

Total No. of Questions : 10]

SEAT No. :

P3535

[5560]-187

[Total No. of Pages : 2

T.E. (Computer Engg.)
EMBEDDED OPERATING SYSTEMS
(2012 Pattern) (Semester - II) (310250)

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) *Assume suitable data if necessary.*

- Q1)** a) What the features of ARM processor? List the Registers of ARM. [6]
b) Explain the features of Real time operating system. [4]

OR

- Q2)** a) Name and explain the different operating modes of ARM. [6]
b) Define hard real time, soft real time, Latency, Deadline. [4]

- Q3)** a) Justify Linux is more popular in embedded system. [4]
b) Write a Note on : [6]
i) Tool Chain
ii) UBoot.

OR

- Q4)** a) Name and explain kernel image components. [6]
b) What is cross development environment for Linux? [4]

- Q5)** a) How to format and partition a USB stick? Explain the commands used. [5]
b) Explain the term 'journaling'. Name and explain two file systems which use journaling. [6]
c) Explain the following Linux utilities used: [6]
i) mount
ii) mke2fs
iii) fdisk

OR

P.T.O.

- Q6)** a) What is Das U-Boot? What are U-Boot command sets? [7]
b) What are the different file systems used for embedded Linux? [7]
c) What are pseudo file systems? Name any one. [3]

- Q7)** a) Why tracing and profiling tools are required? Name and explain 3 such tools. [7]
b) How to debug a core dump using GDB? [6]
c) What is SSH? When do you use it? [4]

OR

- Q8)** a) Explain interfacing of BBB with Stepper motor. [7]
b) How to debug Linux kernel code? [6]
c) What are the various development tools used in embedded development? [4]

- Q9)** a) Explain System Server, Activity Manager in Android. [5]
b) How to port Linux on target board? [5]
c) How do you customize Linux for specific board? [6]

OR

- Q10)**a) Which Linux version supports real-time features? What are the real-time features of this Linux kernel? [6]
b) How different latency periods affect the real-time process execution? [6]
c) Explain Init process. [4]