Title: **Octal to Binary, Binary to Octal Conversion** Worksheet: 6

Course: Introduction to Automation Unit: Introduction to PLC CLO: 4

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall calculate a binary number given its equivalent value in octal form.
2. Student shall calculate an octal number given its equivalent value in binary form.

**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this Worksheet. Grading shall be based on the answer key.

**Instructions**

Convert the following binary numbers to their octal equivalents.

1. 100110012 \_\_\_\_8
2. 000110112 \_\_\_\_8
3. 100011012 \_\_\_\_8
4. 111110012 \_\_\_\_8
5. 111111112 \_\_\_\_8
6. 100000012 \_\_\_\_8
7. 010101012 \_\_\_\_8
8. 101010102 \_\_\_\_8
9. 101111012 \_\_\_\_8
10. 110100002 \_\_\_\_8

Convert the following octal numbers to their binary equivalents.

1. 378 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
2. 128 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
3. 548 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
4. 38 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
5. 1268 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
6. 168 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
7. 778 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
8. 108 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
9. 1018 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2
10. 2118 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2