surface of seed
 (d) Present on seed coat
- 126.** Micropyle plays role of-
 (a) Stalk for seed (b) Scar of stalk
 (c) Facilitating entry of water into seed
 (d) Facilitating escape of seed metabolites
- 127.** Mature seed has-
 (a) More water content and more metabolism
 (b) Less water content and more metabolism
 (c) Less water content and less metabolism
 (d) More water content and more metabolism
- 128.** The embryo in a mature seed-
 (a) Germinates essentially
 (b) May enter dormancy
 (c) Always enters dormancy first, followed by germination
 (d) Both B and C
- 129.** Choose the correct match regarding the maturing of flower into fruit-
 (a) Wall of ovule – pericarp
 (b) Nucellus – periderm
 (c) Ovary – seed
 (d) None of these

130. Fleshly fruit is-

- (a) Mustard (b) Groundnut
(c) Guava (d) More than one

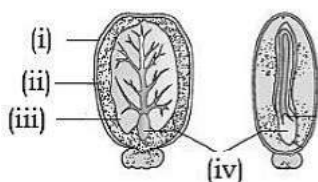
131. In false fruits, select incorrect statement-

- (a) Floral parts other than ovary are involved
(b) Thalamus may contribute to fruit formation
(c) Examples include apple, cashew, groundnut
(d) Fruit does not develop from ovary

132. Which of these is incorrect about parthenocarp-

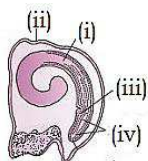
- (a) Plant formed without fertilization
(b) Banana is example
(c) Induced by application of growth hormones
(d) none of these

133. Identify the endosperm in the given figure-



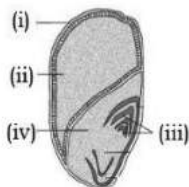
- (a) I (b) II
(c) III (d) IV

134. Identify cotyledon in the given figure of seed



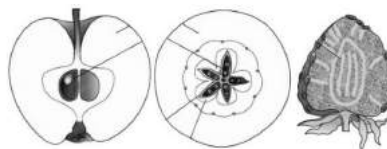
- (a) I (b) II
(c) III (d) IV

135. Identify scutellum in the given figure -



- (a) I (b) II
(c) III (d) IV

136. The given figure shows -



- (a) Eucarp of apple and lithi
(b) Pseudocarp of apple litchi
(c) Eucarp of apple and strawberry
(d) Pseudocarp of apple and strawberry

137. In angiosperm, pollination and fertilization are -

- (a) Both independent of water
(b) Both dependent of water
(c) Only pollination is essentially on water
(d) Only fertilization is dependent on water

138. For storage of seeds -

- (a) Dehydration is important
(b) Dormancy is important
(c) Neither dehydration nor dormancy is needed
(d) Both dehydration and dormancy are crucial

139. The oldest yet viable seed found is -

- (a) Lupinus from arctic tundra
(b) Phoenix from arctic tundra
(c) Lupinus from king herod's palace
(d) Phoenix from king herod's palace

140. Phoenix dactylifera is commonly known as-

- (a) Fig (b) Coconut
(c) Cashew (d) None of these

Topic

10

Apomixis and Polyembryony

141. Apomixis is -

- (a) Fruit without fertilization
(b) Seed without fertilization
(c) Plant without fertilization
(d) More than one option

142. Apomixis is -

- (a) A form of sexual reproduction that mimics asexual reproduction
(b) A form of asexual reproduction that mimics sexual reproduction

