

Reg. No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**M.E / M.TECH. DEGREE EXAMINATIONS, MAY 2023**

Second Semester

**CP22203 – INTERNET OF THINGS***(Computer Science and Engineering)***(Regulation 2022)****TIME: 3 HOURS****MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Students will be able to realize the Architecture and Components.	2
CO 2	Students will be able to frame connectivity to access/control IoT devices.	3
CO 3	Students will be able to construct a portable IoT using Raspberry Pi.	3
CO 4	Students will be able to produce secured models of an IoT application.	3
CO 5	Students will be able to examine applications of IoT in real-time scenarios.	3

**PART- A (20 x 2 = 40 Marks)**

(Answer all Questions)

	CO	RBT LEVEL
1. Write short notes on Smart Creatures.	1	2
2. Specify any two technologies for connecting smart objects.	1	2
3. Write the difference between Edge and Fog Computing.	1	2
4. What are the sensors used in a smartphone?	1	2
5. What are the types of classes of constrained nodes?	2	2
6. Which offers improvements to IP security and why?	2	3
7. Represent 6LoWPAN Fragmentation Header.	2	2
8. Write about IEEE 802.15.4	2	2
9. What is the purpose of Information Model?	3	2
10. Write down the difference between physical entity and virtual entity.	3	3
11. What are the various service types?	3	2
12. Which is the final step in a home automation web application?	3	3
13. What is Supervised Learning?	4	2
14. What is meant by MapReduce?	4	2
15. What is the difference between Local Learning and Remote Learning?	4	3
16. Specify the layers and their responsibilities in Lambda Architecture.	4	2
17. What makes smart cities successful?	5	2
18. List some use cases for smart parking.	5	2
19. Draw the smart city Traffic Architecture.	5	3
20. What are the advantages of water management in IoT?	5	2

**PART- B (5 x 10 = 50 Marks)**

	Marks	CO	RBT LEVEL
21. (a) Enumerate in detail about IoT World Forum (IoTWF) standardized Architecture in detail.	(10)	1	3
<b>(OR)</b>			
(b) Illustrate the Physical and MAC Layer of IEEE 802.15.4g and 802.15.4e.	(10)	1	3
22. (a) What is the need for optimization at various layers? What is a constrained node and specify the classification?	(10)	2	3
<b>(OR)</b>			
(b) Explain the concept of IPv6 Header Compression and Fragmentation.	(10)	2	3
23. (a) Illustrate in detail about IoT Design methodology.	(10)	3	3
<b>(OR)</b>			
(b) Elaborate in detail on Raspberry Pi with various components with a neat sketch.	(10)	3	3
24. (a) Enumerate Apache Hadoop for distributed batch processing analysis of Big Data.	(10)	4	4
<b>(OR)</b>			
(b) Enumerate the major challenges in OT Security. Mention and discuss what is designed without strong security requirements and why.	(10)	4	4
25. (a) How physical records are digitalized in the Internet of Medical Things? Describe the connected medical devices and their tracking. Specify the application of smart medicine and smarter devices.	(10)	5	4
<b>(OR)</b>			
(b) Elaborate on the Architectures of the ICAS reference model and CPwE reference model of the manufacturing system.	(10)	5	4

**PART- C (1 x 10 = 10 Marks)**

(Q.No.26 is compulsory)

	Marks	CO	RBT LEVEL
26. What is the purpose of Weather Monitoring in IoT? Represent the various illustrations for the analysis of data to make predictions.	(10)	3	5

\*\*\*\*\*