

Total No. of Questions : 10]

SEAT No. :

P3047

[5154]-615

[Total No. of Pages : 2

**B.E. (Electronics & Telecommunication)
EMBEDDED SYSTEM & RTOS
(2012 Course) (Semester - I) (Elective - I)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Q.No.1 or Q.No.2, Q.No.3 or Q.No.4, Q.No.5 or Q.No.6, Q.No.7 or Q.No.8, Q.No.9 or Q.No.10.*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagram must be drawn wherever necessary.*
- 4) *Use of non programmable electronics pocket calculator is allowed.*
- 5) *Assume suitable data, if necessary.*

- Q1)** a) Explain features of embedded system and classify them with example. **[5]**
b) Explain various processor technologies in design of embedded processors. **[5]**

OR

- Q2)** a) Explain difference between V model and Water fall model of software design. **[5]**
b) Explain design metrics with respect to camera as embedded system. **[5]**

- Q3)** a) Explain kernel architecture & configuration for RTOS. **[5]**
b) Explain the importance of clock tick in function RTOS. Explain the time management functions in $\mu C/OS-II$. **[5]**

OR

- Q4)** a) What do you mean by task communication & explain various IPC techniques. **[5]**
b) Explain OSMailboxCreate() and OSMailboxPost() function. **[5]**

P.T.O.

- Q5)** a) Compare BIOS with boot loader in embedded system. [8]
b) Explain tracing & profiling tools. [8]

OR

- Q6)** a) List and explain various file systems used in Embedded Linux. [8]
b) What is binary utilities? Discuss miscellaneous binary utilities. [8]

- Q7)** a) Define software testing. Explain various level of testing. [8]
b) Explain concept of loadable device driver for Linux kernel. [8]

OR

- Q8)** a) Draw and explain Linux kernel architecture. [8]
b) Discuss different Linux file systems. [8]

- Q9)** a) Explain the use of ICE for testing embedded system with diagram. [9]
b) Explain mobile phone with its hardware & software requirements. [9]

OR

- Q10)**a) Explain embedded system hardware & software requirements in automatic chocolate vending machine. [9]
b) Explain GNU debugger. What is hardware assisted debugging? [9]

