PG ODD SEMESTER (CBCS) EXAM., FEBRUARY 2021

COMPUTER SCIENCE

3rd Semester

COURSE NO. MCSCC - 304

(Microprocessor and Assembly Language Programming)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

(Answer any five)

UNIT - I

1. a) Explain why 8086 internal architecture is devided into BIU and EU. 6

   b) What is the need for DMA and discuss the architecture of DMA. 8

2. a) Explain the architecture of 8086 microprocessor. 9

   b) Explain the function of instruction queue is 8086 microprocessor. 5

UNIT - II

3. a) What is assembly language programming? What are the advantages of assembly language programming. 10

   b) What is the function of CALL and RET instructions. 4

4. a) List out the assembles directives of 8086 microprocessor and explain them with examples. 7

   b) Discuss about logical instructions. 7

UNIT - III

5. a) What is the purpose of 8255 in the interfacing with external devices. 7

   b) Write the application of stepper motor. 7

6. a) List out the features of the 8255 programmable peripheral interface. 8

   b) Discuss the need for Analog to Digital converter and digitial to analog converter. 6

UNIT - IV

7. a) Explain the internal architecture of 8259 programmable interrupt controller with a neat block diagram. 8

   b) Explain interrupt response of a 8086 microprocessor. 6

8. a) List out the different type of interrupts in 8086 imcroprocessor. 7

   b) Define interrupt vector table. 3

   c) Define interrupt service routine. 4

UNIT - V

9. a) Draw and discuss the internal architecture of USART (Universal Synchronous Asynchronous Receiver Transmitter) 8251. 10

   b) Explain types of communications. 4

10. a) Explain about the following communication standards: 6

    i) Simplex

    ii) Half duplex

    iii) Full duplex

    b) Discuss various types of serial communication techniques used in 8086 microprocessor. 8