



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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End - Term Examinations – MAY 2025

Date: 24-05-2025

Time: 09:30 am – 12:30 pm

School: SOCSE	Program: B. Tech. CAI\CBC\CBD\CCS\CDV\CIT\COM\CSD\CSE\CSG\ISE\IST		
Course Code: CIV2006	Course Name: Infrastructure Systems of Smart Cities		
Semester: VI	Max Marks: 100	Weightage: 50%	

CO - Levels	CO1	CO2	CO3
Marks	16	35	49

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	Name four core infrastructure elements of a smart city.	2 Marks	L1	CO1
2.	What is the function of a Special Purpose Vehicle (SPV) in smart cities?	2 Marks	L1	CO1
3.	Write any two benefits of smart implementation for cities.	2 Marks	L1	CO1
4.	List two main challenges of sustainable development	2 Marks	L1	CO2
5.	Define Urban resilience.	2 Marks	L1	CO2
6.	What is mobile governance (m-Governance)?	2 Marks	L1	CO2
7.	State two economic interventions to promote urban inclusiveness	2 Marks	L1	CO2
8.	Mention the four stages of maturity model for a smart city development	2 Marks	L1	CO2
9.	State the benefit of Automated Waste Collection System (AWCS).	2 Marks	L1	CO3
10.	Define Smart Energy in the context of a Smart City?	2 Marks	L1	CO3

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Discuss the strategies of Area-Based Development (ABD) in the Smart Cities Mission, including retrofitting, redevelopment, and greenfield development.	10 Marks	L2	C01
Or					
12.	a.	Briefly explain the anatomy of Smart cities with associated smart features.	10 Marks	L2	C01
13.	a.	Classify the types of interactions that take place in Smart Governance and Explain G2B interaction with examples of the initiative	10 Marks	L2	C02
Or					
14.	a.	Explain in brief spatial, social and economic interventions aimed at bringing inclusiveness in cities	10 Marks	L2	C02
15.	a.	Smart Environment is the idea to build an environment with embedded sensors, displays, and computing devices so that users can better understand and control the environment. With 6 out of the top 10 most polluted cities in the world based on PM2.5 air pollution being from India, Smart Environment has become the need of the hour. In this context, explain IoT based monitoring system for smart environment and discuss the benefits of this system in better managing the environment.	10 Marks	L2	C03
Or					
16.	a.	Summarize the key smart city initiative or project that your group presented. Highlight its main features and the challenges it aimed to address.	10 Marks	L2	C03
17.	a.	Explain the stages of the Smart City Maturity Model with examples.	15 Marks	L3	C02
Or					
18.	a.	With the help of a flow chart explain the framework for preparation of Strategic Urban Development Plan (SUDP) for smart cities.	15 Marks	L3	C02
19.	a.	Explain the concept of Smart Mobility and last mile connectivity along with smart mobility systems for Last mile connectivity.	15 Marks	L2	C03
Or					
20.	a.	Explain the smart water management system along with its features and benefits	15 Marks	L2	C03
21.	a.	What are traffic dashboards? Explain their role in managing transportation systems in smart cities.	10 Marks	L3	C03
	b.	Describe briefly the advanced decision support systems for smart waste management system along with its benefits.	10 Marks	L3	C03
Or					
22.	a.	Elaborate on the detailed architecture of Smart City Systems based on Application, Sensing, Communication, Data, and Security planes.	20 Marks	L3	C03