TE INSEM
MAR 2017

Total No. of Questions : 6] SEAT No. :

P204 [Total No. of Pages : 2

APR - 17/TE/Insem. - 40

T.E. (Computer Engineering)

EMBEDDED OPERATING SYSTEMS (310250)

(2012 Pattern) (Semester - II)

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 indicate full marks.*
4) *Assume suitable data, if necessary.*

Q1) a) What do you mean by preemptive and non-preemptive tasks? [2]

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

Task	Ts (Time Units)
T1	400
T2	125
T3	250

c) What do you mean by real-time tasks? Give two examples of systems with real time tasks. [3]

OR

Q2) a) Differentiate between periodic and aperiodic tasks. [2]

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

Task	Ts (Time Units)
T1	100
T2	350
T3	175

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

P.T.O.

Q3) a) What is meant by 'Core' with respect to ARM architecture? [2]

b) Name the registers found in the register set of ARM. [3]

c) Write assembly language program for ARM to add numbers 1 to 10. [5]

OR

Q4) a) Explain advanced features of ARM. [3]

b) Explain interrupt handling in ARM. [4]

c) Explain load-store architecture of ARM. [3]

Q5) a) Differentiate between BIOS, Bootloader and Bootstrap loader. [3]

b) What are different outputs/files generated when Linux kernel is built using *make* command for a target processor? [4]

c) Explain Initialization flow of control in brief. [3]

OR

Q6) a) With help of diagram, explain the required setup for embedded Linux development. [5]

b) Name four configuration targets or editors used to configure Linux kernel. [2]

c) What are the standards and relevant bodies for Linux. [3]

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