

Bachelor of Science (B.Sc.) Semester-III 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 answers with suitable diagrams.

1. Describe in detail the inbreeding and outbreeding. 10

OR

Write notes on :

- (A) Recessive and Dominant Epistasis 5
(B) Law of Independent assortment. 5
2. What is Cytoplasmic Inheritance ? Explain it with suitable examples. 10

OR

Write notes on :

- (A) Crossing Over 5
(B) Sickle Cell anemia. 5

3. What is Chromosomal aberrations ? Give an account of types of Chromosomal aberrations. 10

OR

Write notes on :

(A) ZO-ZZ and ZW-ZZ pattern of Sex determination. 5

(B) Turner and Klinefelter syndrome. 5

4. Give an account of Hardy Weinberg principle and its significance. 10

- (vi) Phenylketonurea
- (vii) Super Female
- (viii) Mutagenic agents
- (ix) Frameshift mutation
- (x) Purpose of genetic counselling
- (xi) Nitrocellulose membrane
- (xii) Storage of Sperm. 10

OR

Write notes on :

(A) Recessive lethal genes 5

(B) Amniocentesis. 5

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

(i) Mitochondrial DNA

(ii) Codominance

(iii) Polygenic traits

(iv) Linkage groups

(v) Muton