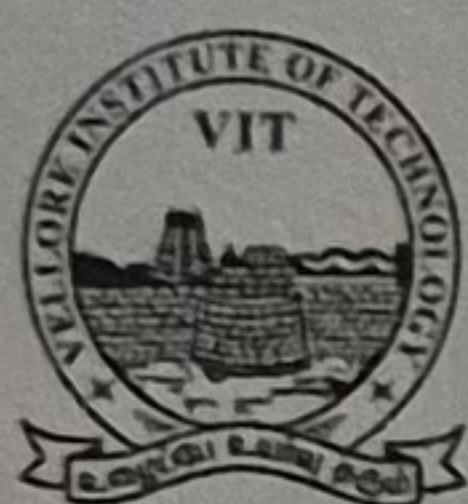




VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

REG.NO.:

SCHOOL OF BIOSCIENCES AND TECHNOLOGY
CONTINUOUS ASSESSMENT TEST - I
FALL SEMESTER 2026-2027

Programme Name & Branch : BBT and SBST
Course Code and Course Name : BABIT100 and Biology
Slot(s) : D2+TD2+TDD2
Faculty Name(s) : Dr. Shaik Firdoz
Class Number(s) : VL2026270106766
Date of Examination : 12-08-2026
Exam Duration : 90 minutes Maximum Marks: 50

General instruction(s):

General instruction(s):

- Answer All Questions
- M - Max mark; 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.	All living organisms are composed of cells, and the cell is the fundamental structural and functional unit of life. Based on cellular organization, how are organisms classified? Discuss the major types of organisms present in the biosphere, highlighting their cellular characteristics.	10	1	2
2.	Compare and analyze the major theories of the origin of life. How do the experiments of Pasteur, and Miller-Urey support or refute these theories?	10	1	4
3.	a) Describe the different levels of ecological organization and explain their significance in understanding ecosystems.	5	1	4
	b) Analyze how biotic and abiotic factors interact to influence the structure, functioning, productivity, and stability of ecosystems.	5		
4.	Gram staining is a widely used differential staining technique for bacterial classification. a) Explain the principle of Gram staining and describe how it is used to classify bacteria.	5	2	2
	b) Explain why some bacteria retain the crystal violet stain and appear purple, whereas others lose the stain and appear pink after counterstaining. Relate your answer to the structural differences in their cell walls.	5		
5.	Ribosomes are the cellular organelles responsible for protein synthesis. Explain how ribosomal characteristics are used to classify living organisms. Briefly describe the major cellular organelles associated with each type of cellular organization and discuss their functions.	10	3	2
