Title: **BCD Conversion** Worksheet: 8

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

Name ANSWER KEY Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall calculate a binary coded decimal (BCD) number given its equivalent value in binary form.
2. Student shall calculate the decimal equivalent of a BCD number.

**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 decimal numbers to their BCD equivalents.

1. 213710 0010 0001 0011 0111BCD
2. 123410 0001 0010 0011 0100BCD
3. 739010 0111 0011 1001 0000BCD
4. 100010 0001 0000 0000 0000BCD
5. 71210 0000 0111 0001 0010BCD
6. 210 0000 0000 0000 0010BCD
7. 400110 0100 0000 0000 0001BCD
8. 7710 0000 0000 0111 0111BCD
9. 218710 0010 0001 1000 0111BCD
10. 442210 0100 0100 0010 0010BCD

Convert the following BCD numbers to their decimal equivalents.

1. 0100 0011 0001 0010BCD 4,31210
2. 0110 0101 0111 0001BCD 6,57110
3. 0001 0000 0001 0010BCD 1,01210
4. 0001 0010 0011 0100BCD 1,23410
5. 0010 1001 0010 0100BCD 2,92410
6. 0100 0000 0000 0000BCD 4,00010
7. 0101 0011 0001 0011BCD 5,31310
8. 0000 0011 0001 0100BCD 31410
9. 1100 0001 0001 0011BCD N/A10
10. 0010 0111 0011 0011BCD 2,73310