

(i) Printed Pages: 3]

Roll No.

(ii) Questions : 9]

Sub. Code :

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Exam. Code :

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

1047

ZOOLOGY

(Genetics)

(ZOO-601)

Paper : I

Time : 3 Hours]

[Max. Marks : 36

Note :- Attempt *one* question from each of the Units I to IV. Question No. 1 is compulsory.

1. Write short answers :

- (a) Qualitative characters
- (b) Pleiotropic genes
- (c) Wobble hypothesis
- (d) Differences between DNA and RNA
- (e) Spontaneous and induced mutations

N-288

(1)

Turn Over

- (f) Albinism
- (g) DNA fingerprinting
- (h) Plasmids

Unit-I

2. Explain with an example the modified ratios of 9 : 6 : 1 instead of 9 : 3 : 3 : 1 in F₂ generation of a Mendelian cross.
3. What are multiple alleles ? Explain their inheritance with an example.

Unit-II

4. What is crossing over ? Discuss cytological basis of crossing over.
5. Describe the process of protein synthesis in eukaryotes.

Unit-III

6. Explain operon model of regulation of gene expression in prokaryotes.
7. What are Mutagens ? Describe different types of mutagens giving examples.

Unit-IV

8. Explain process of genetic recombination through transduction.
9. Give applications of recombinant DNA in Medicine and Agriculture.