



Apprentice Name: _____

Step 3 - Apprentice System Operator Job Competency / Demonstration Form

| COMPETENCIES/SKILLS | | RATING | | |
|---------------------|---|---------------|---|---|
| | | Please circle | | |
| #1 | Explain inductive loads on a circuit. | 1 | 2 | 3 |
| #2 | Explain capacitive loads on a circuit. | 1 | 2 | 3 |
| #3 | Explain how VAR flow is determined and how it relates to power factor. | 1 | 2 | 3 |
| #4 | What are the three fundamental control requirements for a properly designed and operated power system? | 1 | 2 | 3 |
| #5 | Explain "Power Wheeling". | 1 | 2 | 3 |
| #6 | Explain the purpose of a load tap changer (LTC) and a regulator. | 1 | 2 | 3 |
| #7 | List the five steps that should be followed to safely bypass a voltage regulator. | 1 | 2 | 3 |
| #8 | What FERC? How do they relate to the power industry? | 1 | 2 | 3 |
| #9 | Explain what system losses are. | 1 | 2 | 3 |
| #10 | What are the typical losses for a rural distribution system? | 1 | 2 | 3 |
| #11 | Explain several ways to minimize system losses. | 1 | 2 | 3 |
| #12 | Review a single line diagram (supervisor selected) and show the power flow through the substation and identify the equipment that it flows through, including it's purpose. | 1 | 2 | 3 |
| #13 | Demonstrate your ability to read a distribution map, showing lines, poles, switches, apparatus, protection equipment and consumers. | 1 | 2 | 3 |
| #14 | Demonstrate your familiarity with device plant numbering using the maps available. | 1 | 2 | 3 |
| #15 | Explain RUS Specifications: their use, what they are based on, etc. | 1 | 2 | 3 |
| #16 | Explain the purpose of disconnects and switches. | 1 | 2 | 3 |
| #17 | Locate disconnects and switches on a single line diagram. | 1 | 2 | 3 |
| #18 | Ability to follow directions. | 1 | 2 | 3 |
| #19 | Positive attitude toward work and others. | 1 | 2 | 3 |

RATINGS:

1. Exceeds Expectations
2. Meets Expectations
3. Needs Improvement

| COMMENTS/REMARKS | |
|------------------|--|
| | |

I find this apprentice competent in the skills listed above and ready to advance to the next level.

Supervisor's signature: _____ Date: _____