

**VIT**Vellore Institute of Technology
(Deemed to be University under section 3 of U.G. Act 1956)

REG.NO.:

SCHOOL OF BIOSCIENCES AND TECHNOLOGY
CONTINUOUS ASSESSMENT TEST - II
FALL SEMESTER 2025-2026

Programme Name & Branch : M.Sc., Integrated Biotechnology
Course Code and Course Name : TBIT301L Analytical Techniques
Slot(s) : A1+TA1
Faculty Name(s) : Dr.K.Kannabiran
Class Number(s) : VL2025260101018
Date of Examination : 05.10.2025
Exam Duration : 90 minutes

Maximum Marks: 50**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)
- Course Outcomes (Type the CO statements covered in this question paper. Use the CO number as per the syllabus copy)
CO3, CO4 & CO5

Q. No	Question	M	CO	BL
1.	Demonstrate how TEM is used to study the internal structural organisation of atoms in a molecule? List out the biological applications of TEM	10	CO3	3
2.	Compare the methodology used for the separation of proteins by native PAGE and SDS PAGE.	10	CO4	2
3.	Compare and contrast the use of conventional agarose gel electrophoresis and Pulsed Field Gel Electrophoresis for separation of nucleic acids.	10	CO4	4
4.	Illustrate the components of UV-Visible double beam spectrophotometer. Analyse the procedure followed to estimate the concentration of the substance in the given sample.	10	CO5	3
5.	Analyse the use of atomic spectroscopy under absorption and emission mode for the estimation elemental concentrations in biological samples.	10	CO5	4
