36621

VI Semester B.Sc. Degree Examination, September/October 2020

BOTANY

Paper 6.1 – Plant Breeding, Biotechnology and Plant Tissue Culture

(CBCS – New)

Time : 3 Hours Max. Marks : 70

Instructions :

1) *Answer all Sections.*

2) *Draw diagrams wherever necessary.*

SECTION – A

I. Answer the following : **(15 × 1 = 15)**

1. What is pure line selection?

2. What is Pollen bank?

3. Define explant.

4. What is grafting?

5. Define DNA Ligase.

6. What is Quarantine method?

7. What are restriction sites?

8. What is bagging?

9. What are polyclonal antibodies?

10. What are cryoproteins?

11. Define dedifferentiation.

12. What are YAC's?

P.T.O.

13. What are intraspecific hybridization?

14. What is stem cell culture?

15. Expand LAF.

SECTION – B

II. Answer **any five** of the following : **(5 × 5 = 25)**

16. Write note on Gene therapy.

17. Mention the applications of tissue culture in agriculture.

18. Describe with neat labelled diagram of PBR^{322}.

19. Mention the principles and objectives of plant breeding.

20. Explain how hybridization technique helps in the production of new varieties.

21. Write a note on DNA fingerprinting technique.

22. Write a note on recurrent selection.

SECTION – C

III. Answer **any three** of the following : **(3 × 10 = 30)**

23. Bt cotton is an example for transgenic plant. Justify.

24. Explain the different types of grafting.

25. Explain any two methods of plant breeding selection.

26. What is haploid culture? Describe anther culture.

27. What is somatic embryogenesis? Explain the process of production of somatic embryos.
