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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

First Semester, M. Tech - Computer Science and Engineering (MCSE)
Semester End Examination; June - 2022
Internet of Things

Time: 3 hrs   *Max. Marks: 100*

Course Outcomes

The Students will be able to:
CO1: Explain the definition and understand the key components that makeup an IoT system.
CO2: Understand where the IoT concepts fit in future trends.
CO3: Compare and contrast the use of devices, gateways and data management in IoT.
CO4: Explain architecture in IoT.
CO5: Identify Real world design Constraints.

<u>*Note:*</u> *I)* *Answer any* ***FIVE*** *full questions, selecting* ***ONE*** *full question from each unit.*

  II) *Any* ***THREE*** *units will have internal choice and remaining* ***TWO*** *unit questions are compulsory.*

  III) *Each unit carries 20 marks.*   *IV)* *Missing data, if any, may suitably be assumed.*

Q. No.	Questions	Marks	BLs	COs	POs
	UNIT - I	**20**			
1 a.	Define IoT. Explain protocols that can be used while designing IoT system.	10	L3	CO1	PO1,2,3,5
b.	Differentiate between IoT and M2M.	10	L2	CO1	PO1,2,3,5
	OR				
1 c.	Describe IoT communication models with neat diagrams.	10	L2	CO1	PO1,2,3,5
d.	Illustrate the technologies which play key role in enabling IoT.	10	L3	CO1	PO1,2,3,5
	UNIT - II	**20**			
2 a.	Explain the significance of IoT value chains with a neat diagram by showcasing its inputs.	10	L3	CO2	PO1,2,3,5
b.	Describe the information driver global value chain for IoT with a neat diagram, along with its inputs.	10	L3	CO2	PO1,2,3,5
	UNIT - III	**20**			
3 a.	Explain IoT devices and gateways focusing on basic device types and gateway technologies.	10	L2	CO3	PO1,2,3,5
b.	Demonstrate how M2M data is managed from point of generation to business assessment through different stages in an IoT system?	10	L4	CO3	PO1,2,3,5
	OR				
3 c.	Write a note on "Everything as a service (XaaS)" provided by an IoT.	10	L2	CO3	PO1,2,3,5
d	Explain the collaborative infrastructure for cross layer interaction between M2M and M2B in integration of IoT with enterprises.	10	L4	CO3	PO1,2,3,5

UNIT - IV	**20**			
4 a. Explain ITU-T IoT reference model with neat diagram.	10	L3	CO4	PO1,2,3
b. Illustrate IoT functional model with neat diagram showcasing different functional groups.	10	L4	CO4	PO1,2,3
OR				
4 c. Discuss the importance of safety privacy, trust, security model of an IoT.	10	L3	CO4	PO1,2,3
d. Illustrate the information handling mechanism in IoT system showing information exchange patterns.	10	L4	CO4	PO1,2,3
UNIT - V	**20**			
5 a. Describe briefly about technical design constraints for IoT.	10	L3	CO5	PO1,2,3,4,5
b. Write a note on service oriented based device integration with a neat diagram.	10	L4	CO5	PO1,2,3

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