

PRETEST: RAC Materials and Tools (DOMRAC / HVAC)

Directions: Read each question carefully. Choose the letter of the correct answer.

What is the primary use of copper tubes in refrigeration and air conditioning systems?

- A. To store refrigerant
- B. To carry refrigerant throughout the system
- C. To insulate the compressor
- D. To clean the evaporator

Which basic hand tool is commonly used to tighten and loosen nuts and bolts in domestic refrigeration servicing?

- A. Hammer
- B. Screwdriver
- C. Wrench
- D. Pliers

What type of tubing is commonly used in RAC systems because it is easy to bend and resistant to corrosion?

- A. Steel tubing
- B. Aluminum tubing
- C. Soft copper tubing
- D. Plastic tubing

Which tool is specifically used for cutting copper tubes accurately?

- A. Hacksaw
- B. Tube cutter
- C. File
- D. Chisel

What is the main purpose of a filter drier in a refrigeration system?

- A. To cool the refrigerant
- B. To remove moisture and dirt from the refrigerant
- C. To increase pressure
- D. To circulate air

Which equipment is used in brazing copper tubes during RAC installation or repair?

- A. Electric drill
- B. Soldering iron
- C. Brazing torch
- D. Heat gun

What is the function of a torch and lighter in refrigeration servicing?

- A. To test electrical current
- B. To clean copper tubes
- C. To provide heat for brazing
- D. To measure temperature

Which HVAC tool is used to measure pressure in refrigeration and air conditioning systems?

- A. Thermometer
- B. Vacuum pump
- C. Manifold gauge set
- D. Leak detector

Why is soft copper tubing preferred in domestic RAC systems?

- A. It is cheaper than all materials
- B. It is hard and brittle
- C. It can be easily bent and shaped
- D. It cannot carry refrigerant

Which of the following is a tool for tubing used to expand the end of a copper tube for proper fitting?

- A. Tube bender
- B. Flaring tool
- C. Pipe wrench
- D. Clamp

PRETEST: Mensuration, Measuring Tools, and Electrical Instruments in RAC

Directions: Read each question carefully. Choose the letter of the correct answer.

What branch of mathematics is used in RAC to compute area, volume, and capacity of components such as ducts and pipes?

- A. Algebra
- B. Geometry
- C. Mensuration
- D. Statistics

Which measuring tool is commonly used to measure the length and diameter of copper tubes in RAC work?

- A. Thermometer
- B. Steel rule
- C. Clamp meter
- D. Ammeter

What is the main purpose of mensuration and calculation in refrigeration and air conditioning servicing?

- A. To design electrical circuits
- B. To determine correct sizes and quantities of materials
- C. To test refrigerant quality
- D. To clean RAC tools

Which electrical instrument is used to measure electric current in an RAC system?

- A. Voltmeter
- B. Ohmmeter
- C. Ammeter
- D. Wattmeter

What is the basic principle of an ammeter?

- A. It is connected in parallel to measure voltage
- B. It has high resistance to stop current flow
- C. It is connected in series to measure current flow
- D. It measures resistance only

Which basic measuring tool is used to measure small and precise dimensions, such as the thickness of metal sheets?

- A. Tape measure
- B. Vernier caliper
- C. Steel rule
- D. Protractor

Which electrical instrument can serve as an alternative tool for measuring current, voltage, and resistance in RAC servicing?

- A. Test light
- B. Multimeter
- C. Megger
- D. Continuity tester

Why are accurate measurements important in RAC mensuration?

- A. To reduce electricity consumption
- B. To ensure proper fitting and system efficiency
- C. To make tools lighter
- D. To avoid using electrical instruments

Which measuring tool is best used for measuring curved or long surfaces, such as air ducts?

- A. Tape measure
- B. Micrometer
- C. Ammeter
- D. Caliper

Which tool is commonly used as an alternative to an ammeter for measuring current without disconnecting the circuit?

- A. Voltmeter
- B. Clamp meter
- C. Ohmmeter
- D. Protractor

#### PRETEST: Technical Drawings and Plans in RAC

Directions: Read each question carefully. Choose the letter of the correct answer.

What is the main purpose of technical drawings in refrigeration and air conditioning systems?

- A. To show the cost of materials
- B. To provide a visual representation of components and layout
- C. To measure electrical current
- D. To test refrigerant pressure

Which type of diagram shows the electrical connections and operation of an RAC system?

- A. Pictorial diagram
- B. Schematic diagram
- C. Installation diagram
- D. Fabrication drawing

What do signal lights in an RAC electrical diagram usually indicate?

- A. Pressure level
- B. System operation status or alerts
- C. Temperature measurement
- D. Refrigerant type

Which drawing shows the actual physical arrangement of equipment and components in RAC installation?

- A. Schematic diagram
- B. Installation diagram
- C. Blueprint
- D. Pictorial diagram

What are switches in an RAC diagram used for?

- A. To measure current
- B. To control the flow of electricity

- C. To indicate refrigerant level
- D. To connect copper tubes

Which type of drawing uses standardized symbols to represent electrical and mechanical components?

- A. Fabrication drawing
- B. Blueprint
- C. Pictorial diagram
- D. Technical drawing

Which drawing provides a 3D-like representation of RAC components to make it easier to visualize assembly?

- A. Pictorial diagram
- B. Schematic diagram
- C. Installation diagram
- D. Fabrication drawing

Blueprint reading helps a technician to:

- A. Determine the amount of refrigerant needed
- B. Understand system layout, measurements, and specifications
- C. Measure electrical current
- D. Perform brazing of copper tubes

What type of drawing shows detailed fabrication instructions for making components such as ductwork or brackets?

- A. Schematic diagram
- B. Fabrication drawing
- C. Installation diagram
- D. Pictorial diagram

Which diagram shows where each component is installed within the system or building?

- A. Schematic diagram
- B. Installation diagram
- C. Fabrication drawing
- D. Pictorial diagram

PRETEST: Maintenance of RAC Tools and Equipment

Directions: Read each question carefully. Choose the letter of the correct answer.

What is the main purpose of maintenance of RAC tools and equipment?

- A. To make tools look shiny
- B. To ensure tools function properly and last longer
- C. To measure refrigerant levels
- D. To reduce electricity consumption

Which of the following is a correct classification of RAC tools?

- A. Mechanical, electrical, and measuring tools
- B. Refrigerant, ductwork, and piping tools
- C. Heating, cooling, and ventilation tools
- D. Fabrication, pictorial, and schematic tools

What is preventive maintenance?

- A. Repairing tools after they break
- B. Routine care and inspection to prevent damage or failure
- C. Using tools for different systems
- D. Cleaning tools with water only

Which of the following is a general requirement for tools and equipment maintenance?

- A. Use tools for any purpose
- B. Store tools properly, inspect regularly, and clean after use
- C. Leave tools outside for ventilation
- D. Never lubricate moving parts

When taking care of hand tools, which of the following should be observed?

- A. Throw them into a toolbox without cleaning
- B. Keep them dry, clean, and properly stored
- C. Only clean them once a year
- D. Share them without care

Why is cleaning with compressed air considered dangerous?

- A. It can cause electrical shock
- B. It can blow dust and debris into eyes or skin
- C. It removes lubricant
- D. It breaks the tools

What is the function of lubricant in tool maintenance?

- A. To clean the tool
- B. To reduce friction and wear in moving parts
- C. To measure pressure
- D. To prevent rust by cooling

Which of the following is part of preventive maintenance?

- A. Inspecting, cleaning, lubricating, and recording tool usage
- B. Replacing tools every month
- C. Using tools without checking condition
- D. Only cleaning tools after failure

What is the purpose of a preventive maintenance recording form?

- A. To list the tools in a toolbox
- B. To document inspections, maintenance actions, and schedule
- C. To measure electrical current
- D. To determine refrigerant type

Which of the following is NOT a proper way of maintaining RAC tools?

- A. Storing tools in a dry place
- B. Lubricating moving parts regularly
- C. Cleaning with compressed air directly on hands or body
- D. Inspecting tools for damage before use