Paper Code: O A E 4 2 1 T

Semester : 7th   **Subject: Digital & Smart Cities**

S.No.	TOPICS	T/L
	UNIT I: Introduction to Smart Cities	
1	Introduction to smart cities	1
2	Concepts and components of smart cities	1
3	Characteristics of smart cities	1
4	Role of AI in enabling smart city solutions.	1
5	Role of ML in enabling smart city solutions.	1
6	Role of IoT in enabling smart city solutions.	1
7	Case studies of successful smart city implementations in India	2
8	Case studies of successful smart city implementations in worldwide.	2
	UNIT II: Digital Infrastructure for Smart Cities	
9	Urban sensing in Smart Cities	2
10	Data collection technologies in Smart Cities	1
11	Cloud computing in Smart Cities	1
12	Edge computing in Smart Cities	2
13	Data centers in Smart Cities	1
14	Cybersecurity and Privacy Challenges in Smart City infrastructures	2
	FIRST TERM EXAM/ REVISION	1
	UNIT III: AI and IoT Applications in Smart Cities	
15	Smart transportation systems	1
16	Smart traffic management	1
17	Energy-efficient buildings	2
18	Smart Grids	1
19	Healthcare Solutions	1
20	Public safety solutions	1
21	Waste Management	1
22	Environmental Monitoring	1
	Unit -IV: Smart Governance and Citizen Engagement	
23	E-governance for citizens	2
24	Digital services for citizens	2
25	Open data initiatives and data-driven decision-making	2
26	Community engagement and participatory platforms	2
27	Social and ethical considerations in smart city development	2
	SECOND TERM EXAM/ REVISION	1

Text Books:

[T1] "Smart Cities: Digital Transformations, Smart Urban Infrastructures and Digital Innovation" by Matteo Zignani, Vincenzo Mighali, and Raffaele Giaffreda.

[T2] "Smart Cities: Foundations, Principles, and Applications" by Hossam Gabbar.

Reference Books:

[R1] "Smart Cities: Big Data Prediction Methods and Applications" by Robert J. Howlett and Lakhmi C. Jain.

[R2] "Internet of Things for Smart Cities: Technologies, Big Data and Security" by Fadi Al-Turjman.

[R3] "Artificial Intelligence and IoT for Smart Cities: Applications and Security" by Fahim Ahmed Shaikh.