

D. Entee

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION, APRIL 2019
B.Tech IV Semester (CSE)

Course Code: 10B11CI401

MAX. MARKS: 25

Course Name: Microprocessors and Controllers

Course Credits: 04

MAX. TIME: 1.5 Hrs.

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

- Q1(a).** What are the different types of special purpose registers available in 8086. Explain. [2]
- (b).** What are the various instructions available for stack operations in 8086. Describe each in detail with suitable example. [3]
- Q2(a).** What interrupt number has the vector table address range of 0000:0280H to 0000:0283H. [1]
- (b).** Differentiate between INTR and NMI pins of 8086. [1]
- (c)** What is the sequence of events for INT 08H, if it generates a CS:IP return address of 0100:0200H. The contents of flag register and SP before INT 08H is 0081H and 3C00H respectively. [3]
- Q3(a).** Give description of the following 8086 pins. [2]
(i) HOLD **(ii)** HLDA **(iii)** READY **(iv)** \overline{TEST}
- (b)** Explain 8284A clock generator with its block diagram. [3]
- Q4(a).** Find the contents of AL after each of the following instructions are executed. [2]
Assume that, AL = 55H, CL = 03H, CY = 1
(i) SHL AL, CL **(ii)** ROL AL, CL **(iii)** RCR AL, CL **(iv)** SAR AL, CL
- (b)** Write a subroutine to find the smallest number in an array starting at DS:SI. The number of elements in the array is stored in CX. Return the smallest number through AX register. [3]
- Q5.** Write an inline assembly language program with C, to read a character string from key board until a space is entered. Display the string in reverse order. Use DOS interrupt INT 21H to read and display character. (ASCII code for space is 20H). [5]