

Total No. of Questions :6]

SEAT No. :

**P85**

**OCT. -16/BE/Insem. - 140**

[Total No. of Pages :2

**B.E. (E & Tc)**

**EMBEDDED SYSTEMS & RTOS  
(2012 Pattern) (Semester - I) (Elective - I)**

*Time : 1 Hour]*

*[Max. Marks :30*

*Instructions to the candidates:*

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data if necessary.*

**Q1) a)** Explain the following design metric power size. **[5]**

b) Explain the characteristics of Embedded system. **[5]**

OR

**Q2) a)** Explain waterfall model with a neat diagram. **[5]**

b) Explain the various stages involved in design process. **[5]**

**Q3) a)** Explain the concept of Foreground / Back ground systems. **[5]**

b) Define task. Draw and explain task state diagram. **[5]**

OR

**Q4) a)** Explain Round Robin scheduling algorithm. **[5]**

b) What is priority inversion? How does it help to improve the performance of Embedded system. **[5]**

**P.T.O.**

- Q5)** a) Explain the features of Mucos II RTOS. [5]  
b) Explain any two task related functions. [5]

OR

- Q6)** a) Explain the following functions related to mailbox [5]  
i) OSM box Create ( )  
ii) OSM box Pend ( )  
b) What is intertask communication? Explain the following functions [5]  
i) OS sem Post ( )  
ii) OS sem Accept ( )

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