Total No. of Questions : 6]

SEAT No. :

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BE/Insem./Oct.-551

B.E. (E&TC)

EMBEDDED SYSTEM & RTOS

(2015 Pattern) (Semester - I)

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

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Assume suitable data, if necessary.***

Q1) a) Draw and explain the hardware architecture of embedded system. **[6]**

b) With an example, explain need of optimizing design metrics. **[4]**

OR

Q2) a) Explain the waterfall model. State its merits and demerits. **[6]**

b) What are the criterion for memory selection in embedded system design. **[4]**

Q3) a) Compare General Purpose Operating System (GPOS) and RTOS with respect to :

i) Multitasking

ii) Interprocess communication

iii) Timer

iv) Memory management **[6]**

b) Explain any two scheduling algorithms. **[4]**

OR

Q4) a) With respect to scheduling algorithm, explain the following :
CPU utilization, Throughput, Turnaround time, Wait time **[6]**

b) What is real time system? Explain with a suitable example. **[4]**

P.T.O.

Q5) a) What are different methods of multitasking in μ cos II? Explain with the help of task state diagram. **[6]**

b) Explain the features of μ cos II. **[4]**

OR

Q6) a) Explain the problem of priority inversion with the help of three tasks? How to avoid this problem. **[6]**

b) Explain the following functions : **[4]**

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