Insulating

Level Three

Module 19307
Refrigeration and Cryogenic Systems

EXAMINATION PACKET

This packet contains the reproducible Module Examination, Answer Key, and Performance Profile Sheet(s).

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NATIONAL CENTER FOR CONSTRUCTION EDUCATION AND RESEARCH

Pearson Education, Inc.

Upper Saddle River, New Jersey Columbus, Ohio

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Module Examination **TASK MODULE 19307** **Refrigeration and Cryogenic Systems**

Name: _____ **Date:** _____

Social Security Number: _____

_____ 1. Which pipe is normally insulated on an air conditioning split system?

a. Hot gas
b. Relief
c. Suction
d. Cooling

_____ 2. What type of pipe is used in an air conditioning system?

a. Plastic
b. Copper
c. Steel
d. Cast iron

_____ 3. Which component in a refrigeration system actually cools the air in a building?

a. Compressor
b. Condenser
c. Evaporator
d. Motor

_____ 4. In a split air conditioning system, which of these components is located indoors?

a. Condensing coil
b. Compressor
c. Carburetor
d. Evaporator coil

_____ 5. What is a D-X system?

a. Chilled water air conditioning
b. Direct expansion refrigeration
c. Direct drive centrifugal chiller
d. Ammonia absorption machine

_____ 6. A window air conditioning unit is usually designated as a _____.

a. split system
b. brine system
c. self-contained unit
d. absorption unit

_____ 7. What part of the refrigeration system discharges the heat?

a. Expansion valve
b. Compressor
c. Evaporator
d. Condenser

_____ 8. What is usually the largest pipe size in a D-X system?

a. 2 inch
b. 6 inches.
c. 1/2 inch
d. 4 inches

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Refrigeration and Cryogenic Systems

_____ 9. Cryogenic systems operate in which temperature range?

a. 212° and above
b. -100° and below
c. -60° to 0°
d. 0° to 60°

_____ 10. A hot gas line is insulated when it is located _____.

a. in a cold storage room
b. in a fireproof space
c. outside
d. below ground

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NOTE ON PERFORMANCE PROFILE TESTING

Performance Profiles are included in this Instructor's Guide in a format that can be easily photocopied for each trainee. The Profiles measure trainee competency in the tasks taught in this module.

Please note the number of tasks to be tested while teaching this module. Each trainee should be tested on the tasks listed in the Performance Profile. Before the performance testing, the instructor should brief the trainees on:

- test objectives and criteria,
- safety precautions, and
- procedures for each task to be tested.

The instructor administering the performance testing should also do the following:

- ensure that all of the needed equipment is available and operating properly;
- set up the testing stations;
- organize and administer the test in a way that allows for optimal performance;
- complete the Performance Profile Sheet for each trainee by assigning a score for each listed task;
- monitor adherence to all safety regulations and precautions;
- provide adequate supervision to prevent injuries; and
- take immediate and effective action to remedy any emergency.

ACCREDITATION TESTING

If this Performance Profile Testing is done in the National Center for Construction Education and Research Standardized Craft Training Program, the following conditions must be met:

1. The Craft Instructor must hold valid NCCER instructor certification.
2. The training must be delivered through a Training Program Sponsor recognized by the NCCER.
3. For every module, the specific performance testing must be completed to the satisfaction of the instructor.
4. The results of the testing must be recorded on the Craft Training Report Form. This form must be provided to the local Training Program Sponsor to be forwarded to the NCCER National Craft Training Registry.

Craft: Insulating

Task Module Number: 19307

Task Module Title: Refrigeration and Cryogenic Systems

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

_____

INSTRUCTOR: _____

Rating Levels: 1. Passed: performed task.

2. Failed: did not perform task.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance Profile testing results on Craft Training Report Form 200 and submit the results to the Training Program Sponsor.

TASK	RATING
1. Label an unmarked diagram of a refrigeration cycle.	
2. Label an unmarked diagram of an ammonia refrigeration system.	

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Answer Key to Module Examination

Answer		Section
1.	c	3.1.0
2.	b	3.2.0
3.	c	2.2.0
4.	d	3.1.0
5.	b	2.2.0
6.	c	2.2.0
7.	d	2.2.0
8.	a	3.2.0
9.	b	1.0.0
10.	a	3.2.0