K20U 0087

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination, April 2020
(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. Anther culture is used for the production of
   a) Haploids b) Diploids c) Triploids d) Tetraploids

2. Study of pollen grains in honey is called
   a) Entomopalynology b) Melittopalynology
   c) Paleaopalynology d) Aeropalynology

3. After fertilization, the seed coat develops from
   a) Chalaza b) Ovule c) Embryosac d) Integuments

4. A medium which is composed of chemically defined compounds are called
   a) Natural media b) Synthetic media
   c) Artificial media d) None of these **(4×1=4)**

SECTION – B

Answer **any eight**.

5. What is scutellum ? Give its function.

6. Pollen grains are most suitable for haploid production. Why ?

7. What is the importance of palynology in taxonomy ?

P.T.O.

8. Write notes on cell suspension culture.
9. Give an account on somaclonal variations.
10. Explain parthenocarpy.
11. Describe the structure of ovule.
12. Define totipotency. Explain its significance in plant tissue culture.
13. Differentiate between somatic hybrids and cybrids.
14. What is meant by hardening ?
15. Give an account on pollen allergy.
16. Explain triple fusion and give its significance. **(8×2=16)**

SECTION – C

Answer **any four** :

17. Give an account on the structure and function of tapetum.
18. Explain somatic hybridization and its significance.
19. Describe the preparation of media for anther culture.
20. Explain the post fertilization changes in an angiosperm ovule.
21. Briefly explain the acetolysis of pollen grains.
22. Describe microsporogenesis. **(4×3=12)**

SECTION – D

Answer **any one** :

23. With the aid of diagrams, describe the development of a typical dicot embryo.
24. What are bioreactors ? Explain how secondary metabolites can be produced in bioreactors.
25. Explain M S Medium. How is it prepared ? **(1×8=8)**

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