

Assignment –I, Course : B.Sc. Sem-II Minor/MD

Exercise: Number System Arithmetic

A. Binary Arithmetic

1. Binary Addition

a) $1011_2 + 1101_2$

b) $1110_2 + 1011_2$

c) $100101_2 + 11011_2$

2. Binary Subtraction

a) $1101_2 - 1011_2$

b) $10000_2 - 111_2$

c) $10101_2 - 1100_2$

3. Binary Multiplication

a) $101_2 \times 11_2$

b) $110_2 \times 101_2$

4. Binary Division

a) $11010_2 \div 10_2$

b) $10100_2 \div 100_2$

B. Octal Arithmetic

5. Octal Addition

a) $456_8 + 127_8$

b) $345_8 + 267_8$

6. Octal Subtraction

a) $725_8 - 346_8$

b) $604_8 - 157_8$

7. Octal Multiplication

a) $24_8 \times 5_8$

b) $36_8 \times 7_8$

C. Hexadecimal Arithmetic

8. Hexadecimal Addition

a) $A3_{16} + 2F_{16}$

b) $7B_{16} + 9C_{16}$

9. Hexadecimal Subtraction

a) $F2_{16} - 3A_{16}$

b) $C4_{16} - 6B_{16}$

10. Hexadecimal Multiplication

a) $A_{16} \times 9_{16}$

b) $1F_{16} \times 4_{16}$

D. Conversion Practice

11. Convert 101101_2 to decimal and hexadecimal.

12. Convert 572_8 to binary.

13. Convert $3A_{16}$ to binary and decimal.