



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

Industrial Maintenance, Electrical & Instrumentation Technician

IMEIT40

Released August 2010

Overview

This knowledge assessment is a two-hour closed-book examination. You will be permitted to use a basic function, non-printing calculator during the examination. No extra papers, books, notes or study material are allowed in the testing area.

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.

Focus Statement

A journey-level IM E & I Technician should:

- Have a thorough knowledge of basic electrical/electronic, pneumatic, hydraulic, and mechanical fundamentals
- Have a working knowledge of safety and electrical hazards
- Have a knowledge of mechanical/electrical isolation of stored energy
- Identify tools, equipment, and best practices for performing electrical and instrumentation maintenance
- Interpret drawings, specifications, and other resource documents
- Have a thorough knowledge of both process and craft-related mathematics
- Maintain, repair, and install electrical and instrumentation system components
- Be familiar with networks and process control systems

Knowledge Assessment Contents:

Module Number	Module Name	Number of Questions
00101-04	Basic Safety	4
00106-04	Basic Rigging	4
40103-07	Fasteners and Anchors	4
40105-07	Gaskets and Packing	4
40201-08	Industrial Safety for E&I Technicians	4
40203-08	Electrical Theory	4
40204-08	Alternating Current	4
40206-08	Flow, Pressure, Level, and Temperature	4
40207-08	Process Mathematics	4
40209-08	Tubing	4
40210-08	Clean, Purge, and Test Tubing and Piping Systems	4
40211-08	Instrument Drawings and Documents, Part One	4
40213-08	Conductor Terminations and Splices	4
40302-09	Electronic Components	4
40303-09	E & I Drawings	4
40305-09	Distribution Equipment	4
40309-09	Layout and Installation of Tubing and Piping Systems	4
40311-09	Hydraulic Controls	4
40312-09	Pneumatic Controls	4
40402-09	Basic Process Control Elements, Transducers and Transmitters	4
40403-09	Instrument Calibration and Configuration	4
40404-09	Pneumatic Control Valves, Actuators, and Positioners	4
40405-09	Performing Loop Checks	4
40406-09	Troubleshooting and Commissioning a Loop	4
40407-09	Process Control Loops and Tuning	4
40408-09	Data Networks	4
40409-09	Programmable Logic Controllers	4
40410-09	Distributed Control Systems	4
Total Number of Questions		112

The minimum passing score is 75.

A corresponding hands-on Performance Verification is available (PVEIMT).

NCCER

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