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Total Number of Pages : 02

B.Tech
PCEL4303

6th Semester Back Examination 2017-18
MICROPROCESSOR AND MICROCONTROLLER
BRANCH : CSE, EEE, ELECTRICAL, IT, ITE
Time : 3 Hours
Max Marks : 70
Q.CODE : C561

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.
Attempt all parts of a question at a place

Q1 Answer the following questions : (2 x 10)

- a) What are the various registers of the 8085?
- b) What are the machine cycles in the 8085?
- c) Mention the differences between 8085 and 8086 microprocessors.
- d) What is meant by DMA operation?
- e) What are the functions of the different flags in the 8086?
- f) What is the difference between SUB and CMP instructions?
- g) What is the function of DAA instruction in the 8086?
- h) What is the difference between mode 0 and mode 1 operations of 8051 timers?
- i) List the interrupts presents in 8051.
- j) What is the function of the instruction XCHD in 8051?

Q2 a) With a neat sketch, discuss the architecture of Intel 8085, bringing out its salient features. (5)

b) With a help of a functional block diagram, explain the features available in the microcontroller Intel8051. (5)

Q3 a) '8086 employs a pipe lined architecture' – Elaborate. (5)

b) Discuss the segment memory concept used in 8086. (5)

Q4 a) Write an assembly level program for 8051 to clear 16 RAM locations starting at RAM address 60H. (5)

b) Draw the Interfacing diagrams of three numbers of 8K×8 size RAM memory chips with 8086. (5)

Q5 a) Explain the maximum mode of 8086 with the timing diagrams of memory read cycles, memory write cycle and discuss about multiprocessor configurations. (5)

b) Explain the RAM memory allocation in 8051? (5)

Q6 a) Write a program to transfer a byte from external RAM address 200H to external RAM address 300H in 8051. **(5)**

b) Write a subroutine to generate delay of 20ms. Assume crystal frequency is 12MHz in 8051. **(5)**

Q7 Write an assembly language program to multiply two 16 bit hexadecimal numbers in 8051. **(10)**

Q8 Write short answer on any TWO : (5 x 2)

a) 8086 Interrupts

b) Memory mapped I/O and I/O mapped I/O in 8086.

c) Intel 8279 architecture

d) Timers in 8051