

Total No. of Questions : 12]

SEAT No. :

P1901

[4861]-24

[Total No. of Pages : 3

**F.Y. M.C.A. (Engineering Faculty)
MICROPROCESSOR APPLICATIONS
(2008 Course) (Semester-II) (510912)**

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *From Section-I, answer (Q. 1 or Q. 2), (Q. 3 or Q. 4), (Q. 5 or Q. 6).*
- 2) *From Section-II, answer (Q. 7 or Q. 8), (Q. 9 or Q. 10), (Q. 11 or Q. 12).*
- 3) *Answers to the two sections should be written in separate answer books.*
- 4) *Neat diagrams must be drawn wherever necessary.*
- 5) *Figures to the right side indicate full marks.*
- 6) *Assume suitable data if necessary.*

SECTION-I

- Q1)** a) Explain the need to demultiplex the bus AD7-AD0. [4]
- b) Explain the following: [8]
- i) Tristate State Devices.
 - ii) Buffer.
 - iii) Bidirectional Buffer.
 - iv) Decoder.

OR

- Q2)** a) Explain the concept of tri-state logic. Explain unidirectional and bidirectional buffer with neat diagram and truth table. [8]
- b) What is program counter? How it is useful in program execution? [4]
- Q3)** a) Draw and explain Timing Diagram of MOV M, R instruction. [6]
- b) Explain the execution of the following instructions with examples. [6]
- i) MOV Rd, Rs.
 - ii) MVI M, Data.

OR

P.T.O.

- Q4)** a) Explain basic machine cycles of 8085 microprocessor. [8]
b) What is a Stack? Explain push and pop operation of stack using suitable example. [4]

- Q5)** a) Discuss interfacing with a matrix keyboard. [7]
b) Explain the functions of the RD(bar) & WR(bar) signals of the 8085 Microprocessor. [4]

OR

- Q6)** a) Write short note on: [5]
i) BSR mode
ii) I/O mode
b) Explain the I/O Interfacing Techniques of 8085 MPU. [6]

SECTION-II

- Q7)** a) Give details of hardware interrupt and software interrupt of 8085. [8]
b) What is necessity of Programmable Interval Timer. [4]

OR

- Q8)** a) Explain functional block diagram of 8253 with neat diagram. [8]
b) What do you mean by interrupt? What is ISR? What is the function of ISR. [4]

- Q9)** a) Draw and explain the programmer's model of 8086. [8]
b) What is purpose of addressing modes? Explain any three. [4]

OR

- Q10)** a) Explain various registers in 8086. [4]
b) Explain segmentation with neat diagram. What are the advantages of it? [6]
c) What is pipelining? [2]

- Q11)** a) What do you mean by Directives? Explain any five 8086 language Directives. [7]
b) List and explain the DOS Calls for displaying the character(s). [4]

OR

- Q12)** a) Write an 8086 assembly language program to reverse 5 numbers in an Array. [8]
b) Explain what is meant by BIOS calls. List and use of any 4 BIOS call. [3]

