Total No. of Questions : 10]

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[5460]-187

[Total No. of Pages : 2

**SEAT No. :** 

## T.E. (Computer Engineering) EMBEDDED OPERATING SYSTEMS (2012 Pattern) (End - sem) (Semester - II) (310250)

*Time : 2<sup>1</sup>/<sub>2</sub> Hours]* 

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Questions 1 or 2, 3 or 4, 5 or 6, 7 or 8, and 9 or 10.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Name and explain the different operating modes of ARM.	[6]
What are the message pipes? How they are useful to Kernel?	[4]
OR	
	What are the message pipes? How they are useful to Kernel?

<b>Q2)</b> a)	What are the quality points that rate a scheduling algorithm?	[4]	
b)	Give total number of registers found in ARM mode of ARM architecture		
	Give reason for their existence.	[4]	
c)	List four Real Time Operating Systems.	[2]	
<b>Q3)</b> a)	What is bootstrap loader? What are its components?		
b)	What are the following with respect to Linux kernel?		
	i) zImage ii) vmlinuz		
c)	Write short note on flash memory.	[3]	
	OR		

<b>Q4)</b> a)	Explain the following:			[6]
	i) head.o	ii)	main.o	
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- b) What is Busy Box? Give details of Busy Box configuration. [4]
- Q5) a) How DHCP/BOOTP protocols are useful for embedded Linux development? [5]
  - b) Name and explain a Linux utility used for partitioning the block devices.[6]
  - c) What are the different types of device drivers? Explain lsmod and modprobe. [6]

OR

*P.T.O.* 

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<b>Q6)</b> a) b) c)	Explain the following Linux utilities:i) fdiskii) mke2fsiii) e2fsck[6]What is journaling? Give the names of two file systems where it is used.[6]Write a note on MTD subsystem.[5]
<b>Q7)</b> a) b) c)	Explain in detail Embedded Graphics Processing.[7]Write in short GDB, DDD, cbrowser/cscope.[6]What is SSH? When do you use it?[4]OR[4]
<b>Q8)</b> a) b) c)	Explain interfacing of BBB with Stepper motor.[7]What are the challenges faced by developer while debugging Linux kernel[6]code.[6]What is JTAG probe debugging?[4]
<b>Q9)</b> a) b)	With the help of neat diagram, explain embedded android Architecture.[8] How different latency periods affect the real-time process execution? [8] OR
<i>Q10</i> )a) b) c)	Explain the following terms with respect to embedded android.[8]i) Launcherii) Activity manageriii) DalvicVMWhat is real-time scheduling in Linux?[4]How to port Linux on target board.[4]

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