Q. Code:272809

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

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

Fifth-Semester

AD18503 – INTERNET OF THINGS TOWARDS DATA SCIENCE

(Artificial Intelligence and Data Science)

(Regulation 2018/2018A)

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

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	To Analyze various protocols for IoT	**2**
CO 2	To Develop IoT application using scripting languages	**2**
CO 3	To Design a portable IoT using Raspberry Pi	**3**
CO 4	To Develop web services to access/control IoT devices	**3**
CO 5	To Analyze applications of IoT in real time scenario	**3**

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	List and define the characteristics of IoT	**1**	**1**
2.	Distinguish the physical and logical design of IoT	**1**	**2**
3.	Identify the Key elements of network function virtualization.	**2**	**2**
4.	Distinguish the SDN and NFV for IoT systems	**2**	**2**
5.	Short note on any three exception handling python packages with example	**3**	**2**
6.	Classify the built-in data types of python data structures	**3**	**2**
7.	Short note on SPI and I2C Raspberry PI-Interfaces	**4**	**2**
8.	Defend how Raspberry Pi is different from a desktop computer?	**4**	**2**
9.	Brief about the real-world design constraints for IoT applications.	**5**	**2**
10.	Define smart parking system and smart lighting	**5**	**2**

PART- B (5 x 14 = 70 Marks)

			Marks	CO	RBT LEVEL
11. (a)		Define the IoT Levels with an example using neat diagrams.	(14)	1	2
		(OR)			
	(b)	Categories the characteristics of Big Data Analytics and examples of big data analytics generated by IoT.	(14)	1	2
12. (a)	(i)	Explain NETCONF with suitable example.	(7)	2	2
	(ii)	Compute Date/Time operation and Classes in python with an example.	(7)	2	2
		(OR)			
	(b)	Define the network operator requirements and describe the need for IoT system management.	(14)	2	2
13. (a)		Compute the operations that can be performed on a list and demonstrate each with an example.	(14)	3	3
		(OR)			
	(b)	Illustrate exception handling python packages - JSON, XML, HTTPLib, URLLib, SMTPLib with each an example.	(14)	3	3
14. (a)		Sketch the building blocks of IoT and its functionalities with suitable illustration.	(14)	4	3
		(OR)			
	(b)	Apply programming Raspberry Pi with python to design a traffic control system and also compute the steps to install the OS in Raspberry Pi.	(14)	4	3
15. (a)		Compute a solution for smart lighting and explain street lighting architecture in detail.	(14)	5	3
		(OR)			
	(b)	Demonstrate the design of IoT for smart cities environment with automation.	(14)	5	3

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

			Marks	CO	RBT LEVEL

16.	Develop an IoT application to control home appliances from anywhere through an interface connected to the same cloud as the application.	**(10)**	**5**	**5**

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