

Total No. of Questions : 6]

SEAT No. :

P40

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APR - 18/TE/Insem. - 42

T.E. (Computer Engineering)

EMBEDDED OPERATING SYSTEMS

(2012 Pattern) (Semester - II) (310250)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data, if necessary.*

Q1) a) Using the state transition diagram, explain the different states of a process. **[4]**

b) Explain different qualities of a good scheduling algorithm. **[3]**

c) What is EDF? Mention its disadvantages. **[3]**

OR

Q2) a) Differentiate between periodic and aperiodic tasks. **[3]**

b) Consider a multitasking system using FCFS scheduling algorithm. There are three tasks in the ready list with service time T_s , as given below. Find the average turnaround time (TAT). **[5]**

Task	T_s (Time Units)
T_1	100
T_2	350
T_3	175

c) What is firm real - time task? **[2]**

P.T.O.

- Q3)** a) Compare ARM7 and ARM9. [3]
b) Name the registers found in the register set of ARM7. [2]
c) Write assembly language program for ARM7 to add numbers, 1 to 10. [5]

OR

- Q4)** a) Explain LDR and STR with the help of an example. [3]
b) Explain interrupt handling in ARM7. [4]
c) Explain the following with respect to ARM7 architecture: [3]
i) Jazelle DBX
ii) MPU
iii) Synthesizable

- Q5)** a) Differentiate between Bootloader and Bootstrap loader. [4]
b) What is start_kernel()? How it is responsible in starting the Linux kernel? [4]
c) Name four configuration targets or editors used to configure Linux kernel . [2]

OR

- Q6)** a) What are the following files, namely, piggy.o, misc.o, big_endian.o, head-xscale.o and head.o? [5]
b) What is vmlinux? [2]
c) What is BusyBox? How do you configure it? [3]

