

# TEN FREE 313A REFRIGERATION & AC SYSTEMS MECHANIC PRACTICE QUESTIONS.

| QUESTIONS                              | COST                       | LAST CHECKED       |
|----------------------------------------|----------------------------|--------------------|
| 10, multiple choice, answers explained | Free. No account, no email | September 25, 2026 |

Ten 313A Refrigeration & AC Systems Mechanic questions in the format of the Red Seal exam: four options, one correct answer, no trick questions. They are free to use, print and share. There is nothing to sign up for on this page.

## 01 How to use these

The questions come from the TicketPrep 313A bank and are spread across the exam's work activities in the order and roughly the proportion the Red Seal Program publishes for this trade: A (performs common occupational skills), B (performs routine trade activities), C (plans installation), D (performs installation), E (performs commissioning), F (performs maintenance and service). Answer each one before opening the explanation. Every explanation covers all four options, because on the real exam the wrong options are written to be plausible, and knowing *why* they are wrong is most of the skill.

- **Pace.** The exam allows four hours for 125 questions, so about 1 min 55 s per question. Try these at that pace.
- **Print.** The printed version shows the questions and the answer key without the explanations, so it works as a handout.
- **Mark.** The pass mark is 70 percent on every Red Seal trade; seven of ten here is the same bar.

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## 02 The questions

Q1 • RECALL • PERFORMS COMMON OCCUPATIONAL SKILLS

**When setting up an oxy-acetylene brazing outfit, what is the maximum acetylene working pressure that should ever be set at the regulator?**

- A. 34 kPa (5 psig)
- B. 103 kPa (15 psig)
- C. 690 kPa (100 psig)
- D. 207 kPa (30 psig)

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Q2 • PROCEDURAL • PERFORMS ROUTINE TRADE ACTIVITIES

**You are about to braze the joints on a new line set for an R-410A split system. How should the nitrogen purge be set up?**

- A. A quick blast of nitrogen through the line before brazing, then the line capped to keep it in
- B. A low flow of dry nitrogen through the line with the far end open to vent, maintained while each joint is heated
- C. Nitrogen at 100 psig (690 kPa) held in the sealed line set so the joint is tested as it is brazed
- D. No purge is needed on R-410A line sets because BCuP alloys are self-fluxing

**Where should the micron gauge be connected to give a true reading during and after the evacuation of a split system?**

- A.** At the pump's exhaust port, where the gauge is protected from oil and refrigerant vapour
- B.** At the vacuum pump inlet, where the deepest vacuum is reached first and the gauge responds fastest
- C.** On the system, at a port away from the pump connection, and read with the pump valved off for the decay test
- D.** On the manifold's centre hose between the pump and the system, so one gauge sees both

**Which zoning method holds the supply air temperature constant and meets each zone's load by varying the quantity of air delivered to the zone?**

- A.** Terminal reheat
- B.** Induction reheat
- C.** Variable air volume (VAV)
- D.** Dual duct

**When assembling a heat-pump reversing valve into the circuit, which tube connects to the compressor discharge?**

- A. The centre tube of the three on the other side.
- B. The tube nearest the solenoid coil.
- C. Either outer tube of the three; they are interchangeable.
- D. The single tube on one side of the valve body.

**Insulated suction lines are being hung on clevis hangers. What is placed at each hanger?**

- A. A shield or saddle (or a rigid insert) so the insulation and its vapour barrier are not crushed.
- B. A rubber strip between hanger and copper, with the insulation cut away.
- C. Nothing; the insulation is stiff enough to carry the line.
- D. The hanger directly on the copper, with the insulation cut away at each support.

**When reading a P/T chart for a zeotropic blend such as R-407C or R-448A, which column is used for superheat and which for subcooling?**

- A. Dew point for superheat; bubble point for subcooling
- B. Either column; the glide is small enough to ignore on all blends
- C. Bubble point for superheat; dew point for subcooling
- D. The average of the two columns for both readings

**How should the high-pressure safety switch on a new air-cooled condensing unit be proven at commissioning?**

- A.** With gauges on, restrict condenser airflow and confirm it trips at its set pressure with the specified reset
- B.** Lower the set point until it trips at running pressure, then leave it there as the new setting
- C.** Check the switch contacts for continuity with an ohmmeter and record that they are closed
- D.** Jumper the switch during commissioning so it cannot interrupt the readings, and test it on the first service call

**A rooftop unit's aluminum-fin condenser coil is heavily fouled with cottonwood seed and road dust. How should it be cleaned?**

- A.** Leave the coil; condenser fouling only affects the heating mode
- B.** Pressure-wash at full pressure from the outside face to blast the dirt through
- C.** Brush off debris, apply an approved coil cleaner and rinse from the clean side at low pressure
- D.** Use a muriatic-acid solution because it dissolves scale fastest

**A laboratory ultra-low freezer holding –80 °C (–112 °F) uses a cascade refrigeration system. What is the defining feature of a cascade system?**

- A.** Two compressors piped in parallel on a common suction header
- B.** A single circuit with a secondary glycol loop for distribution
- C.** Two separate refrigerant circuits joined by an interstage heat exchanger
- D.** One refrigerant compressed in two stages by two compressors in series

### 03 Answer key

| QUESTION | ANSWER | WORK ACTIVITY                       |
|----------|--------|-------------------------------------|
| Q1       | B      | Performs common occupational skills |
| Q2       | B      | Performs routine trade activities   |
| Q3       | C      | Performs routine trade activities   |
| Q4       | C      | Plans installation                  |
| Q5       | D      | Performs installation               |
| Q6       | A      | Performs installation               |
| Q7       | A      | Performs commissioning              |
| Q8       | A      | Performs commissioning              |
| Q9       | C      | Performs maintenance and service    |
| Q10      | C      | Performs maintenance and service    |

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## 04 More free questions

For the 313A exam itself, the 313A exam guide covers the work activities, their weights and how the exam is scored, and the 313A Refrigeration & AC Systems Mechanic practice exam page describes the full TicketPrep 313A question bank. The same free format is available for the other 7 trades, plus the free guides on the pass mark, question counts, exam day and how to study.

310S

Automotive Service Technician questions

310T

Truck and Coach Technician questions

309A

Electrician questions

403A

Carpenter questions

421A

Heavy Duty Equipment Technician questions

332A

Hairstylist questions

433A

Industrial Mechanic Millwright questions

HUB

All free practice questions

GUIDES

The Red Seal exam, explained

How these questions are written and checked: how our questions are made. Found a mistake? Tell us and we will fix it.