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(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.

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.