R09

Code No: C3708, C7506

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.Tech I - Semester Examinations March/April-2011

EMBEDDED SYSTEMS

(COMMON TO CONTROL ENGINEERING, CONTROL SYSTEMS)

Time: 3hours **Max.Marks:60**

Answer any five questions

All questions carry equal marks

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1. Explain the characteristics and challenges in embedded software development applications. [12]

2. a) Discuss the aspects Memory allocation and Mapping in embedded domain
   b) What are the considerations for processor selection? [12]

3 a) Explain the role of device drivers and buses in device networking.
   b) Write the assembly language program using 80xx microcontroller which interface LED and make it ON and OFF. [12]

4. What is the role of serial communication in real-time applications? Explain the serial communication among the different buses. [12]

5. Explain the process and process state diagram. Show that Semaphores are used for process synchronization. [12]

6. Explain the role of ICE in embedded system application development. How the embedded applications are ported into TARGET environment? [6+6]

7. Distinguish Top down and Bottom approaches of embedded software design and development. Illustrate one of them with the suitable application. [12]

8. Write a short note on:
   i) Interrupt implementation issues in Real Time applications.
   ii) Features of Vx works or PSOS. [12]

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