C (Printed Pages 3)

Roll No. _____

22/2101

B.C.A. (Third Semester)

Examination, 2022

Third Paper

(Computer Architecture & Assembly Language)

Time : 1:30 Hours]   [Maximum Marks : 75

Note : Attempt any **five** questions. **All** questions carry equal marks. Limit the answers of each of the question to 250 words only.

1. Explain with examples (any **five**) :   15

    (i) OPCODE   (ii) OPERAND

    (iii) MNEMONIC   (iv) REGISTER

    (v) BUS   (vi) RISC

    (vii) MACRO

2. Draw the programming model of a given microprocessor and discuss it briefly.   15

3. Discuss the Bus/Data transfer instructions of a given microprocessor with examples. 15

4. Write a short note on pipelined vector processing with diagram.   15

5. Discuss Booth's Algorithm for arithmetic integer multiplication. Show its working with an example.   15

6. What is Floating point representation of Real numbers? Explain normalized representation with examples.   15

7. Differentiate between :   7½×2=15

    (a) Synchronous and Asynchronous Data Transfer.

    (b) Interrupt driven I/O and DMA

8. Draw the pin diagram of 8085 microprocessor and explain briefly its external architecture with I/O interface.   15

9. What are the different classes of instructions in an Assembly level language. Discuss in brief the Arithmetic and logic class of instructions in 8085 with examples.   15