



Celebrating 100 Years of Career Readiness

2018-2019

Technical Skills Assessment

Electronic Technology

Results by Standard

Legend (%)		
0-50%	51-75%	76-100%

Assessment: Idaho Electronic Technology Number tested: 31	% Correct 16-17	% Correct 17-18	% Correct 18-19
1) CONTENT STANDARD 1.0: SAFETY AND TOOLS	83.13%	88.29%	84.76%
1) Performance Standard 1.1: Demonstrate general lab safety rules and procedures	84.86%	89.81%	84.84%
1.1.3 Identify and use proper lifting procedures and proper use of support equipment	93.75%	98.65%	94.29%
1.1.4 Utilize proper ventilation procedures for working within the lab/shop area	93.75%	87.84%	91.43%
1.1.5 Identify marked safety areas	87.50%	94.59%	85.71%
1.1.6 Describe the type and usage of the fire extinguishers	78.13%	89.19%	94.29%
1.1.7 Identify the location of the posted evacuation routes	73.44%	83.78%	75.71%
1.1.8 Explain eye and ear protection needed by technicians, and appropriate clothing for lab/shop activities	87.50%	90.54%	84.29%
1.1.11 Explain how electrostatic discharge (ESD) damages sensitive electronic components	76.56%	83.78%	72.86%
2) Performance Standard 1.2: Identify and safely utilize tools and equipment	71.88%	78.38%	84.29%
1.2.2 Demonstrate the proper techniques when using tools and equipment	71.88%	78.38%	84.29%
2) CONTENT STANDARD 2.0: ELECTRONIC THEORY	68.08%	69.31%	72.24%
1) Performance Standard 2.1: Explain the principles of electronic theory	76.56%	78.83%	80.95%
2.1.2 Explain the characteristics of voltage, current, and resistance (unit of measure, letter/symbol)	82.29%	81.08%	82.86%
2.1.10 List Ohms law formulas for current, voltage, resistance and power. Solve math problems utilizing each	70.83%	76.58%	79.05%
2) Performance Standard 2.2: Utilize schematics and block diagrams	59.38%	60.14%	64.29%
2.2.1 Draw and interpret common electrical/electronic symbols	43.75%	39.19%	45.71%
2.2.5 Explain how schematics are used to locate component and wiring failures in electronics products	75.00%	81.08%	82.86%
3) Performance Standards 2.3: Identify basic wiring principles	64.06%	64.19%	67.14%
2.3.3 Explain the effects of proper and improper termination	59.38%	66.22%	65.71%
2.3.4 Explain the purposes of grounding and common conventions used in electrical systems and electronics	68.75%	62.16%	68.57%

Assessment: Idaho Drafting & Design	% Correct 16-17	% Correct 17-18	% Correct 18-19
Number tested: 31	17	18	19
3) CONTENT STANDARD 3.0: ELECTRONIC COMPONENTS	71.88%	71.17%	76.19%
2) Performance Standard 3.2: Analyze quantities utilized in electronics	71.88%	71.17%	76.19%
3.2.1 Identify and utilize the basic units of electronic measurements	71.88%	71.17%	76.19%
4) CONTENT STANDARD 4.0: DC AND AC CIRCUIT CONFIGURATION	66.96%	65.27%	69.79%
1) Performance Standard 4.1: Analyze series circuit configuration	73.95%	79.12%	83.12%
4.1.1 Identify series circuit configuration	79.69%	83.78%	80.00%
4.1.2 Calculate voltage drops in a series circuit	73.44%	82.43%	90.00%
4.1.4 Recognize polarity in a series circuit	71.88%	73.87%	80.00%
4.1.5 Calculate voltage, current, resistance, and power in a series circuit	84.78%	90.54%	88.57%
4.1.6 Construct, measure, and analyze simple series circuits	64.06%	67.57%	78.57%
2) Performance Standard 4.2: Analyze parallel circuit configuration	69.44%	67.27%	78.41%
4.2.1 Identify parallel circuit configuration	70.31%	58.11%	78.57%
4.2.2 Calculate voltage drops in a parallel circuit	84.38%	82.43%	81.43%
4.2.4 Recognize polarity in a parallel circuit	79.69%	82.43%	90.00%
4.2.5 Calculate voltage, current, resistance, and power in a parallel circuit	52.08%	53.15%	68.57%
3) Performance Standard 4.3: Analyze series-parallel circuit configuration	65.31%	61.35%	68.57%
4.3.1 Identify series-parallel circuit configuration	62.50%	59.46%	68.57%
4.3.2 Calculate voltage drops in a series-parallel circuit	62.50%	54.95%	69.52%
4.3.4 Recognize polarity in a series-parallel circuit	75.00%	79.73%	77.14%
4.3.5 Calculate voltage, current, resistance, and power in a series-parallel circuit	63.54%	56.76%	61.90%
4) Performance Standard 4.4: Analyze alternating circuits (AC)	59.06%	52.16%	48.57%
4.4.1 Construct and test AC circuits	37.50%	37.84%	32.86%
4.4.2 Identify AC wave form characteristics: effective voltage (RMS), average voltage, negative alternation, positive alternation, wavelength, amplitude, period, and frequency	52.08%	49.55%	37.14%
4.4.3 Calculate peak, peak-to-peak, RMS, and average voltage values for an AC waveform	59.38%	44.59%	48.57%
4.4.4 Explain cycle, hertz, phase, and frequency	80.21%	69.37%	70.48%
5) CONTENT STANDARD 5.0: DIGITAL ELECTRONIC PRINCIPLES	59.38%	51.89%	50.86%
1) Performance Standard 5.1: Analyze digital concepts design and circuitry	57.03%	44.59%	49.29%
5.1.2 Compare and contrast between 1 (high) and 0 (low or ground)	67.19%	51.35%	54.29%
5.1.4 Identify and describe basic logic operations (AND, OR, buffer, inverter, NAND)	53.13%	43.24%	42.86%
5.1.7 Interpret data sheet information	40.63%	32.43%	45.71%
2) Performance Standard 5.2: Utilize microcontroller devices	68.75%	81.08%	57.14%
5.2.1 Describe basic principles of microcontrollers	68.75%	81.08%	57.14%
6) CONTENT STANDARD 6.0: SOLDERING AND DESOLDERING TECHNIQUES	77.08%	76.58%	77.14%

Assessment: Idaho Drafting & Design	% Correct 16-	% Correct 17-	% Correct 18-
Number tested: 31	17	18	19
1) Performance Standard 6.1: Apply soldering techniques	92.19%	93.24%	94.29%
6.1.1 Describe solder safety as it pertains to burns and potential fires, damage to facilities or	93.75%	91.89%	91.43%
6.1.2 Explain the causes of solder fumes and the effects of lead poisoning	90.63%	94.59%	97.14%
2) Performance Standard: 6.2: Apply desoldering techniques	46.88%	43.24%	42.86%
6.2.2 Describe various types of desoldering equipment and how it is used	46.88%	43.24%	42.86%
7) CONTENT STANDARD 7.0: TROUBLESHOOTING AND MAINTENANCE TECHNIQUES	76.56%	75.27%	75.29%
1) Performance Standard 7.1: Apply troubleshooting techniques	75.42%	72.07%	73.52%
7.1.1 Explain troubleshooting techniques	84.38%	81.08%	80.95%
7.1.3 Utilize all safety procedures necessary while troubleshooting (lock-out tag-out, etc.)	82.29%	80.18%	74.29%
7.1.4 Select and utilize appropriate tools for electronics troubleshooting	82.81%	71.62%	72.86%
7.1.5 Research various sources of repair/maintenance/troubleshooting documentation (print media, electronic media, tech support, local expert, and manufacturer)	57.81%	55.41%	70.00%
7.1.6 Interpret electronic schematic diagrams	71.88%	72.97%	69.52%
7.1.7 Measure electrical characteristics of voltage, current, and resistance in basic electronic circuits using multimeters, oscilloscopes, logic probes, etc.	67.19%	62.16%	71.43%
2) Performance Standard 7.2: Demonstrate repair documentation techniques	80.00%	84.86%	80.57%
7.2.4 Isolate common faults in wiring and equipment	82.29%	87.39%	85.71%
7.2.6 Explain the purposes and requirements for proper recordkeeping	76.56%	81.08%	72.86%