National Craft Assessment and Certification Program
S P E C I F I C A T I O N S

Industrial Insulator V3
INSU_03
Released June 2013

Overview

- Two-hour closed-book examination
- May use a basic function, non-printing calculator
- No extra papers, books, notes, or study materials are allowed
- The minimum passing score is 75
- A corresponding hands-on Performance Verification is available

NCCER Curriculum

All NCCER knowledge assessments are referenced to NCCER's curriculum modules as listed on this specification sheet. You may order modules from Pearson (800.922.0579) or from NCCER's Online Catalog at www.nccer.org.

Assessment Development

All questions are developed and approved by subject matter experts under the direction of NCCER.

Credentials

Upon successful completion of the knowledge assessment, NCCER will send applicable credentials to the assessment center.

Score Report and Training Prescription

Each candidate will have access to their assessment results including their overall score and recommended training.

NCCER Registry

Knowledge assessment results are recorded in NCCER's Registry and become a part of the portable record of an individual's NCCER credentials.

Knowledge Assessment Contents:

Content Domain	Number of Questions
Safety *[00101-09]*	8
Tools of the Trade *[19103]*	7
Pipe Insulation *[19105,19107, 19204]*	15
Installation of Insulation *[19205, 19206, 19207]*	16
Finishes and Adhesives *[19208, 19304]*	7
Trade Math [*19301]*	8
Jacketing Fabrication *[19310, 19311]*	14
Sheet Metal Lagging *[19312]*	5
Total Number of Questions	**80**

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Learning Objectives related to Assessment:

	Safety
Registry ID Number:	**Module Title and Objectives:**
00101-09	**Basic Safety**
	Recognize hazard recognition and risk assessment techniques.
	Explain fall protection, ladder, stair, and scaffold procedures and requirements.
	Identify causes of accidents and the impact of accident costs.
	Explain the role of OSHA in job-site safety.
	Recognize hazard recognition and risk assessment techniques.
	Tools of the Trade
Registry ID Number:	**Module Title and Objectives:**
19103	**Tools of the Trade**
	Identify specific tools required in the insulation trade.
	Choose the correct tool for the specific application.
	Explain the general safety rules for hand tools.
	Pipe Insulation
Registry ID Number:	**Module Title and Objectives:**
19105	**Characteristics of Pipe Insulation**
	Understand the relationship between pipe size and sizes of insulation.
	Understand what heat traced pipe is.
19107	**Installing Pipe Fittings, Valves and Flanges**
	Cut and install mitered segments of insulation to pipe elbows.
	Cut insulation for application to flanged valves.
	Install insulation on pipe flanges.
	Cut and install plug 90 degree ells.
19204	**Installing Calcium Silicate/Expanded Perlite Pipe Insulation**
	Make accurate cuts in calcium silicate/expanded perlite pipe insulation.
	Install a single layer of calcium silicate/expanded perlite insulation on piping using wire or bands.
	Installation of Insulation
Registry ID Number:	**Module Title and Objectives:**
19205	**Installing Mineral Wool Insulation**
	Install mineral wool insulation.
	Identify the characteristics of welded pins, stick pins, and clips.
19206	**Installing Rigid Foam and Cellular Glass Insulation**
	Measure and cut rigid foam plastic and cellular glass insulation.
	Install and seal rigid foam plastic and cellular glass insulation.
	Understand cryogenic installation methods.
	Understand the roles of expansion joints, contraction joints, and vapor stops.

19207	**Installing Board and Block Insulation**
	Install board and block insulation.
	Finishes and Adhesives
Registry ID Number:	**Module Title and Objectives:**
19208	**Cement and Fabric Finishes and Mastics**
	Identify types of cements.
	Identify types of fabrics and mastics.
	Understand the limitations of cements.
19304	**Adhesives and Their Uses**
	Identify various types of adhesives and list the most common applications of each type.
	Describe the general application method for contact adhesive.
	Trade Math
Registry ID Number:	**Module Title and Objectives:**
19301	**Trade Math**
	Define radius, circumference, diameter, and pi.
	Calculate surface areas of objects when given formulas and measurements.
	Covert fractions to decimals.
	Convert inches to feet and feet to inches.
	Use a scale ruler to convert drawing dimensions to full-size dimensions.