

Exam.Code:0927
Sub. Code: 6899

1079

B.E. (Electronics and Communication Engineering)
Third Semester
EC-303: Microprocessor and Applications

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer the following:-

- a) What is the difference between absolute and partial decoding?
- b) What is an assembler?
- c) What is the difference between Subtract and Compare instruction?
- d) How does the stack space grow?
- e) What are the different modes of 8255A?

UNIT - I

II. a) What are the various types of instruction formats of 8085? Give example for each format.

b) What are the different operations that can be performed with data in a microprocessor? What units are required for these operations? Explain with the help of block diagram. (2x5)

III. a) How can you select 8 blocks of address each of 4 KB area using a decoder IC? Draw the arrangement showing all signals.

b) Design a seven-segment LED output port with the device address F6H, using a 3:8 decoder and a common-anode seven-segment LED. (2x5)

IV. a) A set of eight data bytes is stored in the memory location starting at XX50H. Check each data byte for bits D7 and D0. If D7 or D0 is a 1, reject the data byte; otherwise store the data bytes at memory locations starting at XX60H.

b) Write instructions to clear the CY flag, to load number FFH in register B and increment (B). If the CY flag is set, display 01 at the output port, otherwise display the contents of register B. Explain your results. (2x5)

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(2)

UNIT - II

- V. a) Explain the sequence of events that takes place when a subroutine is called. How is the execution resumed in the main program? Illustrate with example.
b) Write a program to generate a square wave with the period of 500 μ s. Assume the system clock period is 325 ns and use bit D0 to output the square wave. (2x5)
- VI. a) What are the different vectored interrupts of 8085? Describe each of them briefly.
b) With the help of a schematic diagram, show the interfacing of a typical 8-bit A/D converter with the 8085 using status check. Give the subroutine instructions to initiate the conversion and to read output data. (2x5)
- VII. Write short notes on:-
a) 8257 DMA controller
b) Memory management unit of 8086 (2x5)