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

(An Autonomous Institution affiliated to VTU, Belagavi)

Sixth Semester, B.E. - Information Science and Engineering

Semester End Examination; July / Aug. - 2022

Internet of Things

Time: 3 hrs | Max. Marks: 100

Course Outcomes

The Students will be able to:

CO1: Able to identify the basic concepts, the different levels of IOT applications from a present and a futuristic view point.

CO2: Understand the practical knowledge through different case studies and develop multiple node IOT system with YANG network Configuration

CO3: Understand the working knowledge related to enabling technologies like RFID.

CO4: Design a methodology for various IOT applications and Model the Internet of things to business.

CO5: Understand data sets received through IoT devices and tools used for analysis.

<u>Note:</u> I) **PART - A** is compulsory. **Two** marks for each question.

II) **PART - B**: Answer any <u>Two</u> sub questions (from a, b, c) for a Maximum of **18 marks** from each unit.

Q. No.	Questions	Marks	BLs	COs	POs
	I : PART - A	**10**			
I a.	List the application of IOT.	2	L2	CO1	PO1
b.	List any four limitation of SNMP.	2	L2	CO2	PO1
c.	List out the main components of RFID architecture.	2	L2	CO3	PO1
d.	What is amazon auto scaling?	2	L2	CO4	PO1
e.	List the key components of YARN.	2	L2	CO5	PO1
	II : PART - B	**90**			
	UNIT - I	**18**			
1 a.	Define IOT. Describe the functional blocks of IOT.	9	L2	CO1	PO1
b.	Summarize the IOT communication API's.	9	L2	CO1	PO1
c.	Compare and contrast IOT and SDN.	9	L2	CO1	PO1
	UNIT - II	**18**			
2 a.	Draw a neat diagram of IOT device management with NETCONF and discuss briefly about its tools.	9	L2	CO3	PO1
b.	"How can be IOT used in agriculture domain", justify.	9	L2	CO2	PO1
c.	Analyze the need for IOT system management.	9	L2	CO2	PO1
	UNIT - III	**18**			
3 a.	Discuss briefly the various application of RFID.	9	L2	CO3	PO1
b.	Summarize the hardware issue of RFID.	9	L2	CO3	PO1
c.	Describe the RFID middleware architecture.	9	L2	CO3	PO1

	UNIT - IV	**18**			
4 a.	Illustrate a case study for home automation IOT system involving design methodology.	9	L3	CO4	PO3
b.	Discuss about WAMP-Auto Bahn for IOT.	9	L2	CO4	PO1
c.	Construct the steps in designing a Restful web API.	9	L2	CO4	PO1
	UNIT - V	**18**			
5 a.	With a neat diagram, explain the components of spark cluster.	9	L2	CO5	PO1
b.	Describe how apache hadoop can be used for batch data analysis.	9	L2	CO5	PO1
c.	Write a short note on apache oozie.	9	L2	CO5	PO1

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