

BIRLA INSTITUTE OF TECHNOLOGY, MESRA OFF CAMPUS DEOGHAR

Subject: CS235 Computer Organization & Architecture

Quiz: 1

Time: 50Min

Date: 02/09/2024

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- Q1. Represent the decimal numbers 45, -37, -61, and 57 as signed 7-bit numbers in the following binary formats. (i) sign-and-magnitude, (ii) 1's complement and (iii) 2's complement [2]
- Q2. Perform addition and subtraction on each pair $[(+21) \& (-14)]$ and $[(-41) \& (+14)]$ in binary using 2's complement and indicate whether there is overflow or not. [2]
- Q3. Represent the decimal number $(-147.625)_{10}$ in IEEE 754 single precision as well as double precision format. [2]
- Q4. Draw the flowchart for Booths multiplication algorithm. Multiply the two numbers -7 and 9 using booth's algorithm using 6-bit register. [4]