

Exam. Code : 103205

Subject Code : 1417

B.A./B.Sc. Semester—V

ZOOLOGY ZOO-V (B) (Genetics)

Time Allowed—3 Hours]

[Maximum Marks—35

Note :—(1) Question 1 is compulsory and carries 7 short answer type questions of 1 mark each.

(2) The remaining **EIGHT** questions include **TWO** questions from each Unit. Candidate is required to attempt **FOUR** questions, **ONE** from each Unit. Each question carries 7 marks.

1. Define the following :

- (a) Incomplete Linkage
- (b) Epistasis
- (c) Nonsense codons
- (d) Polysome
- (e) Housekeeping genes
- (f) Mutagen
- (g) Gene pool.

1×7=7

UNIT-I

2. What is multiple allelomorphism ? Illustrate the phenomenon of multiple allelism with suitable examples. 7

3. Describe the process of linkage and give its significance. 7

UNIT-II

4. Give a detailed account of replication of DNA in prokaryotes. 7
5. Define the term genetic code and discuss about the Wobble hypothesis in detail. 7

UNIT-III

6. Write an essay on extranuclear inheritance giving suitable examples. 7
7. What do you understand by spontaneous and induced mutations? Summarize different kinds of chemical mutagens utilized for inducing mutations. 7

UNIT-IV

8. What do you mean by term genetic cloning? Explain its applications in medicine and agriculture. 7
9. Write a note on Hardy Weinberg's Law. 7