

(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

(2056)

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 from each unit I - IV.

1. Explain briefly:

- (a) Punnet square
- (b) Codominance
- (c) Kappa particles
- (d) Frameshift mutations
- (e) Wobble hypothesis
- (f) Phenylketonuria
- (g) Transfer RNA
- (h) Introns and exons.

8×1=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 genes?

5+2=7

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1

[Turn over



3. Write notes on:
- (a) Multiple alleles
 - (b) Inheritance of Quantitative traits. 4+3=7

UNIT-II

4. What do you understand by linkage and recombination in genetics? Give the cytological basis of crossing over. 7
5. (a) Explain the properties of Genetic code.
- (b) What is gene expression? 4+3=7

UNIT-III

6. Write notes on:
- (a) Physical & Chemical Mutagens
 - (b) Somatic mutations and carcinogenesis. 4+3=7
7. Discuss in detail the regulation of gene expression in prokaryotes. How does it differ from that in eukaryotes? 7

UNIT-IV

8. (a) Describe the equilibrium of gene frequencies in populations.
- (b) Briefly explain genetic recombination in bacteria. 4+3=7
9. Discuss the technique of genetic engineering, giving its applications in agriculture and health. 7