Total No. of Questions : 10]

SEAT No. :

P3238

[Total No. of Pages : 2

[4859] - 1040

B.E. (ESTC)

EMBEDDED SYSTEM & RTOS

(2012 Pattern) (Elective - I)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates :

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

Q1) a) Explain the characteristics of embedded system. **[5]**

b) Explain the waterfall model. **[5]**

OR

Q2) a) Write a program in embedded C to implement scheduler. **[7]**

b) Explain the different states of task. **[3]**

Q3) a) Explain the classification of embedded system. **[3]**

b) Write a program in embedded C to implement semaphore. **[7]**

OR

Q4) a) Write a program in embedded C to implement mailbox. **[7]**

b) Compare MUCOS RTOS with LINUX RTOS. **[3]**

Q5) a) Explain the importance of embedded Linux in the development of embedded system. **[8]**

b) Explain the memory storage considerations for embedded Linux system. **[8]**

OR

P.T.O.

Q6) a) Explain the cross development environment used for embedded Linux. **[8]**

b) Explain in detail the steps to execute any C program on embedded system development board (ARM 9) **[8]**

Q7) a) Explain the Linux kernel configuration steps. **[8]**

b) Explain module utilities used in embedded linux. **[8]**

OR

Q8) a) Explain the steps to configure U-Boot. **[8]**

b) Explain the following file system in linux. **[8]**

i) ext2 ii) ext3

iii) ext4 iv) JFFS2

Q9) a) Explain the embedded software development tools. **[8]**

b) Explain Automatic chocolate vending machine with suitable block diagram and state its hardware requirements. **[10]**

OR

Q10) a) Explain the porting issues of operating system (os) in an embedded platform. **[8]**

b) Explain the lab tools required for embedded system design. **[10]**

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