

Total No. of Printed Pages:02

SUBJECT CODE NO:- H-1382
FACULTY OF SCIENCE AND TECHNOLOGY
T.Y. B.Tech. (ETC) (Sem-V)
Microprocessors and Microcontroller
(Revised)

[Time: Three Hours]**[Max.Marks:80]**

N.B

Please check whether you have got the right question paper.

- i. Question No. 1 and 6 are compulsory.
- ii. Attempt any two questions from remaining in each section.

Section A

- Q.1 Attempt **any FIVE** of the following 10
- a) Why AD₀ to AD₇ lines are multiplexed?
 - b) Give the function RESET and READY pins of 8085.
 - c) Give difference between memory mapped I/O & I/O mapped I/O.
 - d) Give the function of interrupt request register of 8259.
 - e) What is fully nested mode?
- Q.2 a) Draw the timing diagram of ADD M. 08
b) Write a delay subroutine for generating a delay of 0.4 sec. 07
- Q.3 a) Write an assembly language program to find smallest number from a block of data. 07
Block of ten numbers are stored from memory location 2200H.
b) Interface 7 segment display with 8085 through 8255. And write an ALP for display 0 to 9. 08
- Q.4 a) Draw the block diagram of 8255 and explain each block in detail. 08
b) Draw the master slave diagram of 8259 PIC to interface 24 interrupting devices. 07
- Q.5 a) With neat waveform explain mode 1 and mode 2 of 8253. 07
b) Explain different data transfer techniques of 8085 in detail. 08

Section B

- Q.6 Attempt **any five** of the following 10
- a) Give IP=329 CH, physical address=573H calculate segment address.
 - b) What do you mean by index registers?
 - c) Draw SCON register of 8051.
 - d) Enlist any four feature of 8051.
 - e) What is the reset value of SER's, stack pointers, and ports of 8051
 - f) Explain direct addressing mode of 8051 with example.
- Q.7 a) Draw and explain the architecture of 8086. 08
b) What is memory segmentation? Explain it for 8086. 07

- Q.8 a) Two 32 bit numbers are stored at Num1 and Num2 respectively. Write an instruction sequence to add these numbers and store it in Num3. 08
b) Write ALP to subtract the content of two external memory location 7400H and 7401H. Store result at 7402H. 07
- Q.9 a) Explain in detail steps to program timer in mod 2. 08
b) Assuming crystal 22MHz write a program to generate a square wave of frequency 1KHz on pin 1. 2. Use timer 0, mode 2. 07
- Q.10 a) Interface LCD 16×2 with 8051 and write a program for communicating with LCD using a delay. 10
b) Write a 8051 program in C to toggle all the bits of port 1 continuously. 05