

CMR TECHNICAL CAMPUS
UGC AUTONOMOUS

B. Tech. VI Semester Regular End Examinations, May-2023

Fundamentals of IOT
Common to CSE,IT&CSM

Time: 3 Hours

Max. Marks: 70

Note

- i. This Question paper contains Part- A and Part- B.
- ii. All the Questions in Part A are to be answered compulsorily.
- iii. All Questions from Part B are to be answered with internal choice among them.

PART-A

10 X 02 = 20 Marks

| | Marks | CO | BL |
|--|--------------|-----------|-----------|
| 1. a What is the role of things and internet in IoT? | 2M | CO1 | L2 |
| b Write a short note on sensor networks. | 2M | CO1 | L2 |
| c Write a short note on Arduino IDE Overview. | 2M | CO2 | L2 |
| d Why do we require Interoperability. | 2M | CO2 | L4 |
| e Define the packages in python | 2M | CO3 | L1 |
| f What are the different operations in python. | 2M | CO3 | L2 |
| g What is Hadoop and what are the aspects of Hadoop Technology | 2M | CO4 | L2 |
| h What does SDN mean? | 2M | CO4 | L2 |
| i What is IIOT? And how it is related to IOT? | 2M | CO5 | L1 |
| j What are Wireless Sensor Networks and its limitations. | 2M | CO5 | L2 |

PART-B

5 X 10 = 50 Marks

| | Marks | CO | BL |
|--|--------------|-----------|-----------|
| 2. a Explain the characteristics and applications of IoT in detail | 5M | CO1 | L2 |
| b Write a short note on Basics of Networking | 5M | CO1 | L2 |
| OR | | | |
| 3. a Explain different types of IOT Communication models? | 7M | CO1 | L1 |
| b Differentiate between sensors and actuators | 3M | CO1 | L2 |
| 4. a Differentiate between IoT and M2M | 5M | CO2 | L2 |
| b Sketch the DHT Sensor with its implementation. | 5M | CO2 | L3 |
| OR | | | |
| 5. a Write a short note on semantic interoperability for device interaction with an example. | 5M | CO2 | L4 |
| b Sketch on Traffic light control system and Blinking LED using Arduino | 5M | CO2 | L2 |

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Subject Code: 20EC612OE

SET-I

HT NO: 7 R

- 6 a Illustrate RaspberryPi Peripherals 5M CO3
- b Draw and explain the pin diagram of RaspberryPi. 5M CO3
- OR
- 7 a Briefly explain the functions in python. Give an example for each function. 5M CO3 L3
- b Write about SPI and I2C in detail. 5M CO3 L2
- 8 a Write a program for Remote data logging using DHT22 interfaced with RaspberryPi? 5M CO4 L4
- b How SDN is originated? What are the basic components of SDN? 5M CO4 L2
- OR
- 9 a What are different statistical models for data analytics ? 5M CO4 L3
- b How data is categorized and What are the characteristics of BigData. 5M CO4 L2
- 10 a What is a connected vehicle and what are the challenges associated with connected vehicles 5M CO5 L2
- b What are the properties of Smart Grid and how does the architecture of smart grid look like. 5M CO5 L3
- OR
- 11 a Explain Sensor cloud ? 5M CO5 L3
- b What is the traditional architecture of activity monitoring system and its advantages, mention the important human activities that can be monitored. 5M CO5 L4

CO : Course Outcomes

BL : Bloom's Taxonomy Levels

| | |
|-------------------|---------------------|
| L 1 : Remembering | L 2 : Understanding |
| L 3 : Applying | L 4 : Analysing |
| L 5 : Evaluating | L 6 : Creating |
