

Total No. of Questions : 4]

SEAT No

PC29

[6360]-29

[Total No. of Pages : 1

**T.E. (Computer Engineering) (Insem)**  
**INTERNET OF THINGS AND EMBEDDED SYSTEMS**  
**(2019 Pattern) (Semester-I) (Elective - I) (310245 A)**

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Figures to the right indicate full marks.

- Q1) a) What is System - On - Chip? Discuss the advantages of it. [5]
- b) Discuss a hard real-time system with a suitable example. [5]
- c) Discuss the one of given embedded systems and its components ATM Machine/ Digital Camera. [5]

OR

- Q2) a) What are the desirable features of an embedded systems? [5]
- b) Explain soft and hard real-time tasks with suitable examples. [5]
- c) Discuss the components of the microcontrollers with a diagram. [5]
- Q3) a) Explain IOT level - 3 with suitable Application and diagram. [5]
- b) Discuss that IOT systems have to be self-adaptive and self-configuring. [5]
- c) What are the underlying characteristics of big data? [5]

OR

- Q4) a) Enlist and explain protocols used in IoT. [5]
- b) Explain the Publish - Subscribe communication model with a diagram. [5]
- c) Draw a generic block diagram of IoT and discuss the working of each block. [5]

