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**25-ZO-23**

**M.Sc. II SEMESTER [MAIN/ATKT] EXAMINATION  
MAY - JUNE 2025**

**ZOOLOGY**  
Paper - III  
**[Tools and techniques in Biology]**

*[Max. Marks : 75]*

*[Time : 3:00 Hrs.]*

*[Min. Marks : 26]*

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**Note :** Candidate should write his/her Roll Number at the prescribed space on the question paper.  
Student should not write anything on question paper.  
Attempt all five questions. Each question carries an internal choice.  
Each question carries **15 marks**.

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**Q. 1** Give a detailed account on Spectrophotometer.

**OR**

Write short notes on –

- i) Difference between TEM and SEM.
- ii) Chromatography, its principle, types and applications.

**Q. 2** Write an essay on Bacterial Culture Media.

**OR**

Write short notes on –

- i) Different staining techniques for bacterial identification.
- ii) Microbial assay of Vitamins and Amino acids.

**Q. 3** Explain Autoradiography.

**OR**

Write short notes on –

- i) Immunoelectrophoresis.
- ii) Measurements of Radioactivity.

**Q. 4** Write an essay on Microtomy.

P.T.O.

**OR**

Describe design and functioning of Tissue Culture Laboratory.

**Q. 5** Write a detailed account on PCR.

**OR**

Explain Flow – Cytometry.

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