

R09

Code No: C8402

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

ADVANCED MICRO CONTROLLERS

(REAL TIME SYSTEMS)

Time: 3hours

Max. Marks: 60

Answer any five questions

All questions carry equal marks

- - -

1. a) Explain the complete ARM register set in different modes of ARM processor. [6M]
b) Explain how a constant is loaded into a general purpose register of ARM processor. [6M]
2. a) Distinguish the features of RS 232, RS 422, RS 485 serial communication protocols. [6M]
b) Draw the block diagram of CPM. Explain the data path and registers of SDMA channels. [6M]
3. a) Give the hardware configuration of program and data memory interfaced to 8051. [6M]
b) Explain the format of IP and IE register of 8051. [6M]
4. What is the purpose of External Bus Interface? Give its signal descriptions and limitations. [12M]
5. a) Write a program to create a square wave with a 20ms period and 50% duty cycle using PIC16C6X. [6M]
b) Write a program to transmit a string "Embedded Systems" serially at 9600 baud rate using 8051. [6M]
6. Discuss the hardware and software attributes of vectored interrupts. [12M]
7. a) Write a program to get data from the SFRs of Port B and send it to the SFRs of Port C continuously in PIC 16C6X. [6M]
b) Describe various operating modes of timers/counters and associated registers of PIC 16C6X. [6M]
8. Write short notes on:
 - a) Interrupt Latency
 - b) Thumb State of ARM7TDMI
 - c) Addressing modes of 68HC11. [12M]
