

End Semester Examinations - 2015-16 Even Semester - May 2016

14EC2009 Microprocessor and Interfacing techniques

Set B

Time : 3 hrs
Total Marks: 100

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1. a. With neat sketch, explain the architecture of 8085 microprocessor. (15)
b. Draw the timing diagram for the instruction
4100: MOV A,B (5)
- OR**
2. a. Identify and define the addressing modes of the following instructions (10)
i. LDAX B
ii. LDA 4302
iii. MOV A,B
iv. RRC
v. ANI 42
b. Sketch the timing diagram for the instruction OUT 45. (10)
3. a. Design a memory system for the 8085 microprocessor such that it should contain 16 Kbyte of ROM and 4 Kbyte of RAM and give the address map. (15)
b. Design a system for the 8085 microprocessor to connect 2 LEDs and 2 Switches. (5)
- OR**
4. a. Draw and explain the block diagram of 8255-programmable peripheral interface. (15)
b. MVI C,FF
Loop DCR C
JNZ Loop
Find the execution time for the above delay program (5)
5. a. With Neat Block diagram, explain how 8251A is designed for asynchronous serial data communication. (15)
b. Write an 8085 assembly language program to generate 2Khz square wave from counter 2. The clock frequency of 8253 is 2 Mhz.(Assume Counter 0 address is 80H) (5)
- OR**
6. a. Explain in detail about 8253 programmable timer with a block diagram and describe the modes of operation (15)
b. Draw the diagram interfacing 8237 – DMA controller with 8085 microprocessor. (5)
7. a. With neat functional block diagram explain the architecture of 8086 Microprocessor. (15)
b. Write an 8086 assembly language program to find sum of first 5 natural numbers. (5)
- OR**
8. a. Describe maximum mode and minimum mode configuration of 8086 with necessary diagrams. (15)

- b. Write an ALP to arrange the numbers from the least in an array using 8086.
(5)

9. a. With neat block diagram, Illustrate how a matrix keyboard and display can be interfaced with the microprocessor using keyboard display interface controller 8279. (15)
- b. Write short notes on Pentium processor.

(5)

Wishing you All the Best
