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Name.....

Reg. No.....



**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
OCTOBER 2012**

**IT 09 503—EMBEDDED SYSTEMS
(2009 Scheme)**

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. Mention about the hardware units used in an embedded system.
2. What are the features involved in advanced buses ?
3. How is DFG used for program analysis ?
4. What are the problems faced when data is shared in RTOS ?
5. State the advantages of MUCOS.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

1. Explain about the software components used in an embedded system.
2. Explain about the serial port devices.
3. Write about the Petri net models.
4. Define a device driver. State its need and mention its working.
5. Mention about the OS security issues.
6. How is synchronization done in an RTOS environment ?

(4 × 5 = 20 marks)

Part C

Answer all questions.

1. Discuss in detail about the processors in the embedded system.

Or

2. Write about the embedded systems on a chip (SOC) and use of VLSI.
3. With a neat sketch, explain the Timer and the Counting devices.

Or

Turn over

4. Discuss in detail about the common memory devices used in an embedded system.
5. Explain the Inter process communication in RTOS.

Or

6. Describe about the interrupt servicing mechanism.
7. Explain about the list of basic actions in pre-emptive scheduler and expected time taken.

Or

8. How is scheduling of multiple tasks done in real time by RTOS ? Explain.

(4 × 10 = 40 marks)