U.S.N

P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Fifth Semester, Master of Computer Applications (MCA)
Semester End Examination; February - 2022
Internet of Things (IOT)

Time: 3 hrs   Max. Marks: 100

*Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.*

UNIT - I

1 a.	Summarize the applications of IOT.	10
b.	How IOT used in retail domain? Explain.	10
2 a.	Illustrate IOT communication models.	10
b.	Demonstrate applications of IOT for homes.	10

UNIT - II

3 a.	Illustrate key elements of SDN.	8
b.	Explain the following:	
	i) NETCONF	12
	ii) YANG	
4 a.	Demonstrate difference between M2M and IOT.	10
b.	Illustrate IOT systems management with NETCONF-YANG.	10

UNIT - III

5 a.	Demonstrate the steps involved in IOT system design methodology.	12
b.	Outline the Python syntax and use of the following:	8
	i) Functions ii) Packages	
6 a.	Illustrate domain model of the home automation IOT system.	10
b.	Develop Python code for encoding and decoding JSON.	10

UNIT - IV

7 a.	Explain the basic building blocks of an IOT device.	10
b.	Write Python program for controlling an LED with a switch.	10
8 a.	List ten frequently used UNIX commands on Raspberry pi. Give example for each.	10
b.	Illustrate Python program for switching LED/Light based on reading LDR reading.	10

UNIT - V

9 a.	Demonstrate deployment design of the home automation IOT system.	10
b.	Summarize the air pollution monitoring system using the web socket approach.	10
10 a.	Demonstrate service specification for the smart parking IOT system-state service.	10
b.	Demonstrate Python code for controller service on end-node-forest fire detection system.	10

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