328613(28)

B. E. (Sixth Semester) Examination April-May 2021
(Old Scheme)

(AEI, EEE, EI & ET & T Engg. Branch)

ADVANCE MICROPROCESSOR & INTERFACING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory and carries 2 marks. Attempt any two parts from (b), (c) and (d) of each question which carry 7 marks each.

Unit-I

1. (a)   What is the functions of different types of REP prefix?

    (b)   Explain the following PIN functions of 8086 in detail?

   (i)   QS0 & QSI

   (ii)   RQ/GT0,RQ/GT1 (active low)

   (iii)   Lock & Test (active low)

   (iv)   S0, S1, S2

(c)   Explain the 8086 microprocessor architecture with its register organisation in detail?

(d)   The contents of different registers are given below. Form physical addresses for different addressing modes. Offset & 16 bit displacement = 5000h, AX = 1000H, DS = 2000H, BX = 1000H, SI = 3000H.

Unit-II

2. (a)   What is the main difference between 8086 and 8088 microprocessor.

    (b)   Explain the maximum mode configuration of 8086 microprocessor in detail?

    (c)   Explain the different types of interrupt in 8086 microprocessor with suitable diagram of interrupt vector table.

    (d)   Explain the difference between minimum and maximum mode configuration.

Unit-III

3. (a)   What is the main different between 8259 and 8259 A?

    (b)   Explain the following operating modes of IPC 8259 A.

    (i)   Fully Nested Mode

    (ii)   Automatic Rotation Mode

    (iii)   Buffered Mode

    (iv)   Cascade Mode

    (c)   Explain interfacing of 8254 (Programmable Interval Timer) with 8086 microprocessor with suitable diagram?

    (d)   Explain interfacing of DAC 0800 with 8086 microprocessor with suitable diagram.

Unit-IV

4. (a)   Define the format of selector.

    (b)   Explain the use of each of the following register of 80386 in detail.

    (i)   Control Register

    (ii)   System Address Register

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(iii) Debug & Test Register

(c) Explain the function of real mode, protected mode and virtual mode of 80386 mp in detail.

(d) Explain architecture of 80386 microprocessor in detail.

Unit-V

5. (a) Explain the multiprocessor in brief.

(b) Explain the architecture of Numeric data processor 8087 in detail.

(c) Explain the architecture of IOP (input output processor) 8089 in detail.

(d) Explain the interfacing between IOP 8089 and 8086 microprocessor with suitable diagram.