Q. Code:741866

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

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

Fifth Semester

IT18503 – INTERNET OF THINGS

(Information Technology)

(Regulation 2018 /2018A)

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

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Define the vision of IoT from a global context	**5**
CO 2	Select various protocols to be used in IoT	**3**
CO 3	Conclude the Market perspective of IoT.	**3**
CO 4	Choose between available technologies and devices for stated IoT challenge	**3**
CO 5	Apply state of the art Methodologies in IoT application domain	**3**
CO6	Illustrate the application of IoT and identify Real World Design Constraint	**6**

PART- A(10x2=20Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	Differentiate between Logical and physical design of IoT.	**1**	**2**
2.	How is Raspberry pi different from a desktop computer?	**1**	**1**
3.	Examine whether IOT and M2M are same ?	**2**	**2**
4.	How the KNX protocol works?	**2**	**2**
5.	Interpret on purpose of functional view specification.	**3**	**2**
6.	List the types of resources in a domain model. Give example.	**3**	**1**
7.	Brief on the role of Amazon Web Services in IoT.	**4**	**2**
8.	Cite the architecture of Django with suitable explanation.	**4**	**1**
9.	Interpret on necessity for NETCONF datastore.	**5**	**2**
10.	Distinguish between the Hadoop and Storm frameworks.	**5**	**2**

PART- B (5x 14=70Marks)

		Marks	CO	RBT LEVEL
11. (a)	Illustrate in detail about the components of an IoT system and also define the various levels of IoT system based on increasing complexity.	**(14)**	**1**	**3**
	(OR)			
(b)	Illustrate with necessary diagrams the logical design of IoT explaining its functional blocks ,communication models and API's.	**(14)**	**1**	**3**

12. (a)	**(i)**	Examine in detail about the protocol specially built for control of sensor networks on IEEE 802.15.4 standard for wireless personal area networks.	**(7)**	**2**	**3**
	(ii)	Sketch in detail about the application of SDN and NFV in building an IoT system.	**(7)**	**2**	**3**
		(OR)			
(b)	**(i)**	Predict how the idea of "the Internet Protocol could be applied even to the smallest devices and that low-power devices with limited processing capabilities should be able to participate in the Internet of Things" can be realized.	**(8)**	**2**	**3**
	(ii)	Discuss about any one building and automation protocol used in IoT system development.	**(6)**	**2**	**3**
13. (a)		Illustrate with detailed explanation the steps involved in designing a weather monitoring IoT system .	**(14)**	**3**	**3**
		(OR)			
(b)		Propose a generic design for an IoT enabled home intrusion detection system.	**(14)**	**3**	**3**
14. (a)		Inspect different applications that are benefited from AWS EC2, AWS S3and AWS Dynamo DB.	**(14)**	**4**	**3**
		(OR)			
(b)	**(i)**	Elaborate on SkyNet IoT Messaging Platform with suitable example.	**(7)**	**4**	**3**
	(ii)	Interpret in detail about different cloud storage models and communication API's in real-time message exchange between different application components.	**(7)**	**4**	**3**
15. (a)		Illustrate the steps involved to create a YANG module for Home Intrusion system and generate the YIN and TransAPI module for the same.	**(14)**	**5**	**3**
		(OR)			
(b)		Illustrate the multi tier application deployment using Chef and Puppet module .	**(14)**	**5**	**3**

PART- C (1x 10=10Marks)

(Q.No.16 is compulsory)

			Marks	CO	RBT LEVEL
16.		Develop a Python program to control the switching of an LED or light based on readings from a Light Dependent Resistor (LDR).	**(10)**	**6**	**5**

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