

**Bachelor of Science (B.Sc.) Semester-III (C.B.S.) Examination
ZOOLOGY (Genetics)
Paper-II**

Time : Three Hours]

[Maximum Marks : 50]

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

1. Describe Mendel's laws of inheritance with suitable examples. 10

OR

Write notes on :

(A) Epistasis of gene
(B) Inbreeding

2. What is meant by cytoplasmic inheritance ? Explain with suitable examples. 10

OR

Write notes on :

(A) Sickle cell anaemia
(B) Crossing over

3. Give an account of spontaneous gene mutation and add a note on mutagenic agents. 10

OR

Write notes on :

(A) Klinefelter's Syndrome
(B) Chromosomal mechanism of sex determination

4. Give an account of DNA Fingerprinting. 10

OR

Write notes on :

(A) Amniocentesis
(B) Dominant lethal genes.

5. Write **four** or **five** lines each on the following (any **ten**) :

(i) Incomplete dominance
(ii) Mitochondrial DNA
(iii) F-factor
(iv) Muton
(v) Significance of linkage
(vi) Phenylalanine hydroxylase
(vii) Deletions
(viii) Trisomy-21
(ix) Intersexes
(x) Gene Pool
(xi) Spermbank
(xii) Hardy-Weinberg equilibrium equation.

$10 \times 1 = 10$