



VIT

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

REG.NO.: 22B

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
FALL SEMESTER 2025-2026

SLOT: D1+TD1

Programme Name & Branch : B.Tech/ BCT
Course Code and Course Name : BCSE316L-Design of Smart Cities
Faculty Name(s) : Dr. S. Ayyasamy, Dr.Sarwesh P
Class Number(s) : VL2025260102405, VL2025260102418
Date of Examination : 20-8-2025
Exam Duration : 90 minutes

General instruction(s): Answer all the questions

Maximum Marks: 50

Q. No	Question	M	CO
1.	Many cities today have ambitions of becoming the smart cities of tomorrow. But to achieve this, they need to overcome the major six challenges associated with mapping out a complex strategy. List and explain the major six challenges and how to overcome?	10	1
2.	One of the aspects of smart cities is the optimal use of available resources. Sensors can help make optimal use of resources with connectivity to tell us when and where to save. These sensors are how to control, detect and manage the unnecessary use? and how its make certain adjustments as per the need in the following area? and explain the same. 1. Water Management 2. Energy Management 3. Smart Streetlights 4. Waste Management	10	1
3.	Urban planning is guided by several core principles and clarify the key strategies that ensure comprehensive, equitable, and sustainable development. Despite its benefits, urban planning faces numerous challenges. List the frequent challenges and explain the require innovative solutions.	10	2
4	You are asked to develop a major five Master Plan establishment process for the Chennai city and follow the standards of ITU-T (International Telecommunication Union-Telecommunication Standardization Sector)'s and it must focus group on smart sustainable environment, and it includes four inter-connected phases.	10	2
5.	a) Explain the operation performed in Generation Side, Transmission Side and Distribution Side of the Smart Grid with neat diagram and conclude with Advantages, Disadvantages & Applications.	7	2
	b) Difference Between Power Grid and Smart Grid	3	