



K19U 0082

Reg. No. :

Name :

VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination,
April 2019

(2014 Admission Onwards)

CORE COURSE IN BOTANY/PLANT SCIENCE

6B10BOT/PLS : Plant Tissue Culture, Embryology and Palynology

Time : 3 Hours

Max. Marks : 40

SECTION - A

Answer all.

1. Innermost layer of anther is
 - a) Tapetum
 - b) Endothecium
 - c) Middle layer
 - d) Epidermis
2. An unorganized mass of cells produced in tissue culture is known as
 - a) Callus
 - b) Synthetic seed
 - c) Somatic hybrid
 - d) Explant
3. The name perisperm is given to
 - a) Remnant of the nucellus
 - b) Peripheral nucellus
 - c) Disintegrated antipodals
 - d) Disintegrated synergids
4. Part of the plant used for culturing is called
 - a) Scion
 - b) Explant
 - c) Stock
 - d) Callus (4×1=4)

SECTION - B

Answer any eight.

5. Explain the sterilants in tissue culture.
6. Give an account on the structure and function of middle layer.
7. Differentiate between the endosperm of angiosperms and gymnosperms.

P.T.O.

K19U 0082



8. Briefly explain the role of tissue culture in the conservation of biodiversity.
9. Give an account on palynology and its significance.
10. Explain apospory.
11. Write notes on endothecium.
12. Differentiate the somatic embryos from the zygotic embryos.
13. Explain the entry of pollen tube into the ovule.
14. What are cybrids ? Explain.
15. Give an account on polyembryony and its significance.
16. What is a ruminant endosperm ? (8×2=16)

SECTION – C

Answer any four.

17. Define callus. Give the applications of callus culture.
18. What are artificial seeds ? How are they produced ?
19. Illustrate the structure of mature embryo sac.
20. Briefly give an account on the structure of pollen.
21. Explain the method of protoplast isolation.
22. What is meant by double fertilization add a note on its significance ? (4×3=12)

SECTION – D

Answer any one.

23. With the help of diagrams explain the structure and development of different types of endosperms.
 24. Write an account on tissue culture media. Add a note on sterilization and inoculation of the explants.
 25. Describe the procedure for anther and pollen culture. What are its applications ? (1×8=8)
-