

**Code No: A5501****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****M.Tech I Semester Examinations, October/November-2011****MICRO CONTROLLERS FOR EMBEDDED SYSTEM DESIGN****(EMBEDDED SYSTEMS)****Time: 3hours****Max. Marks: 60****Answer any five questions  
All questions carry equal marks**

- - -

1. a. Explain the functional over view of 8048.  
b. Explain the different types of Flash memories. [12]
2. Explain the PIC 16C6X internal Architecture. [12]
3. a. Explain the PWM for 8051.  
b. Explain how a timer/counter is used in 8051. [12]
4. a. Explain any five instructions which work with special function registers in 8051.  
b. Explain the instruction formats for ARM processor. [12]
5. a. Explain the interrupt vectors and their addresses in 8051.  
b. Explain how the ISR's are executed in priority modes in 8051. [12]
6. Explain in detail the differences and specification standards between RS422 and APPLE TALK, RS435. Draw connectivity of RS422, Apple Talk, and RS435. [12]
7. Explain Channels and IDMA simulations. Explain Debugging procedures in embedded systems. [12]
8. Design an embedded system with 8051 microcontroller, in industrial control. The minimum requirement for the system is to have GPIO interface. [12]

\*\*\*\*\*