



## 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.

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

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

Q. No.	Questions	Marks	BLs	COs	POs
<b>I : PART - A</b>		<b>10</b>			
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
<b>II : PART - B</b>		<b>90</b>			
<b>UNIT - I</b>		<b>18</b>			
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
<b>UNIT - II</b>		<b>18</b>			
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
<b>UNIT - III</b>		<b>18</b>			
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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