



K20U 0089

Reg. No. :

Name :

VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination,
April 2020

(2014 Admission Onwards)

CORE COURSE IN BOTANY/PLANT SCIENCE

6B12 BOT/PLS : Biotechnology and Crop Improvement

Time : 3 Hours

Max. Marks : 40

SECTION – A

Choose the correct answer :

- Determination of the order of nucleotides in a DNA molecule.
a) DNA sequencing
b) DNA profiling
c) DNA mapping
d) DNA excision
 - A fluorescent chemical used in the detection of DNA
a) Sodium hypochlorite
b) Ethidium bromide
c) Crystal violet
d) EDTA
 - Genetic glue
a) DNA polymerase
b) Restriction endonuclease
c) DNA ligase
d) Reverse transcriptase
 - A set of genes or cDNAs immobilized on a glass slide and used in transcription studies.
a) Gene library
b) cDNA library
c) Micro array
d) Genomic library
- (1×4=4)**

SECTION – B

Answer **any eight** of the following :

- What is meant by genomic library ?
- What is meant by replica plating ?
- Explain clonal selection.

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8. What is the significance of gene therapy ?
9. Write short notes on grafting.
10. What are the benefits of gene sequencing ?
11. What do you understand by terminator technology ?
12. What is T-DNA ?
13. Explain Quarantine and Phytosanitary certificate.
14. What is meant by blue-white colony selection ?
15. Write about nano systems in nature.
16. What is the source of the enzyme used in the PCR, write about its special feature. **(8×2=16)**

SECTION – C

Answer **any four** of the following :

17. Explain insertional inactivation.
18. Write in detail about DNA manipulative enzymes.
19. What are the applications of the PCR ?
20. Explain the role of nanotechnology in life sciences.
21. What do you know about biosensors ?
22. Explain the role of Agrobacterium in plant transformation. **(4×3=12)**

SECTION – D

Answer **any one** of the following :

23. List out the essential properties of vector. Discuss the different types and their applications in recombinant DNA technology.
24. What are the achievements of biotechnology in the field of medicine ?
25. Discuss the role of biotechnology in crop improvement. **(1×8=8)**