

Cmpn: TE sem VI Reg C'scheme Summer 2025

Duration: 3hrs**[Max Marks: 80]**

N.B. : (1) Question No 1 is Compulsory.

(2) Attempt any three questions out of the remaining five.

(3) All questions carry equal marks.

(4) Assume suitable data, if required and state it clearly.

1 Attempt any FOUR**[20]**

- a** Explain IoT Application Transport Methods in brief.
- b** Explain IoTWF Standardized Architecture with a neat diagram.
- c** Explain different types of sensors.
- d** What is IoT? Discuss various challenges w.r.t IOT applications.
- e** Describe Raspberry PI with its pin diagram.

2 a Explain Generic Web-Based Protocols.**[10]**

- b** Explain the following layers in Core IoT Functional Stack-
 - 1. Gateways and Backhaul Sublayer
 - 2. Communications Network Layer

[10]**3 a** Which IoT protocol is used for smart home automation? How will you provide security for these applications with the suggested protocol?**[10]****b** Explain in brief- IoT software platforms.**[10]****4 a** Explain RFID and NFC with a neat diagram.**[10]****b** Differentiate MQTT and COAP.**[10]****5 a** Compare various boards and platforms in terms of connectivity.**[10]****b** Explain BLE and ZigBee.**[10]****6 a** Explain the concept of Edge computing, Fog computing and Cloud computing. How they are related to each other?**[10]****b** Write short note on Smart City considering various IOT platforms, types of sensors, IOT boards, communication technologies and protocols.**[10]**
