



K21U 0089

Reg. No. :

Name :



VI Semester B.Sc. Degree (CBCSS – Reg./Supple./Improv.)
Examination, April 2021
(2014-2018 Admissions)
Core Course in Botany/Plant Science
6B12BOT/PLS – BIOTECHNOLOGY AND CROP IMPROVEMENT

Time : 3 Hours

Total Marks : 40

SECTION – A (Answer all)

- Agar is obtained from
a) *Gracillaria* b) *Padina* c) *Codium* d) *Spirogyra*
- Bt toxin is a toxin produced by
a) *B. subtilis* b) *B. thuringiensis*
c) *B. cereus* d) *B. megaterium*
- Which are joining enzymes ?
a) Polymerase b) Ligase c) Endonuclease d) Plasmids
- Removal of anther from a flower is called
a) Budding b) Emasculation
c) Hybridization d) Mutation breeding **(4x1=4)**

SECTION – B (Answer any eight)

- Define binary vectors and shuttle vectors.
- What is meant by disease diagnosis ?
- Mention the major plant breeding institutes in India.
- What is Golden rice ?
- What is meant by Patent ?
- Describe drought resistance.

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K21U 0089



11. Define acclimatization.

12. Describe DNA micro array.

13. What is long shelf life ?

14. Define GMOs.

15. What are the mechanisms involved in rRNA technology ?

16. What is Heterosis ?

17. Define plasmids. Mention its types.

18. Describe nanoparticles.

19. What is vaccine and drugs ?

20. What is cDNA library ?

(8×2=16)

SECTION – C (Answer any four)

21. Briefly explain restriction endonuclease.

22. What are the applications of nanotechnology in life sciences ?

23. Describe the role of *Agrobacterium* in plant transformation.

24. Briefly explain the types of selection in plant breeding.

25. Write notes on methods of breeding.

26. Briefly explain the applications of Biotechnology.

27. Describe Gene therapy and DNA finger printing.

28. What are the steps involved in plant introduction ? (4×3=12)

SECTION – D (Answer any one)

29. What is plant breeding ? Explain objectives of plant breeding.

30. Define vectors. Briefly explain types of vectors and their characteristic features.

31. Briefly explain PCR with its requirements and types. (1×8=8)