

Exam. Code : 208603

Subject Code : 4828

M.Sc. Information Technology 3rd Semester

(Batch 2020-22)

MICROPROCESSOR & ITS APPLICATIONS

Paper—MIT-305

Time Allowed—3 Hours]

[Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. (a) Explain the internal architecture of the 8086/8088 microprocessor with block diagram. 10
- (b) What are the standard data word lengths for which microprocessors have been developed ? What was the first 4-bit microprocessor introduced by Intel Corporation ? Also name 8-bit, 16-bit and 32-bit microprocessors introduced. 10
2. (a) Draw the Pin layout of 8086 Microprocessor and discuss in detail. 10

- (b) Explain the steps of configuring 8086/8088 microprocessor for minimum-mode systems. 10

SECTION—B

3. (a) The memory address spaces of the 8086 and 8088 microprocessor are organized differently from a hardware point of view. Explain. 15
- (b) Describe the bus status codes for maximum mode 8088/8086 microprocessors. 5
4. (a) Explain Minimum-Mode Memory Control Signals of 8086/8088 microprocessor. 10
- (b) Explain Maximum-Mode Memory. Write Bus Cycle of 8086 microprocessor. 10

SECTION—C

5. (a) Explain how an Isolated I/O Interface is implemented for minimum-mode 8086/8088 microcomputer systems. 10
- (b) Explain Input Bus Cycle of 8086/8088 microcomputer systems. 10
6. (a) Write in detail RS-232C Interface. 15
- (b) For an RS-232C Interface, what voltage range defines a mark at the transit end of a serial communication line? 5

SECTION—D

7. (a) Explain Minimum-Mode Interrupt interface of 8086/8088 microcomputer systems. 10
- (b) What is the range of type numbers assigned to the interrupts in the 8086/8088 microcomputer systems? Is the interrupt assigned to type 21 at a higher or lower priority than the interrupt assigned to type 35? 10
8. What do you mean by an Interrupt? What are its various types? Explain Interrupt Vector Table of 8086/8088 microprocessor. 20