

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026****Sixth Semester****Electronics and Communication Engineering****CEC368 – IOT BASED SYSTEMS DESIGN****Regulations - 2021****Duration : 3 Hrs****Maximum : 100 Marks****PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BTL	CO	Marks
1.	Outline the Web 3.0 view of IoT.	L2	1	2
2.	Recall fog and edge in IoT.	L1	1	2
3.	Mention the components of a horizontal architecture approach for IoT systems.	L1	2	2
4.	Discuss resource management in IoT systems.	L2	2	2
5.	State the differences between the LoRaWAN and IEEE 802.15.4 communication technologies.	L1	3	2
6.	Define the CoAP.	L1	3	2
7.	List the features of Python that make it suitable for IoT applications.	L1	4	2
8.	Summarize the embedded system platforms used in IoT.	L2	4	2
9.	Locate the role of IoT in Home Automation systems.	L2	5	2
10.	Under IoT based agriculture systems, identify the main monitoring parameters.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11. a	Describe the basic architecture of IoT systems and explain the role of each layer.	L2	1	16
	Or			
b	Explain the roles of sensors, actuators and smart objects in IoT systems.	L2	1	16
12. a	Examine the middleware architectures used in RFID systems and WSN and illustrate the architectures with neat diagrams.	L4	2	16
	Or			
b	Analyze the working principles and applications of KNX, BACNet and MODBUS protocols.	L4	2	16
13. a	Discuss the Physical and MAC layer functionalities in IoT access technologies.	L2	3	16
	Or			
b	Explain the working mechanism and advantages of the MQTT protocol in IoT.	L2	3	16
14. a	Discuss the different IoT tools used for application development.	L2	4	16
	Or			
b	Describe the role of Raspberry Pi in implementing IoT applications.	L2	4	16

15.	a	Apply IoT sensors to monitor and control environmental pollution in urban areas.	L3	5	16
		Or			
	b	Demonstrate the use of IoT based devices for health and lifestyle monitoring.	L3	5	16
