



'समानो मन्त्रः समितिः समानी'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 4th Semester Examination, 2022

**CC9-TEA SCIENCE**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

1. Answer any **five** from the following questions: 1×5 = 5
- (a) What do you mean by phenotype?
  - (b) Define multiple allele with an example.
  - (c) What are exonucleases?
  - (d) Why DNA replication is said to be semiconservative?
  - (e) What is genetic polymorphism?
  - (f) What do you mean by lagging strand?
  - (g) What is RAPD?
  - (h) What is reverse transcription?
2. Answer any **three** from the following questions: 5×3 = 15
- (a) Why genes are said to be split in eukaryotes? Explain. 5
  - (b) Discuss about the Mendelian Laws. 5
  - (c) Describe the organization of Transposons. 5
  - (d) Discuss the effects of two chemical mutagenes with figures. 5
  - (e) Write about PCR amplification of DNA with suitable sketches. 5
3. Answer any **two** from the following questions: 10×2 = 20
- (a) What do you mean by population? Prove Hardy Weinberg' law up to F<sub>2</sub> generation with suitable example. 2+8
  - (b) What is mutation? State the method of detection of gene mutation. 2+8
  - (c) What is Genetic Code? Write about the characters of genetic code with brief description. 2+8
  - (d) Write a note on Linkage and Crossing over. 5+5

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