

**17P339**

(Pages: 2)

Name.....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2018**

(Regular/Supplementary/Improvement)

(CUCSS - PG)

**CC15P BO3 C11 - BIOTECHNOLOGY AND BIOINFORMATICS**

(Botany)

(2015 Admission onwards)

Time : Three Hours

Maximum : 36 Weightage

I. Answer *all* questions. Each question carries 1 weightage.

1. Production of triploids in tissue culture.
2. Specialized DNA database.
3. TIGR
4. Viability tests after cell culture.
5. Antisense RNA technology.
6. HTTP and HTML
7. Habituation of tissue culture.
8. Pubmed Central.
9. GNU - Linux naming controversy.
10. Hormonal regulation for callus induction.
11. Tfl polymerase.
12. Linkers and adapters.
13. List any 4 botanical bibliographic web sites.
14. Calliclones and somaclones.

**(14 x 1 = 14 Weightage)**

II. Answer any *seven* questions. Each question carries 2 weightage.

15. Distinguish between PROSITE and PRINTS.
16. Write notes on phytopolymers and biodegradable plastics.
17. Write a short note on the principle and procedure of DNA microarray technology.
18. Compare and contrast callus *vs* suspension culture.
19. Write notes on Open Archive Initiatives approach.
20. Give an account on efforts on germplasm conservation of crop plants.
21. What are secondary data bases of proteins? Write a short note on the types of secondary data bases.
22. Write a short note on PCR and its applications.

23. Give a brief description on Chou-fasman method of protein secondary structure prediction.

24. Elucidate the applications and problems associated with transgenics.

**(7 x 2 = 14 Weightage)**

III. Answer any *two* questions. Each question carries 4 weightage.

25. Write an essay on the methods of multiple sequence alignment with special reference to the tools that you have studied.

26. Give a detailed account on the industrial applications of biotechnology.

27. Write an essay on DNA sequencing and its types. Add a note on next generation sequencing.

28. Give an account on secondary metabolite production in plant tissue culture. Also explain the principles and methods of bioreactors. Describe any one bioreactor.

**(2 x 4 = 8 Weightage)**

\*\*\*\*\*