Q. Code:631471

Reg. No. | | | | | | | | | | | | | |

M.E / M.TECH. DEGREE EXAMINATIONS, MAY 2024

Second Semester

CF22204 - INTERNET OF THINGS AND SECURITY

(*Cyber Forensics and Information Security*)

(Regulation 2022)

TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Analyze various protocols of IoT.	**4**
CO 2	Design a portable IoT application using Raspberry Pi or Arduino.	**5**
CO 3	Deploy an IoT application to the cloud.	**4**
CO 4	Analyze applications of IoT in real time scenario.	**4**
CO 5	Design Prototype for physical and online components.	**5**

PART- A (20 x 2 = 40 Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	Characterize the components of IoT.	**4**	**2**
2.	Differentiate IoT and Ubiquitous Computing.	**4**	**4**
3.	Ascertain the power of Moore's Law in IoT.	**4**	**3**
4.	Give example for Enchanted objects and Glanceable displays.	**4**	**3**
5.	Explain all the fields of a DNS record.	**1**	**2**
6.	Illustrate the working of HTTP protocol.	**1**	**3**
7.	Analyze the application of Diffie Hellman key exchange in IoT communication.	**1**	**4**
8.	What type of protocols are needed for low power devices?	**1**	**3**
9.	Categorize the electronic components needed for IoT.	**2**	**3**
10.	How will you choose the right platform for IoT device?	**2**	**4**
11.	Write an arduino code to toggle between 2 LED.	**2**	**4**
12.	Compare the specs of the latest model of Arduino , Beagle bone and Raspberry pi.	**2**	**4**
13.	Explore the options available to make your code more efficient.	**5**	**4**
14.	Outline the common standards available for API data transfer.	**5**	**4**
15.	Brief about the axes movement in CNCC mills.	**5**	**4**
16.	Examine the Hinges and joints used for IoT applications.	**5**	**3**
17.	Brief about electromagnetic testing.	**3**	**2**
18.	How a prototype does differs from manufactured product.	**3**	**2**
19.	Identify two contrasting points to be remembered when designing IoT or anything.	**3**	**4**

20.	Examine the three choices available for getting your invention into hands of more people.	**3**	**3**	

PART- B (5 x 10 = 50 Marks)

		Marks	CO	RBT LEVEL
21. (a)	Describe in detail the principles to be applied while designing IoT System.	**(10)**	**4**	**2**
	(OR)			
(b)	As a Designer of an Internet of Things service discuss in detail how will you handle privacy.	**(10)**	**4**	**3**
22. (a)	Explore the working of an application layer protocol and show with an example how resources are being accessed using client server model.	**(10)**	**1**	**3**
	(OR)			
(b)	Construct an over view of static versus dynamic IP address assignment.	**(10)**	**1**	**3**
23. (a)	Examine the different embedded computing platforms available to build a Internet of Things prototype.	**(10)**	**2**	**3**
	(OR)			
(b)	Explore on the issues and challenges faced during IoT prototype development.	**(10)**	**2**	**3**
24. (a)	Investigate on the techniques and tools available for prototyping the physical design.	**(10)**	**5**	**4**
	(OR)			
(b)	Figure out the use of API to interact with the existing and new web services. Give suitable examples.	**(10)**	**5**	**4**
25. (a)	Elaborate on the elements of the business model template used for describing, visualizing, assessing, defining and communicating a business idea or concept.	**(10)**	**3**	**4**
	(OR)			
(b)	Summarize the principles to be considered for any ethical project design in the field of IoT.	**(10)**	**3**	**4**

PART- C (1 x 10 = 10 Marks)

(Q.No.26 is compulsory)

		Marks	CO	RBT LEVEL
26.	Design a traffic management application using Raspberry pi. Choose suitable components and sketch the connections.	**(10)**	**2**	**5**

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