Total No. of Questions : 4]

SEAT No. :

P5029

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[6187]-429

T.E. (Computer Engineering) (Insem)

INTERNET OF THINGS AND EMBEDDED SYSTEMS

(2019 Pattern) (Semester - I) (310245(A)) (Elective - I)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q.4.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data if necessary.***

Q1) a) What is an embedded system? What are the characteristics of an embedded system? **[5]**

b) Introduce any embedded processor in brief. Explain its architecture. **[5]**

c) What is a real time system? Describe the types of real time tasks. **[5]**

OR

Q2) a) Draw and elaborate the general model of an embedded system, what are the different applications of an embedded system. **[5]**

b) Illustrate the different components of Microcontroller. **[5]**

c) Define SOC. Explain it with suitable examples of it. **[5]**

Q3) a) Explain the concept of 'Things' in IoT with suitable examples of IoT devices. **[5]**

b) Illustrate the need of analog to digital signal conversion and vice versa. Explain it with suitable application. **[5]**

c) What are the challenges in implementing IoT applications? **[5]**

OR

Q4) a) Enlist IoT deployment levels and explain IoT level 4 with suitable application. **[5]**

b) Define IoT and illustrate the use of Raspberry PI as an IoT Device with suitable application. **[5]**

c) Illustrate the Logical design of IoT with suitable example. **[5]**