H Roll No. ....

TBC–505

B. C. A. (FIFTH SEMESTER)
END SEMESTER
EXAMINATION, Jan., 2023
INTERNET OF THINGS (IOT)

Time : Three Hours

Maximum Marks : 100

Note : (i) All questions are compulsory.

(ii) Answer any *two* sub-questions among (a), (b) and (c) in each main question.

(iii) Total marks in each main question are **twenty**.

(iv) Each sub-question carries 10 marks.

1. (a) What is Internet of Things (IOT) ? Draw the functional block of IOT and explain each of the blocks. (CO1)

(b) Describe the Physical design of an IoT and Logical design of an IoT. (CO1)

P. T. O.

(c) What is the IOT communication APIs ? Describe WebSocket APIs in detail. (CO1)

2. (a) Cite the various M2M/IoT device types and explain their characteristics and different between IoT and M2M.   (CO2)

(b) What are the Wireless medium access issues in IoT ? Describe the web connectivity using gatewayin IoT.   (CO2)

(c) Explain IP addressing in IoT in dept.

(CO2)

3. (a) What is the role of Cloud Computing in Internet of Things ? Explain about the IOT cloud-based services.   (CO3)

(b) What is role of IOT in industries ? Differentiate between the IIOT and IOT.

(CO3)

(c) Write short notes on the following : (CO3)

(i) WSN

(ii) Sensor Technology

(iii) RFID

(iv) Automotive IOT

4. (a) What are the various challenges of IoT ? Illustrate any *one* challenge of IoT in detail.   (CO4)

(b) What effect will the IoT have on Surveillance applications ? Explain with any *one* example of a smart device in Surveillance applications.   (CO4)

(c) Explain with an example : Home automation, Industry applications. (CO4)

5. (a) Describe the different IoT tools. Explain how to develop applications through IoT tools.   (CO5)

(b) Implement the device's sensor-based application through embedded system platforms and explain their applicability.

(CO5)

(c) What is Edge Computing ? Differentiate between fog and edge computing.   (CO5)

400