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(20222)

M.Sc.(Bio.-Tech.)-I Sem.

(Printed Pages 4)

Roll No. ....

**NP-3331(CV-III)**

**M.Sc. (Bio-Tech.)**

**Examination, Dec.-2021**

**Cytogenetics and Molecular Genetics**

**(H-102)**

**[ M.Sc. (Bio-Tech.) ]**

*Time : 1½ Hours ]*

*[Maximum Marks : 50*

**Note :** Attempt questions from **all** Sections as per instructions.

**Section-A**

**(Very Short Answer Questions)**

**Note :** Attempt any **two** questions. Each question carries 5 marks. Answer is required not exceeding 75 words.

2×5=10

1. Write short note on Anaphasic movement.

**P.T.O.**

2. What is position effect?

3. Write short notes on the following

(i) Pseudodominance

(ii) Pseudocrying

4. Differentiate between the following

(i) Nulliplex & Nullisomics

(ii) Simplex & Duplex

5. Comment upon repetitive DNA.

**Section-B**

**(Short Answer Questions)**

**Note :** Attempt any **one** of the following questions out of the following 3 questions. Each question carries 10 marks. Answer is required not exceeding 200 words. 1×10=10

6. Give a brief account on double Reduction.

7. What is Nucleosome? How it was discovered?

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8. Describe briefly the experimental evidence which led to the DNA as hereditary material.

### Section-C

#### (Detailed Answer Questions)

**Note :** Attempt any **two** questions out of following 5 questions. Each question carries 15 marks. Answer in required in detail.  $2 \times 15 = 30$

9. Give a detailed account on DEFICIENCY with reference Meiotic pairing & phenotypic effect.
10. Discuss and draw figure to illustrate the behaviour of Paracentric inversion in the meiotic cycle. Give its role in evolution.
11. What is translocation? Discuss in detail occurrence & origin of multiple translocation by taking the example of

**Oenothera lamarckiana.**

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**P.T.O.**

12. What is Genetic code? Give experiments which helped in deciphering genetic code.
13. Discuss different steps of DNA replication in prokaryotes giving role of various enzymes/proteins.

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