1. True statement regarding stamens is / are
I. In a single flower stamens differ in their in their lengths
II. Stamens in different flowers show different shapes
III. Stamens of different flowers show different attachments
IV. Stamens are always bilobed at their distal ends
2. I \& II
3. II, III \& IV
4. I, II \& III
5. I, II \& IV
6. Number of microsporangia in an immature dithecous stamen is/are
1) 2
2) 4
3) 1
4) 8
3. Monothecous condition is seen in
4. Papaver
5. Hibiscus
6. Annona
7. Michelia
8. In a mature anther of Datura the number of pollen sacs are
1) 4 , at each corner of the anther
2 ) 2 , on each side of the central sterile tissue
3. Only one covered by anther wall
4. Only one due to dissolution of sterile tissue
5. Endothecium is
1) Inner wall of microspore
2) Middle layer of pericarp
3) Inner tissue of ovule
4) Fibrous layer of anther wall
6. Assertion A: In fully mature anther lobe tapetal cells are not seen.

Reason R: Tapetal cells serve as food material for growing spores.

1) Both $A$ and $R$ are true and $R$ is the correct explanation of $A$.
2) Both $A$ and $R$ are true but $R$ is not the correct explanation of $A$.
3) $A$ is true, $R$ is false
4) A is false, R is true
7. Area at which dehiscence takes place is
1) Connective
2) Between Theca
3) Stomium
4) At the apex
8. Endothecium is present between
1) Middle layers and tapetum
2) Tapetum and sporogenous tissue
3) Middle layers and epidermis
4) Outside epidermis
9. First cell of the gametophyte is
1) Gamete
2) Vegetative cell
3) Generative cell
4) Spore
10. The chemical present in exine is
1) Pectin
2) Cellulose
3) Sporopollenin
4) Pectin \& Cellulose
11. Functions of tapetum is
1) Only protection
2) Protection and nutrition
3) Dehiscence
4) Photosynthesis
12. True statement regarding tapetum is
A. It is the only the layer that completely covers the sporogenous tissue
B. Cells of tapetum show more than one nucleus
C. In a mature anther lobe tapetum cannot be seen.
D. It is the inner most layer of the anther wall
13. A \& B
14. B \& C
15. B, C \& D
16. A, B, C \& D
17. False statement regarding wall of microspore
A. It is covered by three layers
B. It can be digested by cellulose and pectinase enzymes
C. It is haploid
D. Microspores are of different shapes and sizes
18. A \& B
19. B \& C
20. C \& D
21. D \& A
22. Stage at which pollen grain released from pollen sacs in angiosperms generally
1) Single celled
2) Three celled
3) Four celled
4) Two celled
15. Total number of mitotic divisions in pollen grain is/are
1) 1
2) 2
3) 3
4) 4
16. In a mature pollen grain
17. One bigger and one smaller cells are present
18. Two large nuclei are present
19. Four cells are present as tetrad
20. Single cell with large vacuole and one nucleus is present
21. Characters of vegetative and generative cells of male spore are
22. Vegetative cell shows large round nucleus
23. Small generative cell floats in the cytoplasm of vegetative cell
24. Nucleus of generative cell is spindle shaped
25. Generative cell feeds on vegetative cell.
26. Allergic pollen grains are seen in
27. Hibiscus
28. Carrot grass
29. Rice
30. Wheat
31. Pollen germination on stigma depends on
32. Temperature
33. Humidity
34. Compatible stigma
35. All the above
36. Megasporangium is
37. Nucellus
38. Carpel
39. Ovule
40. Pistil
41. Ovules without integument is seen in
42. Helianthus
43. Loranthus
44. Datura
45. Monocots
46. Chalaza is
47. Distal part of ovule
48. Region below funicle
49. Basal part
50. Innermost portion of ovule
51. Abundant food material is seen in
A. Tapetum
B. Vegetative cell of pollen
C. Nucellus of ovule
D. Central cell
E. Secondary polar nucleus
52. A, B, C
53. A, B, D, E
54. A, C, E
55. A, B, C, D, E
56. Female gametophyte is
57. Megaspore mother cell
58. Functional mega spore
59. Embryo sac
60. Egg apparatus
61. Ovule without curvature is seen
62. Bean
63. Polygonum
64. Sunflower
65. Tridax
66. Reduction division takes place in
67. Megaspore 2.Megaspore mother cell 3. Functional megaspore 4. Embryo sac
68. Micropyle very near to funicle is seen in the ovule type of
69. Orthotropous
70. Campylotropous
71. Anatropous
72. Campylotropous or Anatropous
73. Ploidy of MMC and nucellus respectively is
74. Haploid, Diploid 2. Diploid, Haploid 3. Haploid, Haploid 4. Diploid, Diploid
75. Largest cell of the embryo sac is
76. Egg cell
77. Central cell
78. Antipodal cell
79. MMC
80. A typical angiospermic embryo sac shows
1) 8 celled and 7 nucleate
2) 8 celled and 8 nucleate
3) 7 celled and 7 nucleate
4) 8 celled and 7 nucleate
31. Position of the egg apparatus is
32. Micropylar side
33. Chalazal side
34. Lateral side
35. Either micropylar or chalazal side
36. Number of mitotic divisions takes place in forming an embryo sac is/are
)
1) One
2) Three
3) Two
4) Four
33. True statement regarding embryo sac is
34. Nuclear divisions are free nuclear
35. Cell wall formation takes place after 7 nucleate stage
36. Only one spore out of four develops into embryo sac
37. It takes food from endosperm
38. Number of cells that do not participate in reproduction
1) One
2. Four
3. Five
4. Seven
5. Function of the synergids is
6. Nutrition to the embryo
7. Protection of egg cell
8. Guiding pollen tube
9. Guiding male gametes
10. Assertion (A): Cells of nucellus have abundant reserve food material () Reason(R): It has to serve as food material for the growing embryo sac
1) Both A \& R are true and R is the correct explanation of A.
2) Both $A \& R$ are true but $R$ is not the correct explanation of $A$.
3) A is true, R is false
4) A is false, R is true.
37. Double fertilization is
38. Union of two gametes with the egg
39. Union of one gamete with two polar nuclei
40. Union of two embryo sacs with two gametes
41. Union of one male and female gamete and union of other male gamete and secondary nucleus
42. Assertion (A): In Angiosperms endosperm is always triploid

Reason(R): Endosperm results from double fertilization

1) Both A \& R are true and R is the correct explanation of A.
2) Both $A \& R$ are true but $R$ is not the correct explanation of $A$.
3) A is true, $R$ is false
4) A is false, R is true.
39. To produce 100 gametes number of microspore mother cells required are(
1) 25
2) 13
3) 12
4) 12.5
40. Monosporic type of embryo sac is
1) Embryo sac developed from single spore
2) Only one spore develops into embryo sac
3) Embryo sac developing into one sporophyte
4) Embryo sac fertilized by one microspore

## Embryology-I

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3 | 4 | 2 | 2 | 4 | 1 | 3 | 3 | 4 | 3 | 2 | 4 | 1 | 4 | 2 | 1 | 2 | 2 | 4 | 3 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 2 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 4 | 1 | 2 | 1 | 3 | 3 | 1 | 4 | 3 | 2 | 2 |

