18P339 (Pages: 2) Name……………………..

Reg. No…………………..

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2019

(Regular/Supplementary/Improvement)

(CUCSS-PG)

CC15P BO3 C11/CC18P BO3 C11 - BIOTECHNOLOGY AND BIOINFORMATICS

(Botany)

(2015 Admission onwards)

Time: Three Hours   Maximum: 36 Weightage

I. Answer *all* questions very briefly:

1. Comment on embryo rescue.

2. Distinguish between caulogenesis and rhizogenesis.

3. Name two micro filters and their use in tissue culture technique.

4. What is gametoclonal variation?

5. Comment on DNA chips.

6. Write a note on inverse PCR

7. What is ARS element?

8. What is Klenow fragment?

9. Comment on the ethics of human cloning.

10. Give an account of shuttle vectors.

11. What is BLOSUM-90?

12. Write a note on Free Software Movement.

13. What is UniGene?

14. Give the relevance of Chemoinformatics.

(14 x 1 = 14 Weightage)

II. Answer any *seven* questions each in not more than 100 words:

15. Explain the basic compositions and the preparation of one liter MS medium.

16. Briefly explain the growth pattern and measurement of cell in suspension culture.

17. Discuss somaclonal variation and its applications in crop improvement.

18. Give an account of RAPD analysis. How it differs from RFLP analysis?

19. Discuss Human Genome Project.

20. What is the relevance of patenting of genes and GMOs? Discuss.

21. Explain western blotting technique.

22. Distinguish between PubMed central and Biomed central.

23. Explain the features and applications of Linux platform.

24. Discuss the concept and implications of e-access.

(7 x 2 = 14 Weightage)

III. Answer any *two* questions each in about 300 words:

25. Discuss the production of secondary metabolites by large scale cultivation of cell using bioreactor.

26. What are transgenic plants? Discuss different transgenic approach for crop improvements.

27. Describe tertiary protein structure prediction and its relevance.

28. Explain sequence databases and searching tools.

(2 x 4 = 8 Weightage)

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