**UNIT TEST - II**

**B.Sc(CS) Fourth Semester, Examination,2020-21**

**Subject: Computer System Architecture**

**Time: 1 Hour] 10:00 AM to 11:00 AM** **[Maximum Marks: 30**

***Note: Question Number 1 (SECTION A) is compulsory. Answer any three questions from the remaining Question Number 2-6 (SECTION B).***

Q1. **SECTION A** (**All Questions Compulsory, Give answers in short**) **Marks: 6X2**

I. Add **-64** and **14** using **Signed 2's** complement Representation

II. Find the value of the following postfix notation using STACK. Also show diagram of STACK evaluating the expression.

**50 8 2 / + 4 3 * - 1 -**

III. Write logic expression for the following function tables

a)

| x | y | F |
|---|---|---|
| 0 | 0 | 1 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

b)

| x | y | F |
|---|---|---|
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

IV. Write the names of any four registers of basic computer with their size bits.

V. Write any two features of RISC and CISC architecture.

VI. Write any four rules of writing assembly language.

**SECTION B (Attempt Any Three)** **Marks: 6 X 3**

Q2) Describe one address and zero address instruction formats for the expression

**X = (A+B)*(C+D)**

Q3) Describe relative addressing mode and register indirect addressing modes with diagram.

Q4) Draw flow chart of instruction cycle.

Q5) Describe BSA memory reference instruction with diagram.

Q6) Write pipelining table for the execution of the expression

$$A_i + B_i * C_i$$

$$\text{for } i = 1 \text{ to } 9$$

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