Q. Code:753880

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

B.E / B.TECH. DEGREE EXAMINATIONS, MAY 2023

Sixth Semester

CS18009 - Internet of things and its Applications

(Computer Science and Engineering)

(Regulation 2018A)

Time: 3Hours **Max. Marks: 100**

CO 1 Students will be able to understand the vision of IoT.
CO 2 Students will be exemplifying the application of IoT in various domains.
CO 3 Students will be able to understand the differences and similarities between IoT and M2M.
CO 4 Students will be able to interpret the different IoT platforms design methodology.
CO 5 Students will be illustrating various IoT physical devices.

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

		CO	RBT LEVEL
1	What are the characteristics of IoT? Justify which characteristic is essential.	**1**	**4**
2	Why do we need Deployment templates in IoT?	**1**	**3**
3	What are the benefits of IoT in smart grids?	**2**	**2**
4	Is there any functional difference between IoT in retail and logistics?	**2**	**4**
5	Differentiate M2M with IoT with a minimum of 2 differences.	**3**	**2**
6	List any four applications of M2M.	**3**	**3**
7	How do you perform Device and component integration?	**4**	**3**
8	Why do we want to perform IoT-level specifications?	**4**	**3**
9	What are the other IoT devices?	**5**	**2**
10	What basic building blocks can be used to implement any IoT-enabled real-time system?	**5**	**3**

PART- B (5 x 14 = 70 Marks)

		Marks	CO	RBT LEVEL
11 (a)	Analyze the IoT-enabling Technologies in detail for IoT applications. Justify which technology required more cost to develop a real-time application.	**(14)**	**1**	**4**
	(OR)			
11 (b)	Discuss and analyze various Communication protocols used in IoT. Justify which Communication protocol is difficult to apply in IoT.	**(14)**	**1**	**4**

12 (a)	Implement an IoT-enabled waste management system as an application of IoT in a Smart City. Analyze the difficulty in their functional components and mechanism.	**(14)**	**2**	**4**
	(OR)			
12 (b)	Implement an IoT-enabled patient health care system as an application of IoT in health and lifestyle. Analyze the difficulty in their functional components and mechanism.	**(14)**	**2**	**4**
13 (a)	Apply Software-defined networking for any IoT-enabled application and discuss it in detail.	**(14)**	**3**	**3**
	(OR)			
13 (b)	Apply network function virtualization for any IoT-enabled application and discuss it in detail.	**(14)**	**3**	**3**
14 (a)	Explain in detail about functional view specification and Operational view specification.	**(14)**	**4**	**2**
	(OR)			
14 (b)	Explain in detail about Process specification and Domain model specification.	**(14)**	**4**	**2**
15 (a)	Explain the architecture of Raspberry Pi. Justify whether any difficulties present in using it for forest fire monitoring systems.	**(14)**	**5**	**4**
	(OR)			
15 (b)	Explain the architecture of Raspberry Pi. Justify whether any difficulties are present in using it for temperature monitoring systems.	**(14)**	**5**	**4**

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Implement the IoT device with SDN for implementation of the border security system. Evaluate its real-time functional difficulty.	**10**	**5**	**5**

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