

Total No. of Questions : 10]

SEAT No. :

P3606

[Total No. of Pages : 2

[4959] - 1085
B.E. (E&TC) (Semester - I)
Embedded Systems & Rtos
(2012 Course) (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 following design metrics : **[4]**
- i) Power
 - ii) Size
- b) With the help of block diagram, explain the architecture of embedded system. **[6]**

OR

- Q2)** a) Explain the spiral model. **[6]**
- b) Explain the Foreground | Back ground systems with reference to RTOS **[4]**
- Q3)** a) Explain any two scheduling algorithms. **[6]**
- b) Explain the context switching. **[4]**

OR

- Q4)** a) Write a program in embedded C to implement mail box. **[7]**
- b) Explain any two task related functions. **[3]**
- Q5)** a) Explain the embedded Linux development environment with a block diagram. **[8]**
- b) Explain the memory storage considerations for embedded Linux system. **[8]**

P.T.O.

OR

- Q6)** a) Explain the steps to execute any C program on embedded system development board. (ARM 9). [8]
b) Explain the Binary utilities. [8]

- Q7)** a) Explain various file systems used in Embedded Linux. [8]
b) Explain the device driver concept used in embedded Linux. [8]

OR

- Q8)** a) What is universal boot loader? Explain. [8]
b) What are boot loader challenges? [8]

- Q9)** a) Explain the embedded software development tools. [8]
b) Explain mobile phone with suitable block diagram and state its software requirements. [10]

OR

- Q10)** a) Explain the issues in hardware - software design. [8]
b) Explain the different lab tools required for embedded system design. [10]

