NR

Code No: A5501
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I Semester Examinations, March-2011
MICRO CONTROLLERS FOR EMBEDDED SYSTEM DESIGN
(EMBEDDED SYSTEMS)

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

Answer any five questions
All questions carry equal marks
- - -

1. Explain the architecture of 68HC11 with the help of a neat block diagram.   [12]

2. Explain the architecture of PIC16C6X with the help of a neat block diagram.[12]

3. a) Write a program for 8051 controller to read 200 bytes of data from P1 and save
      the data in the external Ram starting at RAM location 5000H.
   b) Discuss the importance of the following of 8051 for its interfacing with
      external memory.
      (i) P_0 and P_2 (ii) PSEN   (iii) EA   [12]

4. a) Discuss the pulse width modulated outputs of PIC controllers.
   b) Explain the general features of the interrupts of 68HC11 microcontroller.
      Discuss. The interrupt vectors and interrupt priorities of MC68HC11.   [12]

5. a) Explain various addressing modes of 8051.
   b) Write an ALP for 8051 to arrange a list of nine 8-bit numbers in ascending
      order.   [12]

6. a)What are RS-232 specifications? Interface RS232 to 68HC11 controller.
   b) Draw a schematic of 8051 controller interfacing to RS232.   [12]

7. a) Explain Ethernet protocol.
   b) Discuss about Embedded RISC processor architecture.   [12]

8. Write short notes on the following:
   a) Interfacing of stepper motor with 8051 and its control.
   b) UART interfacing with PIC microcontroller.
   c) Power Controls for microcontrollers.   [12]

*****