

(i) Printed Pages : 2

Roll No.

(ii) Questions : 9

Sub. Code :

1	7	5	5	2
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Exam. Code :

0	0	0	6
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**B.A./B.Sc. (General) 6th Semester
(2055)**

ZOOLOGY

Paper-I : Genetics (ZOO-601)

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :— Attempt **FIVE** questions in all, including Question No. 1 which is compulsory and selecting **ONE** question each from Units I-IV.

1. Explain briefly :

- (a) Concept of Dominance
- (b) Somatic mutations
- (c) Test cross
- (d) Pseudo-allelism
- (e) Albinism
- (f) Wobble hypothesis
- (g) mRNA
- (h) Kappa particles.

1×8=8

UNIT—I

2. (a) Describe the modification of Mendelian phenotypic dihybrid ratio to 12:3:1 due to non allelic gene interaction, giving an example.
- (b) What are lethal factors ?

5+2=7

3. Write notes on :

(a) Blood group inheritance in man

(b) Inheritance of Quantitative traits.

3+4=7

UNIT—II

4. What is linkage ? Discuss the phenomenon of crossing over giving its cytological basis. 7

5. (a) Give the properties of Genetic code.

(b) Explain DNA replication.

3+4=7

UNIT—III

6. Write notes on :

(a) Physical & Chemical Mutagens.

(b) Phenylketonuria.

4+3=7

7. Discuss operon model for gene regulation.

7

UNIT—IV

8. (a) Describe the Hardy-Weinberg Law.

(b) Explain transformation in bacteria and its importance.

4+3=7

9. Discuss the process of recombinant DNA technology giving its applications in agriculture and health. 7