ELECTRONIC TECHNOLOGY
CONTEST BREAKDOWN

Skill 2021

APRIL 21, 2021
NIDA CORPORATION
Melbourne, FL
Electronics Technology Competition

Overview:
The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

1. Customer Service/Interview Test
   a. Overview: This test samples your general knowledge of both Employment Interviews and Customer Service skills. In all cases, choose the best answer to the question. This test will contain both multiple choice and multiple selection questions. In preparation for this test, research material on preparing for a personal interview and working in a customer service environment. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.
   
   b. Time Allowed: 60 minutes
   
   c. Number of Questions: 50
   
   d. Email questions to SkillsHelp@nida.com
Electronics Technology Competition

Overview:
The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

2. Electronic Technology Test

a. Overview: This test samples your general knowledge of electronics technology. Specific areas of knowledge include Direct Current, Alternating Current, Analog Circuits, Digital Circuits, and both discrete and integrated circuit components. You will be expected to use formulas to determine circuit values and convert numbers between different number systems. You will also be expected to answer theoretical questions about the use and operation of general test equipment to include multimeter, oscilloscope, function generator, and logic probe. In all cases, choose the best answer to the question. This test will contain both multiple choice and multiple selection questions. In preparation for this test, review any materials that relate to the topic areas listed. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.

b. Time Allowed: 120 minutes

c. Number of Questions: 100

d. Email questions to SkillsHelp@nida.com
Electronics Technology Competition

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The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

3. **Soldering Test**

   a. **Overview**: This test samples your general knowledge of soldering technology. Specific areas of knowledge include solder types, soldering tools, soldering quality, and soldering safety. You will also be expected to answer theoretical questions about the use and operation of soldering tools to include soldering station, solder sucker, and wire stripping tools and techniques. In all cases, choose the best answer to the question. This test will contain both multiple choice and multiple selection questions. In preparation for this test, review any materials that relate to the topic areas listed. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.

   b. **Time Allowed**: 90 minutes

   c. **Number of Questions**: 75

   d. **Email questions to SkillsHelp@nida.com**
Electronics Technology Competition

Overview:
The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

4. Breadboarding Test

a. Overview: This test samples your general knowledge of circuit design and breadboarding skills. Specific areas of knowledge include schematic reading and interpretation. You will be expected to identify errors in breadboarding designs and provide a remedy. General knowledge of breadboards is fundamental to success. In all cases, choose the best answer to the question. This test will contain both multiple choice and multiple selection questions. In preparation for this test, review any materials that relate to the topic areas listed. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.

b. Time Allowed: 90 minutes

c. Number of Questions: 75

d. Email questions to SkillsHelp@nida.com
Electronics Technology Competition

Overview:
The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

5. Troubleshooting Test

a. Overview: This test samples your general knowledge of electronics troubleshooting. There will be general questions that relate to the process of troubleshooting, questions about troubleshooting tools, and troubleshooting scenarios. In all cases, choose the best answer to the question. This test will contain both multiple choice and multiple selection questions. In preparation for this test, review any materials that relate to the topic areas listed. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.

b. Time Allowed: 120 minutes

c. Number of Questions: 100

d. Email questions to SkillsHelp@nida.com
Electronics Technology Competition

Overview:
The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

6. **Multimeter Measurements**

a. **Overview**: Multimeter measurements is a hands-on performance test designed to use a typical multimeter while following instructions, recording measurements, and performing adjustments. You will be expected to fully understand the operation of your multimeter and be capable of measuring both DC and AC voltages. All questions in the multimeter measurement’s performance test are Essay questions. You will enter the actual measured values obtained from the live circuit. Be prepared to carry all measurements to at least two decimal points. In preparation for this performance test, practice using your multimeter to measure voltage, current, and resistance. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.

b. **Time Allowed**: 60 minutes

c. **Number of Questions**: n/a

d. **Email questions to SkillsHelp@nida.com**
Electronics Technology Competition

Overview:
The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

7. Oscilloscope Measurements

a. Overview: Oscilloscope measurements is a hands-on performance test designed to use a typical oscilloscope while following instructions, recording measurements, and performing adjustments. You will be expected to fully understand the operation of your oscilloscope and be capable of measuring both frequency and Vpp. You can use either an analog or digital oscilloscope provided you have the capability of dual channel operation and X1 or X10. All questions in the oscilloscope measurement’s performance test are Essay questions. You will enter the actual measured values obtained from the live circuit. Be prepared to carry all measurements to at least two decimal points. In preparation for this performance test, practice using your oscilloscope to measure frequency and Vpp using both X1 and X10 settings. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.

b. Time Allowed: 60 minutes

c. Number of Questions: n/a

d. Email questions to SkillsHelp@nida.com
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Overview:
The following information provides a brief overview of each Contest area and offers information to assist the Contestant with preparations.

Contest Synopsis:

8. **System Troubleshooting**

   a. **Overview:** The System Troubleshooting hands-on performance test is the culmination of all the previous tests put together. In this performance test you will be given a functional system and required to perform initial Operational Checks. You will be provided with a Technical Manual, Theory or Operation, and Operational Checks. Once you are satisfied that your system is functioning correctly, an electronic fault will be placed in the circuity causing the system to fail. Your task will be to identify that a fault exists, locate the general area of the fault, and finally choose the component most like to be the cause of the fault. Once located, that faults will be removed, and another fault will be activated. All questions Essay questions. You will enter actual measured values, location of the fault, and component suspected. In preparation for this performance test, you will be given the Technical Manual to study prior to the performance test. This will provide the opportunity to fully understand the operation of the System you will be troubleshooting. This is a timed test. Do not start a test unless you have adequate time to complete the test. You cannot pause or restart the test.

   b. **Time Allowed:** 120 minutes

   c. **Number of Questions:** n/a

   d. **Email questions to SkillsHelp@nida.com**