**Computer Organization and Architecture Lab**

**Exercises 1**

## 1. Convert each of the following binary numbers to octal, decimal, and hexadecimal formats.

I. (111011101)₂

Octal: (735)₈

Decimal: (477)₁₀

Hexadecimal: (1DD)₁₆

II. (10101010111)₂

- Octal: (1257)₈

- Decimal: (1367)₁₀

- Hexadecimal: (557)₁₆

III. (111100000)₂

- Octal: (740)₈

- Decimal: (480)₁₀

- Hexadecimal: (1E0)₁₆

## 2. Convert each of the following octal numbers to binary, decimal, and hexadecimal formats.

IV. (3754)₈

- Binary: (111111101100)₂

- Decimal: (2028)₁₀

- Hexadecimal: (7EC)₁₆

V. (7777)₈

- Binary: (111111111111)₂

- Decimal: (4095)₁₀

- Hexadecimal: (FFF)₁₆

VI. (247)₈

- Binary: (10100111)₂

- Decimal: (167)₁₀

- Hexadecimal: (A7)₁₆

## 3. Convert each of the following decimal numbers to binary, octal, and hexadecimal formats.

VII. (3479)₁₀

- Binary: (110110011111)₂

- Octal: (6617)₈

- Hexadecimal: (D9F)₁₆

VIII. (642)₁₀

- Binary: (1010000010)₂

- Octal: (1202)₈

- Hexadecimal: (282)₁₆

IX. (555)₁₀

- Binary: (1000101011)₂

- Octal: (1053)₈

- Hexadecimal: (22B)₁₆

## 4. Convert each of the following hexadecimal numbers to binary, octal, and decimal formats.

X. (4FB2)₁₆

- Binary: (0100111110110010)₂

- Octal: (23762)₈

- Decimal: (20370)₁₀

XI. (88BAE)₁₆

- Binary: (10001000101110101110)₂

- Octal: (421272)₈

- Decimal: (559534)₁₀

XII. (DC4)₁₆

- Binary: (110111000100)₂

- Octal: (15604)₈

- Decimal: (3524)₁₀