

Total No. of Questions : 10]

SEAT No. :

P2268

[Total No. of Pages : 2

[5254]-605

B.E. (E & TC)

EMBEDDED SYSTEM & RTOS

(2012 Pattern) (Elective - I) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q. 1 or Q. 2, Q. 3 or Q. 4, Q. 5 or Q. 6, Q. 7 or Q. 8, Q. 9 or Q. 10.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.
- 5) Assume suitable data if necessary.

- Q1)** a) Explain architecture of embedded system .Give classification of embedded system. [5]
- b) Explain various processor technologies in design of embedded processors. [5]

OR

- Q2)** a) Explain difference between V model and spiral model of software design. [5]
- b) Define the context Switching. What are the steps involved in μ C/OS-II context. [5]

- Q3)** a) Explain kernel architecture & configuration. [5]
- b) What do you mean by clock tick in RTOS. Explain the time management functions in μ C/OS-II. [5]

OR

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

P.T.O.

- Q5)** a) Explain BIOS and the role of boot loader in embedded Linux concept. [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 in short. [8]

- Q9)** a) Discuss challenges to kernel debugging. [8]
b) Explain mobile phone with its hardware & software requirements. [10]

OR

- Q10)** a) Explain embedded system application in automatic chocolate vending machine. [8]
b) Explain GNU debugger. What is hardware assisted debugging? [10]

