

III B. Tech II Semester Supplementary Examinations, April - 2021

INTERNET OF THINGS

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)2. Answer **ALL** the question in **Part-A**3. Answer any **FOUR** Questions from **Part-B****PART -A****(14 Marks)**

1. a) What are smart objects? Give some examples. [3M]
- b) What is RFID? [2M]
- c) What is short range communication? Give some examples. [3M]
- d) Why hop to hop communication is preferable in IoT? [2M]
- e) Give the network topologies ideal for IoT. [2M]
- f) What is IoT middleware? Give some examples. [2M]

PART -B**(56 Marks)**

2. a) Explain the basic architecture of IoT network. [7M]
- b) Elaborate the role of IoT in pollution control systems. [7M]
3. a) What is M2M communication? Justify the statement with an illustrative scenario: "IoT is much more than M2M communication". [7M]
- b) Explain the working principle of Universal plug and Play(UPnP) protocol. [7M]
4. a) Explain the following terms: [7M]
i) Datagram; ii) Hypertext, Hyperlink; iii) XML; iv) Web services.
- b) Describe the HTTP/HTTPS request-response mechanisms. [7M]
5. a) What is Telnet? Explain the remote device access mechanism of Telnet. [7M]
- b) Describe an example of IoT services that uses publish-subscribe model. [7M]
6. a) Describe the challenges and opportunities of data management in IoT. [7M]
- b) Explain the business models for predictive maintenance. [7M]
7. a) Write in detail about wireless sensing technology. [7M]
- b) Describe the IoT cloud based services provided by ThingSpeak platform. [7M]
