

Total No. of Questions : 10]

SEAT No. :

P3106

[Total No. of Pages : 2

[5670]-205

B.E. (E & TC)

EMBEDDED SYSTEMS & 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, electronics pocket calculator and steam tables is allowed.*

- Q1)** a) Explain the spiral model and state its merits and demerits. [5]
b) Explain how design metrics are depending on each other with examples.[5]

OR

- Q2)** a) Define the context Switching. What are the steps involved in μ COS-II context switching. [5]
b) Explain the resource and shared resource in μ COS-II. [5]

- Q3)** a) Explain μ COS- II features. (Any five) [5]
b) Explain following function in COS-II. [5]
i) OSINIT().
ii) OSSTART().

OR

- Q4)** a) Explain the waterfall model in detail. [5]
b) Explain different sates of task with services as an example. [5]

- Q5)** a) Explain BIOS and the role of boot loader in embedded Linux concept.[8]
b) What are storage considerations in case of embedded Linux? [8]

P.T.O.

OR

- Q6)** a) Explain the cross development environment used for embedded Linux. [8]
b) Explain the host and target system and its requirements. [8]

- Q7)** a) List and explain various file systems used in Embedded Linux. [8]
b) Explain the features of Universal boot loaders and porting U-boot. [8]

OR

- Q8)** a) Draw and explain linux kernel architecture. [8]
b) Explain the following file system in linux. [8]
i) ext2
ii) ext4
iii) ext3
iv) JFFS2

- Q9)** a) Explain mobile phone as embedded system with software and hardware requirements. [10]
b) Explain the different lab tools required for embedded system design. [8]

OR

- Q10)** a) What are the hardware and software requirement of Automatic Chocolate vending machine? [10]
b) Why linux is preferred choice for development of embedded system application. [8]

