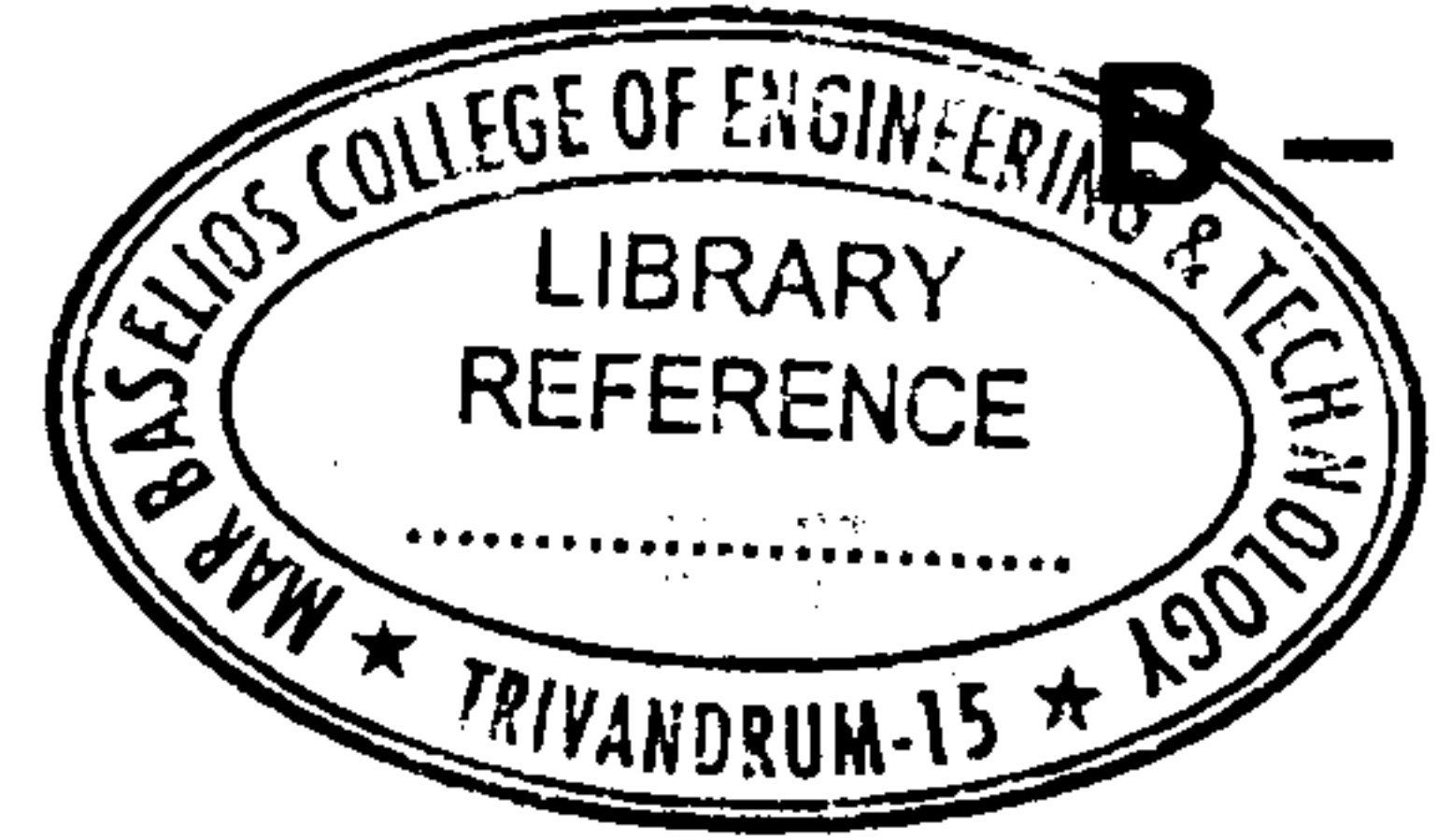




(Pages : 2)



**B – 5993**

Reg. No. : .....

Name : .....

**Sixth Semester B.Tech. Degree Examination, April 2017  
(2013 Scheme)**

**13.603 : MICROPROCESSORS AND APPLICATIONS (E)**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions :

1. Which are the pins in 8085 used for
  - a) Address/Data bus demultiplexing
  - b) Clearing PC
  - c) Interfacing slow peripherals
  - d) Serial data transmission.
2. Explain any four assembler directives.
3. Explain vectored interrupts.
4. Explain different flags in 8086.
5. Explain control word pattern of 8255. Frame control word to make Port A input and Port B output. **(5×4=20 Marks)**

**PART – B**

Answer **any one full** question from **each** Module :

**Module – I**

6. a) Explain different addressing modes with examples. **10**
- b) Write program to add ten BCD numbers stored in an array. Assume 16-bit answer and store the result in two consecutive memory locations. **10**

OR

P.T.O.



7. a) Explain CALL-RETURN execution sequence. 8  
b) Write program to find the number of occurrences of a given number in an array. End of the array is indicated by FFH. 12

### Module – II

8. a) Draw the timing diagram to instruction OUT 20H. Explain opcode fetch cycle. 10  
b) Explain the sequence of operations when 8085 is interrupted by an external device at INTR pin. 10

OR

9. a) Interface 4 KB ROM and 8 KB RAM to 8085 using 4 KB × 8 bit memory chips. Give memory map. 10  
b) Explain different data transfer schemes. 10

### Module – III

10. a) Draw the internal architecture of 8086. Explain pipelining. 10  
b) Explain memory segmentation and physical address calculation. 10

OR

11. a) Differentiate between minimum and maximum mode of operation of 8086. 10  
b) Write 8086 ALP to multiply two 16-bit numbers. 10

### Module – IV

12. a) Interface 8 LEDs to Port B and one switch to PA0 of 8255. Read the switch position. If it is ON, make all LEDs at Port B ON else make all LEDs OFF. 10  
b) Explain with diagram and program how ADC can be interfaced with 8085. 10

OR

13. a) Draw the block diagram of 80386 and explain each block. 12  
b) Explain superscalar architecture. 8
-