Name: **Enrolment No:**	

UPES

End Semester Examination, December 2023

Course: BCA-IoT **Semester: V**

Program: IoT and Smart Cities **Time : 03 hrs.**

Course Code: CSIS3015 **Max. Marks: 100**

Instructions: Explain in short. (60-70 words)

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Discuss any two smart city attributes in brief.	**4**	**CO1**
Q 2	Deliberate regarding temperature control in terms of smart IoT based home automation.	**4**	**CO 2**
Q 3	Explain the mechanism of IoT based smart traffic control systems.	**4**	**CO 3**
Q 4	Clarify the role of residential AMR based meter in a smart city framework.	**4**	**CO 3**
Q 5	Signify the role of IoT based sensors in terms of avalanche monitoring.	**4**	**CO 4**

SECTION B
(4Qx10M= 40 Marks)

Instruction: Write brief notes. (100-150 words)

Q 6	Explain as how energy optimization is achieved in case of IoT based smart street light systems with the help of a diagram.	**10**	**CO1**
Q 7	Discourse the attributes of the smart sustainable city.	**10**	**CO1**
Q 8	Deliberate the importance of ambient air quality monitoring using IoT based air filtering systems.	**10**	**CO2**
Q 9	Discuss the role of smart surveillance camera in an urban set-up. OR Discuss the significance of any two IoT based smart device used in smart offices.	**10**	**CO2**

SECTION-C
(2Qx20M=40 Marks)

Instruction: Write long answer. (Up to 350 words while explaining)
Attempt any part of question no. 10 as there is an option "a" OR "b".
There is no choice for question no.11.

Q 10	Explain the role of IoT based sensors in earthquake and early tsunami detection. Validate the explanation with the help of a case study.	**20**	**CO4**

	OR Clarify the significance of IoT enablement in terms of e-waste management and green energy.		
Q 11	Describe the role of eco-friendly and low-cost technologies in waste management using IoT systems.	**20**	**CO3**