



VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UEA Act, 1987)

REG.NO.: 2ABBT0149

SCHOOL OF BIOSCIENCES AND TECHNOLOGY
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2025-2026

Programme Name & Branch : B.Tech Biotechnology
Course Code and Course Name : BBIT209L Molecular Biology
Slot(s) : B1+TB1
Faculty Name(s) : K M Gothandam
Class Number(s) : 2451
Date of Examination : 28/01/2026
Exam Duration : 90 minutes
Maximum Marks: 50

General instruction(s):

- Answer All Questions
- CO – Course Outcome; BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)

Q. No	Question	M	CO	BL
1.	Detail the hierarchy of DNA packaging in eukaryotes, from the naked DNA double helix to the highly condensed metaphase chromosome.	10	1	2
2.	Explain the Meselson-Stahl experiment in detail. Describe the expected results if the replication had been conservative or dispersive.	10	1	3
3.	Comment on end replication and DNA replication inhibitors	10	1	3
4.	Discuss any five types of DNA damage with suitable example.	10	2	2
5.	List out the proteins and enzymes involved in mismatch repair of <i>E. coli</i> and elaborate the process with suitable diagram.	10	2	2
