

M Sc DEGREE EXAMINATION - OCTOBER 2015

SEMESTER: 3, SUBJECT : BOTANY

COURSE: P3BOTT09 - RESEARCH METHODOLOGY, BIOPHYSICAL INSTRUMENTATION,
BIostatISTICS AND MICROTecHNIQUE

Time: Three Hour

Max. Marks: 75

I. Answer **any eight** questions briefly; each question carries **2** marks

1. Explain ANOVA
2. Write notes on the different types of catalogues.
3. Explain any 4 outcomes of INSDOC.
4. Mention the significance of impact factor in research journals.
5. What are e- journals?
6. Write notes on degree of freedom.
7. Define double staining?
8. Bring out the significance of NCBI-Pub Med?
9. What is a molal solution?
10. What is the significance of key words.
11. What are vital stains? Give examples.
12. Define Rf values? State its significance

(2 x 8 = 16)

II. Answer **any seven** questions; each question carries **5** marks

13. What are buffers? Explain the use of buffers in biological Systems?
14. Bring out the principles and applications of ELISA.
15. What is electrophoresis? Explain its principle. Add notes on the different types of electrophoresis.
16. Compare correlation and regression analysis.
17. Explain Randomized Block Design?
18. What are the sources of Data Acquisition?
19. Bring out the composition of common fixatives used in microtechnique.
20. How do the preparation for a paper presentation in a seminar differs from writing a research paper for publication?

21. Describe the various test of significances in Biostatistics.

22. Describe the different stages involved in research.

(5 x 7 = 35)

III. Answer **any two** questions; each question carries **12 marks**

23. Give an account of the various Experimental Designs employed in biological experimentation?

OR

24. Write Notes on Electron Microscopy.

25. Briefly explain the principle, components, procedure and applications of Spectro - photometer.

OR

26. Describe the methodology of writing a scientific paper with figures, tables and graphs for publication in an international journal.

(12 x 2 = 24)
