1. Define and explain Cache memory. 3

2. Differentiate b/w isolated I/O and memory mapped I/O. 3

3. Define & explain Booth's algorithm. 3

4. Write about Flag register in 8085. 3

5. Write an assembly language program to add two nos. 3

Section - B

(Short Answer Questions)

Note: Attempt any **two** questions. 2×7½=15

6. What are the steps for a simple instruction cycle? Explain Fetch cycle and Indirect cycle using Register transfer language. 7½

7. What do you understand by DMA. Explain giving a diagram. 7½

8. Explain Programmed I/O with a flow chart. 7½

Section - C

(Detailed Answer Questions)

Note: Attempt any **three** questions.3×15=45

9. Discuss various logical instructions, Machine Control Instructions and Program Control Instructions in the Assembly Language. 15

10. (a) List five important characteristics of RISC Architecture. 5

    (b) Differentiate B/W Hardwired Control Unit Vs Micro-programmed Control Unit. 5

    (c) Explain Interrupt Driven I/O in detail. 5

11. (a) What are various data transfer schemes? Briefly discuss each scheme. 5

(b) Explain the need of different addressing modes by taking suitable examples. 5

(c) Explain the role of register transfer in computer architecture. 5

12. Discuss the following in brief: 15

(a) Program loops in Assembly Language

(b) Operation code

(c) 8 bit Microprocessor

13. Write short notes on: 15

(a) Memory Inlufacing Memory.

(b) Floating point representation

(c) Architecture of 8085.

D (Printed Pages 4)

(20221) Roll No. .....

BCA-III Sem.

18013

B.C.A. Examination, Dec. - 2020

COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE

(BCA-303)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section- A

(Very Short Answer Questions)

Note : Answer **all** the **five** questions. Each question carries equal marks. Very short answer is required not exceeding 75 words. 5×3=15

P.T.O.

2. Differentiate between Micro-instruction and micro program.

3. What is the advantage of using Booth Algorithm?

4. What is cache memory? Describe its operations in brief.

5. Convert the following into reverse polish notation.

   A*B+C

Section - B

Note: Attempt any **one** question. Each question carries 15 marks. 1×15=15

6. Differentiate between direct and indirect addressing with an example.

7. Discuss basic computer organization. How is it different from computer architecture.

8. Explain subroutine in assembly language.

Section - C

Note: Attempt any **two** questions. Each question carries 22.5 marks. 2×22.5=45

9. What is Booth algorithm? Explain it in detail. Multiply 24 and -7 using Booth algorithm.

10. Describe Direct Memory Access (DMA) Explain its functioning of DMA transfer with the help of diagram.

11. What is Priority Interrupt? Explain polling and Daisy chaining Priority.

12. What do you mean by Input-output processor (IOP)? Explain with the help of block diagram.