

(i) Printed Pages : 2

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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B.Sc. (Hons.) 3rd Semester

1125

BIO-TECHNOLOGY

Paper : BIOT-Sem-III-II-T : Genetics

Time Allowed : Three Hours]

[Maximum Marks : 67

Note :- Attempt one question from each of the Units I-IV.
Question No. 1 is compulsory. Support your answers with well
labelled diagrams wherever necessary.

1. Write short answers :

- (a) Pericentric and Paracentric Inversions
- (b) Sex Linkage
- (c) Recombination Frequencies
- (d) Somatic Cell Hybridization
- (e) Chi square test
- (f) Mutagenic agents
- (g) Transformation
- (h) Auxotrophs
- (i) Gene Linkage
- (j) Pedigree.

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[Turn over

UNIT-I

2. What do you understand by Non Disjunction ? How does it prove the chromosomal theory of inheritance ? 13

3. What is Polyploidy ? Explain its types and give significance. 13

UNIT-II

4. What is Sex Linked Inheritance ? Explain with examples. 13

5. What is Gene Mapping ? Explain method of tetrad analysis for gene mapping. 13

UNIT-III

6. What is Hardy Weinberg Equilibrium ? How can it help in determining genotypic frequencies ? 13

7. Describe various mechanisms of DNA repair in living systems. 13

UNIT-IV

8. What are Auxotrophs ? Explain a method for their isolation. 13

9. Explain the phenomenon of extra chromosomal inheritance in chloroplast genetic system. 13