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1205E521

Candidate's Seat No : _____

M.Phil (Zoology) Examination
Paper-I : Research Methodology
May-2017

Time : 3 Hours]

[Max. Marks : 70

NB: All questions are compulsory.

Illustrate your answers with neat diagrams wherever necessary

- 1 Explain in detail the requirements, precautions and methods for cell cultures. 14
OR
- 1 Discuss:
(a) Flow sorters and their applications.
(b) Principle and applications of phase contrast microscope.
2. Give a detailed account on the types of emission and absorption spectra. Explain 14
briefly atomic absorption spectrometry.
OR
- 2 Write an explanatory note on:
(a) Types of centrifuges
(b) Ion selective electrodes.
- 3 What is the purpose of blotting techniques? Give a detailed account of the 14
various blotting techniques and their applications.
OR
- 3 Explain:
(a) 2-D Electrophoresis
(b) Chemiluminescence assay.
- 4 Discuss the importance of Biostatistics and explain briefly the use of any two 14
statistical methods for data analysis.
OR
- 4 Write descriptive notes on:
(a) How to write a research paper for publication in a scientific journal.
(b) Contributions of three leading Scientists in your field.
5. **Write short notes on any THREE of the following:** 14
(a) Principle and use of Fluorescence microscope
(b) Applications and advantages of ELISA
(c) Bioinformatics and its significance
(d) Cell fractionation
(e) Immunofluorescence techniques
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