B.Sc. Semester-IV Examination, 2022-23
COMPUTER SCIENCE [Programme]

Course ID : 41518   **Course Code : SP/CSC/401/C-1D**

Course Title : Computer System Architecture

Time : 1 Hour 15 Minutes   Full Marks : 25

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

UNIT–I

1. Answer any **five** of the following questions: 1×5=5

    a) What is sequential circuit?

    b) What do you mean by Boolean function?

    c) What is input/output register?

    d) Convert $(DE)_{16} = (?)_8$.

    e) What is Cache Memory?

    f) What is flip flop? Give example.

    g) What is assembly language in computer architecture?

    h) Draw a block diagram of 4×1 multiplexer.

[Turn Over]

UNIT–II

2. Answer any **two** of the following questions:

    $5×2=10$

    a) Explain address Bus and control Bus in computer system.

    b) What is control unit? What is its function?

    c) What is an instruction set? Give its main elements.

    d) Describe fixed and floating point representation with example.

UNIT–III

3. Answer any **one** of the following questions:

    $10×1=10$

    a) i)   Draw the circuit diagram and truth table of 3:8 decoder.

        ii) What is Direct Memory Access? How is it different from input output processor?

        $5+5$

    b) Write a short note on types of registers used in computer system.

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