H   Roll No. ....

TMC–205(BTL/HLD)

M. C. A. (SECOND SEMESTER)
END SEMESTER EXAMINATION,
July/Aug., 2022

INTERNET OF THINGS

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) Discuss IoT with their basic features and dimensions in detail.   (CO1)

   (b) Explain various Functional Blocks and Communication models in context with IoT.   (CO1)

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   (c) Discuss History and generic block diagram of IoT in detail. (CO1)

2. (a) Difference between M2M technology and IoT in detail. (CO2)

   (b) Discuss Sensor Node with their various components in detail. (CO2)

   (c) Write short notes on any *two* of the following : (CO2)

      (1) Wireless Sensor Networks,

      (2) Cloud Computing,

      (3) Big data analytics

3. (a) Discuss Clustering their types and any two types of clustering algorithm in detail. (CO3)

   (b) Discuss Wireless Sensor Network with their advantage and application areas. (CO3)

   (c) Suppose you are designing a Home automation/Industry Automation IoT system, Discuss some of the challenges you faced. (CO3)

4. (a) Discuss any 5 major security challenges of IoT. (CO4)

   (b) Discuss Hardware platforms : Telos-B and OpenMote in detail. (CO4)

   (c) Discuss design and deployment challenges of IoT in detail. (CO4)

5. (a) Explain Z- wave, BLE, and Zigbee in detail. (CO5)

   (b) Write short notes on any *two* of the following :

      (i) Arduino

      (ii) Raspberry Pi

      (iii) TinyOS

   (c) Explain step by step procedure to add Will Module to Arduino Uno Board with proper configuration diagram. (CO5)