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SAPTHAGIRI COLLEGE OF ENGINEERING

Department of Information Science and Engineering

Internal Assessment –I

Subject: Internet of things Technology
Semester/Section: VIII'A' & 'B'
Duration: 1.5 hours

Sub Code: 15CS81
Max Marks: 30
Date: 13-03-2019

Note: **Answer any two full questions, choosing one from each module**

Question No.	Questions	Marks	BLT	CO's
	Module-1			
1 a.	Define IOT. Explain the term Digitization with an example.	5M	L1,L2	CO1
b.	Illustrate the IOT impact in smart building and connected roadways	6M	L2	CO1
c.	Compare the differences between industrial OT network and enterprise IT network.	4M	L2	CO1
	OR			
2 a.	Explain with a neat diagram one M2M IOT standardized Architecture.	8M	L2	CO1
b.	Describe the most significant challenges that IOT is currently facing.	7M	L1,L2	CO1
	Module-1			
3 a.	Explain the IOT reference model published by IOT world forum.	10M	L1,L2	CO1
b.	Briefly explain in detail about sensors and Actuators layer.	5M	L2	CO1
	OR			
4 a.	Explain in detail about the core IOT functional stack with neat diagram.	9M	L2	CO1
b.	Define and explain the following: i)Fog computing ii)Edge computing	6M	L1,L2	CO1

CO1: To interpret the impact and challenges posed by IOT networks leading to new architectural models.

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

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SAPTHAGIRI COLLEGE OF ENGINEERING
Department of Information Science and Engineering
Internal Assessment –II

Subject: Internet of things Technology
Semester/Section: VIII'A' & 'B'
Duration: 1.5 hours

Sub Code:. 15CS81
Max Marks: 30
Date: 15-04-2019

Note: **Answer any two full questions, choosing one from each module**

Question No.	Questions	Marks	BLT	CO's
	Module-2			
1 a.	Define sensors. Explain the classification and different types of sensor with example.	4M	L1,L2	CO2
b.	Briefly explain the characteristics of smart objects	4M	L2	CO2
c.	Explain the frequency bands and constrained node networks of communication criteria.	7M	L2	CO2
	OR			
2 a.	Explain the ZigBee IP protocol stack with neat diagram. Also explain in brief physical and MAC format of IEEE 802.15.4	8M	L2	CO2
b.	Explain the LORAWAN architecture and how security is provided in LORA with neat diagram.	7M	L2	CO2
	Module-3			
3 a.	Explain the need for optimization of IP stack in IOT	7M	L1,L2	CO3
b.	Describe 6LOWPAN Header stacks in detail.	8M	L2	CO3
	OR			
4 a.	Illustrate Routing over Low power and Lossy Network(RPL) with neat diagram.	7M	L2	CO3
b.	Explain COAP message format and how COAP communication take place in IOT infrastructure with an example.	8M	L1,L2	CO3

CO2: Compare and contrast the deployment of smart objects and the technologies to connect them to network.

CO3:Appraise the role of IoT protocols for efficient network communication

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SAPTHAGIRI COLLEGE OF ENGINEERING

Department of Information Science and Engineering

Internal Assessment –III

Subject: Internet of things Technology
Semester/Section: VIII'A' & 'B'
Duration: 1.5 hours

Sub Code: **15CS81**
Max Marks: 30
Date: 18-05-2019

Note: **Answer any two full questions, choosing one from each module**

Question No.	Questions	Marks	BLT	CO's
	Module-4			
1 a.	Explain with neat diagram Types and Challenges of Data Analysis in IOT	8M	L2	CO4
b.	Explain Apache kafka and Lambda Architecture of Hadoop Ecosystem	7M	L2	CO4
	OR			
2 a.	Illustrate with neat diagram Edge Analytics processing unit	7M	L2	CO4
b.	Explain the logical framework based on the purdue model for control hierarchy	8M	L2	CO4
	Module-5			
3 a.	Define Arduino. and Explain with neat diagram Arduino Uno Learning Board.	8M	L1,L2	CO5
b.	Write a program involving DS18B22 Temperature sensor which reads out a Temperature and records on to a Terminal.	7M	L2,L3	CO5
	OR			
4 a.	What is Raspberry pi. Explain Raspberry pi2 model with neat diagram.	9M	L1,L2	CO5
b.	Write a program to control the state of LEDs from on to off and vice versa from Raspberry pi.	6M	L2,L3	CO5

CO4: Elaborate the need for Data Analytics and Security in IoT.

CO5: Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry.

Principal
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