UNIT II ARITHMETIC OPERATIONS

Addition and subtraction of signed numbers – Design of fast adders – Multiplication of positive numbers - Signed operand multiplication- fast multiplication – Integer division – Floating point numbers and operations

1. Explain the Multiplication algorithm in detail with diagram and examples.
2. Discuss in detail about division algorithm in detail with diagram and examples.
3. Explain in detail about floating point addition with example.
4. Explain in detail about floating point multiplication.
5. Give the algorithm for multiplication of signed 2's complement numbers and illustrate with an example.
6. Multiply the following pair of signed 2's complements numbers: A = 010111, B = 101100.
7. Add the numbers 0.5_{10} and -0.4375_{10}using binary Floating-point Addition algorithm.
8. Multiply 1.10_{10}X $10^{10}$and 9.2_{10}X10^{-5} using binary Floating-point multiplication.
9. Calculate the division of A and B - A: 3.264 X 103 B: 6.52 X 102
10. Show the IEEE 754 binary representation of the number - 0.75 10in single and double precision.