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

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

Name ANSWER KEY 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 2318
2. 000110112 338
3. 100011012 2158
4. 111110012 3718
5. 111111112 3778
6. 100000012 2018
7. 010101012 1258
8. 101010102 2528
9. 101111012 2758
10. 110100002 3208

Convert the following octal numbers to their binary equivalents.

1. 378 0001 11112
2. 128 0000 10102
3. 548 0010 11002
4. 38 0000 00112
5. 1268 0101 01102
6. 168 0000 11102
7. 778 0011 11112
8. 108 0000 10002
9. 1018 0100 00012
10. 2118 1000 10012