May-25-0783

ECEPC-412 (Microcontrollers)

B.Tech. 4th (NEP)

Time : 3 Hours   Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Question paper consists of five sections. Attempt one question each from section A, B, C & D. Section-E is compulsory.

SECTION - A
(Attempt any One)

1. Explain the operations of the interrupts structure of the 8085, with the help of a circuit diagram.   (12)

2. Explain direct addressing mode of 8085 with an example. (12)

SECTION - B
(Attempt any One)

3. Explain, in detail, 8255 programmable peripheral interface.
                                                                         (12)

4. Explain with circuit diagram interfacing of 2KX8 EPROM. (12)

SECTION - C
(Attempt any One)

5. With neat and clean pin diagram and details, explain Basic 8051 Architecture.   (12)

6. Explain the following in detail and differentiate:

    a. CISC architecture   b. RISC architecture   (12)

SECTION - D
(Attempt any One)

7. Write a program to add two 8-bit numbers using 8051. (12)

8. Briefly explain about flash memory in PIC with necessary diagram. (12)

SECTION - E
(Compulsory Questions)

9.   i.   What is microcontroller?

ii.   What is a special function register?

iii.   What are the functions of RAM and ROM chips in a microprocessor-based system?

iv.   What are the ARM Processor modes?

v.   Explain the stack operation in the 8051.

vi.   Explain Pipelining with examples.

(6×2=12)