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# 322551(22)

## B. E. (Fifth Semester) Examination, Nov.-Dec. 2021

**(New Scheme)**

**(CSE, IT Branch)**

**MICROPROCESSOR & INTERFACES**

***Time Allowed : Three hours***

***Maximum Marks : 80***

***Minimum Pass Marks : 28***

***Note** : Part (a) of each unit is compulsory. Attempt any **two** parts from (b), (c) and (d).*

### Unit-I

**1.** (a) The first Intel microprocessor was introduced in the year ..... and it was ..... with ..... data bus width. 2

(b) Draw block diagram of Intel 8085 & explain the following registers : 7

(i) PC

(ii) IR

(iii) SP

(iv) FLAG

(c) What do you understand by Harvard & Princeton architecture of a computer system? Write a short note on microprocessor based personal computer system with neat diagram. 7

(d) What are the basic features of an Intel 8088 micro-processor? Write few points on comparision between 8085 & 8088 microprocessors. 7

## Unit-II

**2.** (a) If register AL = FFH & the instruction ADD AL, 1 is given, specify the content of the six status flags. 2

(b) Explain the following Instructions & Assembler directives of Intel 8086. LDA, MOVSB, LOCK DD, EQU, Stack, PTR. 7





(c) Explain the concept of segmented memory. Explain the physical address formation in 8086. What are its advantages? 7

(d) Write a program for the addition of a series of 8-bit numbers. The series contains 100 numbers. 7

## Unit-III

**3.** (a) How many INT instructions supported by 8086 microprocessor? 2

(b) What is interrupt vector table of 8086? Explain the interrupt responce ie ISR sequence of 8086. 7

(c) Draw and discuss the read & write cycle diagram of 8086 in minimum mode. 7

(d) What is the use of in asm blocks in assembly language using C/C++? Write a program that uses a character string defined with C and displays showing one word per line. 7

## Unit-IV

**4.** (a) Pin no. ..... ie. ..... is responsible for operating 8086 microprocessor in minimum & maximum mode. 2

(b) Draw & discuss the maximum mode configuration of Intel 8086 microprocessor. 7

(c) Explain the control word formate of 8255 PPI in BSR mode & I/O mode (Mode 0 only). 7

(d) Draw & discuss internal architecture of 8253. (Block diagram) 7

## Unit-V

5. (a) Write four features of Intel 80386 microprocessor. 2

(b) Explain the use of each of the following registers of 80386. 7

(i) Segment Descriptor Register

(ii) Control Registers

(iii) Debug and test Registers

(iv) System Address Registers

(c) What do you mean by Paging? What are its advantages and disadvantages? 7

(d) Write short notes on the following : (any **two**) 7

(i) Pentium Pro.

(ii) Core i3

(iii) Atom processors