R20

SET - 1

I B. Tech II Semester Supplementary Examinations, March 2022
COMPUTER ORGANIZATION
(Com. To CSE, IT)

Time: 3 hours   Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks
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UNIT-I

1. a) Compare and contrast fixed point and floating-point representations.   (7M)
    b) Minimize the following Boolean function using sum of products (SOP): f(a,b,c,d)   (7M)
       $= \sum m(3,7,11,12,13,14,15)$

Or

2. a) Explain the significance of binary coded decimal numbers and weighted codes.   (7M)
    b) Simplify f= A`BC`+ABC`+ABC using(a) Sum of minterms. (b) Maxterms   (7M)
       Symbol ' denotes complement.

UNIT-II

3. a) Explain how half-subtractor can be used for LSB subtraction.   (7M)
    b) Discuss the significance of Integrated NAND-NOR gates.   (7M)

Or

4. a) Discuss the functioning of Binary Parallel Adder   (7M)
    b) Explain the features of Shift Registers.   (7M)
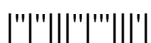
UNIT-III

5. a) Multiply (-7) * (3) using Booth's algorithm. Illustrate the flowchart for   (7M)
       multiplication.
    b) What are the various decimal arithmetic operations available? Explain the same   (7M)
       with an example.

Or

6. a) Illustrate the flow chart for the Multiplication algorithm.   (7M)
    b) Explain various types of computer registers with suitable examples.   (7M)

UNIT-IV

7. a) Explain various addressing modes available with suitable examples.   (7M)
    b) Explain the working of if-else and if-then-else statements with an example.   (7M)

Or

8. a) Explain the pin diagram of the 8086 microprocessor.   (7M)
    b) Explain Repeat-until loop with an example program.   (7M)

UNIT-V

9. a) Discuss the differences among sequential access, direct access, and random access   (7M)
        with examples.
    b) Explain the concept of priority interrupts direct memory access with an example.   (7M)

Or

10 a) Explain the principle of locality relating to the multiple memory levels.   (7M)

    b) Discuss the need for auxiliary memory with an example.   (7M)

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