

Third Semester B. Sc. Examination

ZOOLOGY

Paper – II

(Genetics)

Time : Three Hours]

[Max. Marks : 50

- N. B. : (1) All question are compulsory.
(2) All questions carry equal marks.
(3) Illustrate your answers with suitable diagrams wherever necessary.

1. What are plasmids ? Give an account of types of plasmids and its significance.

OR

Write notes on :—

- (A) Monohybrid cross.
(B) Dominant Epistasis.

2. Give an account of basic concept and types of linkages.

OR

Write notes on :—

- (A) CO₂ sensitivity in **Drosophila**.
(B) Phenylketonuria.

3. Describe in detail the genic balance theory of sex determination in **Drosophila**.

OR

Write notes on :—

- (A) Duplication.
(B) Turner's Syndrome.

4. Explain Hardy–Weinberg's Law of equilibrium and its significance.

OR

Write notes on :—

- (A) Lethal genes.
(B) Amniocentesis.

5. Write **Four** or **Five** lines on the following (Any **Ten**)

- (i) Alleles
- (ii) Codominance
- (iii) Outbreeding
- (iv) Genome
- (v) Kappa particles
- (vi) Recon
- (vii) Heterogametic females
- (viii) Silent mutation
- (ix) Chomical mutations
- (x) Nitrocellulose membrane
- (xi) Purpose of genetic counseling.
- (xii) Sperm bank.