

B. SC. DEGREE (C.B.C.S.S) EXAMINATION, MARCH 2018
(2015 Admission Regular)
SEMESTER VI - CORE (BOTANY)
BO6B12TB - BIOTECHNOLOGY AND BIOINFORMATICS

Time : 3 Hours

Maximum Marks : 60

Part A

I. Answer all questions. Each question carries 1 marks

1. Which property of the plant cells is exploited to culture plant cells?
2. Name the bacteria known as natural genetic engineer of plants
3. What is Biowar?
4. Give two advantages of biological databases.
5. What is CADD?

(5x1=5)

Part B

II. Answer any Five questions. Each question carries 2 marks

6. List out the composition of Murashige and Skoog medium
7. Briefly describe the protocol associated with the production of haploid plants through plant tissue culture
8. What are Restriction endonucleases?
9. What is the role of Adapter and Linker DNA sequences in rDNA technology
10. Short note on gene therapy
11. Describe composite databases. Give an example
12. Briefly explain proteome and proteomics
13. What are the applications of Rasmol?

(5x2=10)

Part C

III. Answer any Five questions. Each question carries 5 marks

14. What is LAF and what is its use in a tissue culture laboratory?
15. Explain the aseptic techniques involved in tissue culture of plants.
16. Why antibiotic resistance gene is used as marker in rDNA technology?
17. Explain the different enzymes involved in gene cloning.
18. Describe Biological warfare. What are its effects?
19. Explain the primary protein sequence databases.
20. What are homologous sequences? What are the different types?
21. Explain molecular phylogeny. Add a note on phylogenetic trees

(5x5=25)

Part D

IV. Answer any Two questions. Each question carries 10 marks

22. Schematically describe organogenesis in plant tissue culture.
23. Explain schematically the strategy in the construction of cDNA library
24. Outline the production of insulin through rDNA technology
25. Write notes on genomics and proteomics.

(2x10=20)