2021

Time : 3 hours

Full Marks : 70

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

*Answer from **all** the Parts as directed.*

Part – A

1. Choose the correct answer in each of the following : 1×5 = 5

(a) Multiplexer is also known as :

(i) MUX

(ii) DEMUX

(iii) A/D Converter

(iv) None of these

(b) Which of the following circuit converts the Binary Data into Decimal ?

(i) Decoder

(ii) Encoder

(iii) Code Converter

(iv) Multiplexer

(c) Subtraction in computer is carried out by :

(i) 1's Complements

(ii) 2's Complements

(iii) 3's Complements

(iv) 9's Complements

(d) Which of the following computer bus connects the CPU to a memory on system borad ?

(i) Expansion Bus

(ii) Width Bus

(iii) System Bus

(iv) None of these

(e) DMA stands for :

(i) Direct Memory Access

(ii) Directly Memory Address

(iii) Directly Memory Addition

(iv) None of these

2. Fill in the blanks : $1 \times 5 = 5$

(a) Cpomputer address Bus is unidirectional

(b) _____ circuit is used to store one bit of the data.

(c) The collection of 8 bits is called as _____.

(d) PIC Stands for _____.

(e) ISA Stands for _____.

Part – B

Answer any **four** questions of the following : $5 \times 4 = 20$

3. (a) Differentiate between Half Adder and Full Adder.

(b) Explain the Associative Memory.

(c) Diferentiate between Pipelining and Parallel Processing.

(d) Explain the Instruction set.

(e) Describe the Arithmetic and Logical microoperation.

(f) Differentiate between DX and SX of different microprocessor.

Part – C

Answer any **four** questions of the following :

$10 \times 4 = 40$

4. (a) What is Stack organisation ? Describe the stack organisation with diagram.

(b) What is DMA Data Transfer Scheme ? Explain the function of DMA Data Transfer.

(c) Explain the Architecture and Organisation of 80286 Microprocessor (mp)

(d) Differentiate between Encoder and Decoder.

(e) Explain the computer registers in Computer System Architecture.

(f) What is Interrupts ? Explain the various types of interrupts in Microprocessor (mp)

(g) Explain any **three** of the following :

(i) DMA System

(ii) Ports

(iii) Clock Pulse Generator

(iv) Cache Memory

(v) Bus Width