

Exam. Code : 103205

Subject Code : 1365

B.A./B.Sc. 5<sup>th</sup> Semester

ZOOLOGY ZOO-VB

(Genetics)

Time Allowed—Three Hours] [Maximum Marks—35

**Note** :—(1) Section A is compulsory and has **SEVEN** short answer type questions (1 mark each).

(2) Section B has **EIGHT** questions including **TWO** from each section. Candidate is required to attempt **FOUR** questions **ONE** from each unit. All questions carry equal marks.

**SECTION—A**

1. Define the following :

- (a) Lethal genes
- (b) Linkage groups
- (c) Primary transcript
- (d) Semiconservative replication
- (e) Spontaneous mutations
- (f) Genotype and Phenotype
- (g) Peptidyl Transferase.

1×7=7

## SECTION—B

## UNIT—I

2. Name the modifications in dihybrid ratio (9 : 3 : 3 : 1) due to different kinds of interactions of genes. Explain any two. 7
3. Discuss the inheritance of quantitative traits in man. 7

## UNIT—II

4. Describe the process of protein synthesis in prokaryotes. 7
5. Write a note on replication of DNA in eukaryotic cell. 7

## UNIT—III

6. Explain the extranuclear inheritance giving example of Kappa particles in Paramecium. 7
7. Discuss the role of Operon model in regulation of gene expression in prokaryotes. 7

## UNIT—IV

8. Write a note on genetic cloning and discuss its applications in medicine and agriculture. 7
9. Explain the process of transduction and transformation in Bacteria. 7