


Name:			
Enrolment No:			
<b>UPES</b> <b>End Semester Examination, May 2024</b>			
<b>Programme Name : B. Tech. CSE spz. IoT</b>		<b>Semester : 6</b>	
<b>Course Name : Smart City</b>		<b>Time : 03 hrs</b>	
<b>Course Code : CSIS3012</b>		<b>Max. Marks: 100</b>	
<b>Nos. of page(s) : 2</b>			
<b>Instructions: Students are supposed to provide suitable examples and draw diagrams wherever applicable. Assume any missing data and answer appropriately with details.</b>			
<b>SECTION A</b> <b>(5Q X 4M=20Marks)</b>			
S. No.		Marks	CO
Q 1.	Write a short note on any of the two IoT based sensors that may be useful in “ <i>Smart City</i> ” solutions.	4	CO1
Q 2.	Explain any two IoT based sensors.	4	CO1
Q 3.	What is a retrofitting of a city?	4	CO2
Q 4.	What is a smart gas/electric meter?	4	CO2
Q 5.	How Esp8266 can be used in smart solutions.	4	CO3
<b>SECTION B</b> <b>(4Q X 10M = 40 Marks)</b>			
Q 6.	How city blue print is helpful for a solution of external architecture in a smart city. Explain in detail with proper examples.	10	CO1
Q 7.	Briefly explain the features of a “ <i>Smart City</i> ”.	10	CO2
Q 8.	What are the challenges of a smart city?	10	CO3
Q 9.	Illustrate a smart solution for a Dehradun traffic management system using IoT based technologies.	10	CO4
<b>SECTION-C</b> <b>(2Q X 20M = 40 Marks)</b> <b>Attempt any one question from question no. 11</b>			
Q 10.	Review and discuss smart city light, smart traffic light, smart parking, and smart waste management system for a Dehradun City. Explain with proper examples and diagrams.	20	CO3

Q 11.	<p>Explain all the various components of a Raspberry Pi and its usage in implementing Smart City solutions.  Hint: Student may discuss the implementation of Raspberry Pi in your project.</p>	20	CO4
	<b>OR</b>		
	<p>Take Dehradun as a smart city and now discuss its internal and external architecture solutions for various smarty deployments.  Draw proper diagram and explain all the technologies proposed for the solution.</p>		