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25-ZO-24

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

ZOOLOGY

Paper - IV

[Molecular Cell Biology and Genetics]

[Max. Marks : 75]

[Time : 3:00 Hrs.]

[Min. Marks : 26]

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**.

Q. 1 Describe active transport with example.

OR

Write short note on -

- i) Membrane Lipids.
- ii) Microtubules.

Q. 2 Explain second messenger system.

OR

Write short note on -

- i) Gap Junctions.
- ii) Integrins.

Q. 3 Describe chromosome organization of gene.

OR

Describe homophilic cell - cell adhesion.

Q. 4 Describe Human genome project and its significance.

OR

Explain sex determination in *Drosophila* and humans.

Q. 5 Explain genetic screening.

OR

Explain prenatal diagnosis and genetic counseling.