

Residential Wiring

I. Define and apply safety rules and practices in residential wiring according to NEC standards.

Tasks Instructions:

Each number to the right refers to a single student/candidate (1-10). Place a check (✓) in the respective column for the appropriate student/candidate number (1-10) if the skills listed below are observed as stated. Leave blank if not observed. Student/candidate will only get credit for the skills they have demonstrated.

Apply shop rules and regulations to work stations.

List the techniques and practices used to prevent fires

Use electrical and hand tools correctly

Discuss the appropriate methods for lifting and climbing ladders

Explain appropriate clothing for residential wiring

Outline the safety requirements for installing temporary electrical services

Safety and infection control are adhered to during all aspects of this task.

The student completed task within the time limited.

Points earned

Total possible points (8)

1	2	3	4	5	6	7	8	9	10

II. Apply knowledge of basic wiring theory according to NEC standards.

Tasks Instructions:

1	2	3	4	5	6	7	8	9	10

Use wiring diagrams, schematic diagrams and prints successfully in a scenario

Apply math calculations to circuits and measurements											
Discuss theory concepts for troubleshooting											
<i>Safety and infection control are adhered to during all aspects of this task.</i>											
<i>The student completed task within the time limited.</i>											
Points earned											
Total possible points (5)											

III. Discuss important trade information and standards according to the NEC.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Explain the purpose and use of the National Electric Code										
Sketch and diagram effectively										
Plan the layout of an electrical installation										
Use trade catalogs and publications to solve residential wiring problems										
Correlate specifications, prints and job sites										
<i>Safety and infection control are adhered to during all aspects of this task.</i>										
<i>The student completed task within the time limited.</i>										
Points earned										
Total possible points (7)										

IV. Use basic equipment and procedures defined by industry standards.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Discuss techniques of residential and light commercial wiring										
Demonstrate wire-pulling techniques										
<i>Safety and infection control are adhered to during all aspects of this task.</i>										
<i>The student completed task within the time limited.</i>										
Points earned										
Total possible points (4)										

V. Apply knowledge of service loads and electrical safety to residential wiring situations.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Compute service loads										
Calculate individual service loads										
Determine the number of outlets permitted in a circuit										
Compute the size of service entrance conductors										
Use all types of cables including NM, MC and service										
<i>Safety and infection control are adhered to during all aspects of this task.</i>										
<i>The student completed task within the time limited.</i>										
Points earned										
Total possible points (7)										

VI. Install a service entrance to meet NEC standards.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
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Install a main service panel											
Install circuit breakers in a panel											
Install a service entrance cable to service drop											
Install temporary electrical service											
<i>Safety and infection control are adhered to during all aspects of this task.</i>											
<i>The student completed task within the time limited.</i>											
Points earned											
Total possible points (6)											

VII. Install switch boxes and outlet boxes to meet NEC standards.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Install box hangers										
Install recess boxes for outlets										
Install hangable boxes										
Install octagon boxes										
Install surface mount boxes										
Install recessed fixture housing in a ceiling										
Install outlet boxes in dry wall, lath plaster or paneled walls										
<i>Safety and infection control are adhered to during all aspects of this task.</i>										
<i>The student completed task within the time limited.</i>										
Points earned										
Total possible points (9)										

VIII. Maintain already existing wiring to meet NEC standards.

Tasks Instructions:

Rough in, connect and install lighting dimmers											
Rough in, connect and install TV outlets											
Rough in, connect and install telephone outlets											
Rough in, connect and install emergency lighting systems											
Rough in, connect and install appliance circuits											
<i>Safety and infection control are adhered to during all aspects of this task.</i>											
<i>The student completed task within the time limited.</i>											
Points earned											
Total possible points (18)											

X. Install PVC and EMT conduit to meet NEC standards.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Make 90-degree bends from measurements										
Make offset bends from measurements										
Make back-to-back bends from measurements										
Make saddle bends from measurements										
Determine correct conduit measurements										
<i>Safety and infection control are adhered to during all aspects of this task.</i>										
<i>The student completed task within the time limited.</i>										
Points earned										
Total possible points (7)										

XI. Install residential telecommunications infrastructure to meet current TIA/EIA 570 standards.

Tasks Instructions:

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