

18. (a) Describe in detail about the structure and functioning of Scanning Electron Microscope.

Or

- (b) Describe the principle and functioning of Fluorescent microscope.
19. (a) What is scatter diagram? How will you represent the different types of correlation in scatter diagrams? What are the merits and demerits of scatter diagram.

Or

- (b) Explain the formula and steps followed to calculate the coefficient of correlation.
20. (a) Write down the importance of acknowledgement and appendices in a thesis.

Or

- (b) How will you write an introduction to a research title?
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Reg. No. :

Code No. : 8187

Sub. Code : C 31 B

M.Sc.(CBCS) DEGREE EXAMINATION,
NOVEMBER 2011.

Third Semester

Botany

RESEARCH METHODOLOGY

(For those who joined in July 2008 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Explain/Define/Comment on/Write notes on the following

1. Acid pH.
2. Paper chromatography.
3. Mobile phase.
4. Svedburg unit.
5. DPX mountant.
6. Ocular micrometer.

7. Cumulative frequency.
8. Null hypothesis.
9. Synopsis.
10. Conclusion.

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Write a short account on affinity chromatography.

Or

- (b) What are the column packing materials used in HPLC?

12. (a) What is meant by dissociating buffer system and non dissociating buffer system?

Or

- (b) Explain the formula for sedimentation coefficient.

13. (a) Draw a simple labeled diagram to show the details of Transmission Electron Microscope.

Or

- (b) What is meant by fixation? Mention the composition of two commonly used fixatives.

14. (a) What is student t-test? What are the applications of t-test?

Or

- (b) Explain the method of calculation of standard error and add a note on the significance of standard error.

15. (a) Where do you collect information for your research topic?

Or

- (b) How will you cite one author and two authors in the bibliography?

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Explain the construction of double beam spectrophotometer.

Or

- (b) What are the applications of liquid chromatography.

17. (a) Discuss the four different types centrifugation and their applications.

Or

- (b) Describe the principle and application of SDS PAGE.