

B.Sc. BOTANY
SECOND SEMESTER (REPEAT)
ANATOMY, PALYNOLOGY AND EMBRYOLOGY
BSB-201

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1×20=20

1. Anamolous secondary growth is seen in:
a. *Dracaena* b. *Amaranthus*
c. *Mirabilis* d. None
2. Pollen grains are also known as:
a. Microspore b. Megaspore
c. Megagamete d. Microgamete
3. Double fertilization is seen in:
a. Gymnosperm b. Angiosperm
c. Bryophytes d. All of these
4. Which method is suitable for combining the desirable characters of two plants together in a single plant?
a. Cutting b. Layering
c. Grafting d. All of these
5. Best method of artificial propagation used in Sugarcane and cactus:
a. Micro propagation b. Grafting
c. Cutting d. Layering
6. Pericarp is differentiated into:
a. Epicarp b. Mesocarp
c. Endocarp d. All of the above
7. In the distal and proximal faces (above and below the equatorial plane) look alike:
a. Isopolar grains b. Heteropolar grains
c. Both a and b d. Asymmetric
8. How many microspores are produced by a microspore mother cell?
a. 1 b. 2
c. 4 d. 3
9. Study of pollen grain is called:
a. Phycology b. Bryology
c. Palynology d. Embryology
10. It is an opening or thinning of the exine:
a. Intine b. Pore
c. Exine d. Aperture

11. Root hairs are:
 a. Unicellular
 b. Multicellular
 c. Both a and b
 d. None
12. Exine of pollen grain is:
 a. Fine
 b. Rough
 c. Smooth
 d. None
13. Male reproductive organ of a flower:
 a. Carpel
 b. Gynoecium
 c. Corolla
 d. Androecium
14. The imaginary line between the proximal and distal pole of the grain which passes through the centre of the spore to the centre of the tetrad is called:
 a. Polar Axis (PA)
 b. Equatorial Axis (EQ)
 c. Both a and b
 d. None
15. In grafting, the rooted plant called stock and stem cutting from the donor plant is called:
 a. Transplant
 b. Scion
 c. Bud graft
 d. Root stock
16. Embryo is:
 a. $2n$
 b. $3n$
 c. n
 d. None
17. The orientation of pollen is called as:
 a. Polarity
 b. Tetrad
 c. Symmetry
 d. None of the above
18. Palisade tissue is seen in:
 a. Root
 b. Leaf
 c. Stem
 d. Bud
19. Product of triple fusion is:
 a. Endosperm
 b. Zygote
 c. Embryo
 d. None
20. Helobial endosperm is:
 a. Intermediate between the nuclear and cellular
 b. Cellular
 c. Nuclear
 d. All of the above

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. What is Palynology? Discuss the NPC classification of pollen morphology. | 2+8=10 |
| 2. Write differences between sporogenesis and gametogenesis. | 10 |
| 3. Describe briefly the process of double fertilization. | 10 |
| 4. Define microsporogenesis. Describe with suitable diagram. | 2+5+3=10 |
| 5. What is budding? Write about any three types of layering. | 2+8=10 |
| 6. Write morphological and anatomical differences between monocot and dicot stem. | 10 |
| 7. Briefly explain the development of fruit and its different parts. Add suitable diagrams. | 2+8=10 |
| 8. Write short notes on:
a) Triple fusion
b) Dicot embryo | 8+2=10 |

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