



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

Programme Name & Branch : BTech (CSE)
Course Code and Course Name : Design of Smart Cities & BCSE316L
Faculty Name(s) : Dr. Swarnalatha P, Dr.Kalaavathi B, Dr. Ajitha D
Class Number(s) : VL2025260102372, VL2025260102407, VL2025260102420
Date of Examination : 20-08-2025
Exam Duration : 90 minutes **Maximum Marks: 50**

General instruction(s): Answer All the Questions

Q. No	Question	M	CO	BL
1.	Barcelona integrated IoT sensors, smart meters, and open data platforms to optimize water, energy, and waste management. Evaluate three critical success factors in Barcelona's approach and recommend how these could be adapted to an Indian smart city context. [6+4]	10	1	2
2.	The Songdo International Business District (South Korea) faced low occupancy despite advanced infrastructure. Analyze three main reasons for its failure and propose two ways to prevent such pitfalls in future projects. [6+4]	10	1	4
3.	Explain the role of multi-stakeholder governance in smart city planning. Using Bristol or Siheung as an example, highlight how governance structures influence project implementation and monitoring. [3+4+3]	10	2	5
4.	The following data shows the ages of 20 residents surveyed in an urban neighbourhood: 21, 26, 18, 45, 32, 41, 42, 22, 28, 26, 33, 20, 26, 44, 46, 21, 24, 36, 39, 30 1. Calculate the Range of the data. 2. Prepare a frequency distribution table with 5 classes. 3. Identify the class boundaries for each class. [2+1+3+2+2]	10	2	1
5.	a) A coastal smart city wants to replace 40% of its electricity with renewable sources (wind, tidal, solar). Seasonal variation causes major fluctuations in generation. • Suggest an optimal renewable energy mix and justify your choice. • Recommend two strategies for energy storage and efficiency to ensure year-round supply. [5] b) In a city shifting to electric buses, AI-driven traffic control and renewable-powered charging, how can smart energy management and ICT integration work together to manage peak demand, cut CO ₂ emissions and enhance both transportation and grid efficiency? Explain briefly. [5]	10	3	3

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