

B.Sc. (NEP) Sem.-3 Examination**MDC-234****Bio-Technology****November-2025****Time : 1-00 Hour]****[Max. Marks : 25**

Q. 1. Discuss the Laws of Mendel and its importance to humans in detail. (10 marks)

OR

(A) Describe Epistatic interaction with an example. (05 marks)

(B) What is the test cross? Explain its importance with an example. (05 marks)

Q. 2 Describe in detail: Thermal and Optical properties of DNA (10 marks)

OR

(A) Explain rolling circle model of replication. (05 marks)

(B) Write a short note on Messelson-Stahl experiment (05 marks)

Q. 3. Short Answer / MCQ (Any 05 out of 06) (05 Marks)

- (a) Define codominance with an example.
- (b) Give an example of multiple alleles.
- (c) What is a self-cross?
- (d) What is lagging strand?
- (e) What is the role of DNA gyrase in replication?
- (f) Which molecule acts as a primer in DNA replication?

— X —