Code No: D109115803

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I Semester Regular Examinations March 2010
EMBEDDED SYSTEMS
(COMMON TO COMPUTER SCIENCE & ENGINEERING, COMPUTER SCIENCE)

Time: 3hours   Max.Marks:60

Answer any five questions
All questions carry equal marks
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1. Define embedded system? Explain the design process in embedded system.

2. What are the variants of 8051 controllers? Discuss the architectural features of 8051 controller

3. a) Explain briefly about the Network protocols used in internet enabled system.
   b) What features of JAVA are exploited in embedded applications?

4. a) What do you mean by hot attachment? Explain the role of timer device in embedded system.
   b) Write an assembly language program of 8051 that count number of 1's in a byte.

5. Distinguish between function, ISR and Task? Explain the role of semaphore in inter processor communication.

6. a) What is the back support package and explain the components of Target emulator?
   b) What are the advantages of In-Circuit Emulator (ICE)?

7. a) What is a Target System? How does the target system differ from the final embedded System?
   b) What is the significance of application software for a target system?

8. Answer any Three
     i.   Real Time Linux
     ii.   Interrupt Routines in RTOS environment
     iii. Watch dog timer
     iv.   Preemptive scheduling model for RTOS application

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