Title: **NEMA Symbols** Test: 1

Course: Intro to Automation Unit: Manual Motor Control CLO: 1

Name ANSWER KEY Grade 30pts. Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall identify the National Electrical Manufactures Association (NEMA) symbols and the components that they represent.
2. Student shall list each component as either an input or an output device.
3. Student shall recall the components of a ladder diagram.

**Assessment**

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

**Instructions**

Match each NEMA symbol with the appropriate description from the table of descriptions below and identify whether the symbol is an input or an output.

|  | Symbol | Description | Input/Output |
| --- | --- | --- | --- |
|  |  | Pilot Light | Output |
|  |  | Momentary Pushbutton, NO | Input |
|  |  | Momentary Pushbutton,  Dual Action | Input |
|  |  | Pilot Light, Green | Output |
|  |  | Selector Switch,  Two Position, Dual Action | Input |
|  |  | Contacts, NC | Input |

|  | Symbol | Description | Input/Output |
| --- | --- | --- | --- |
|  |  | Coil | Output |
|  |  | Momentary Pushbutton, NC | Input |
|  |  | Selector Switch, Two Position | Input |
|  |  | Contacts, NO | Input |
|  |  | Selector Switch, Three Position | Input |
|  |  | Pushbutton, Mushroom Head | Input |

|  |  |  |  |
| --- | --- | --- | --- |
| Momentary Pushbutton, NO | Pilot Light | Contacts, NC | Selector Switch, Two Position |
| Momentary Pushbutton, NC | Pilot Light, Green | Coil | Selector Switch,  Two Position, Dual Action |
| Momentary Pushbutton,  Dual Action | Contacts, NO | Pushbutton, Mushroom Head | Selector Switch, Three Position |

**Instructions**

List the components of a ladder diagram.

B

|  |  |
| --- | --- |
| C  F  E  D  A | 1. Terminal # D 2. Rung F 3. Wire # E 4. Control Voltage A 5. Rail C 6. Rung # B |