

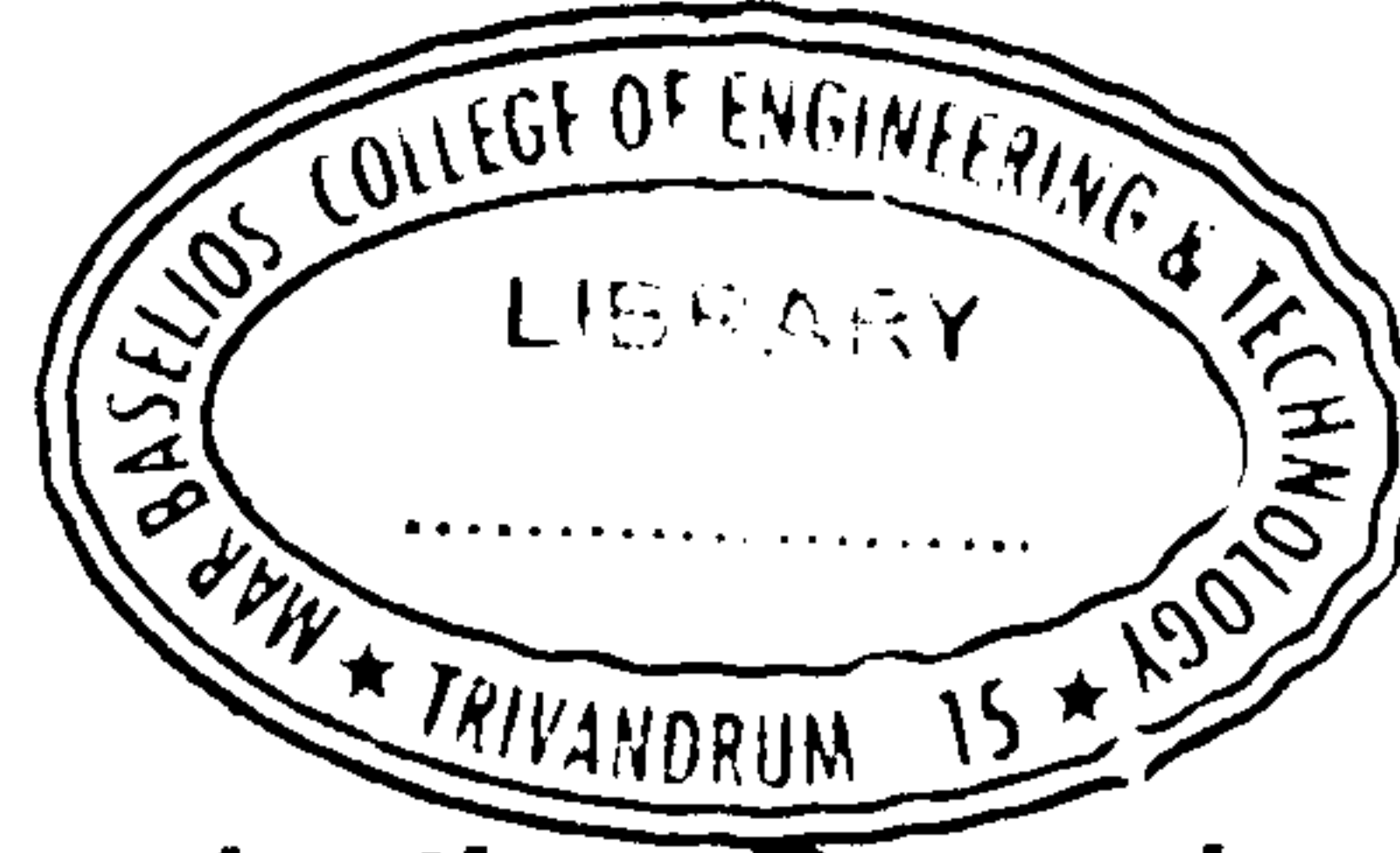


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F – 3156

Reg. No. :

Name :



**Sixth Semester B.Tech. Degree Examination, December 2018
(2013 Scheme)**

13.603 : MICROPROCESSORS AND APPLICATIONS (E)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions :

1. Which are the control and status signals in 8085 microprocessor ? Explain.
2. Explain and differentiate the functions of RLC, RAL, RRC and RAR instructions of 8085 processor.
3. Compare memory mapped I/O and I/O mapped I/O schemes in 8085 processor.
4. What are the advantages of segmentation in 8086 processor ?
5. Explain the different modes of operation of 8255 PPI. **(5×4=20 Marks)**

PART – B

Answer **any one full** question from **each** Module. **All** questions carry **equal** marks.

Module – I

6. a) Draw a neat diagram and explain the internal architecture of 8085 microprocessor.
b) Write an assembly language program to multiply two 8 bit numbers stored in consecutive memory locations.

OR

7. a) What are the different addressing modes in 8085 assembly language programming ? Explain with examples, how effective address is computed in each case.
b) Write an assembly language program to sort the given set of 8 bit numbers in ascending order.

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P.T.O.



Module – II

8. a) Draw and explain the timing diagram of the instruction MVI r, data₈.
 b) Using a 2 to 4 decoder, show how two input devices and two output devices can be interfaced to 8085. Draw the circuit diagram and explain I/O addressing.

OR

9. a) Draw and explain how two numbers of 2 K × 8 ROM and one number of 4 K × 8 RAM are interfaced with 8085 processor. Also give the address mapping table.
 b) Explain with necessary diagram, the interrupt structure of 8085 microprocessor.

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Module – III

10. a) With appropriate pin diagrams explain the minimum and maximum mode operations of 8086.
 b) Write an ALP in 8086 to move block of N bytes of data from source to destination.

OR

11. a) Discuss the functions of all general purpose registers of 8086. Explain the special function of each register and instruction support for these functions.
 b) What do you mean by “PIPELINING” ? How this concept is used in 8086 processor ?

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Module – IV

12. a) Draw a neat diagram and explain the internal architecture of 8255 PPI.
 b) Compare the built-in features of 80386, 80486 and 80586 processors.

OR

13. a) Draw the circuit diagram for interfacing ADC with 8085 processor and explain.
 b) Write an assembly language programme to generate a square wave with 1 m sec time period.

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