

Reg. No. :

Name :

VI Semester B.Sc. Degree (CBCSS – Reg/Supple./Improv.)

Examination, April 2021

(2014 – 2018 Admissions)

CORE COURSE IN BOTANY/PLANT SCIENCE

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

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer all :

- Which one of the following is a stress hormone ?
a) IAA b) IBA c) NAA d) ABA
- The term Palynology refers to
a) The study of embryo b) Study of pollen grains
c) Study of fossil d) None of these
- The outer most layer of pollen grain is
a) Exine b) Intine c) Epidermis d) Tapetum
- The first material used for initiating plant tissue culture is called
a) Callus b) Meristem c) Explants d) Embryo (4×1=4)

SECTION – B

Answer any eight :

- Define Somaclonal variation and write its significance.
- How will you prepare Hybrid plants ?



7. Explain the principle of plant tissue culture.
8. Write steps involved in plant tissue culture.
9. Discuss the role of pollen grains in taxonomy.
10. Explain Ovary culture.
11. Define Parthenocarpy. Where it is seen?
12. Describe the role of tapetum in microsporogenesis.
13. What is double fertilization? Who discovered it?
14. What is suspension culture?
15. Briefly describe the steps of meristem culture.
16. Draw a labelled diagram of monocot embryo.
17. How will you sterilize the explants for inoculation?
18. Explain the development of Male gametophyte.
19. What is acetolysis of pollen? Write its use.
20. What are the different types of endosperms seen in angiosperm? **(8×2=16)**

SECTION – C

Answer **any four** :

21. Explain the significances of biodiversity conservation.
22. Write a note on in vitro production of disease free plants.
23. What is agar-agar? Explain its role and significance.



24. Explain the importance of sterilization in tissue culture.
25. Give an account on embryo sac of angiosperm.
26. Describe the synthetic seeds production and their significance.
27. Write applications of plant tissue culture.
28. Explain the different types of embryos seen in angiosperms. **(4×3=12)**

SECTION – D

Answer **any one** :

29. Write an essay about protoplast fusion, culture and its significance.
30. Describe polygonum type embryo sac development.
31. How will you prepare MS medium for tissue culture work? **(1×8=8)**