SUMMIT
STUDY GUIDES

EPA 608

Diagnostic Assessment

Week 1 Diagnostic

40 Questions • 45 Minutes

Scored by the four Section 608 exam sections • Original practice questions

Find your weak sections, then study the chapters that matter most

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How to Use This Material

Take this assessment in one sitting with a 45-minute timer, choosing the single BEST answer for each question. It has 40 questions, 10 from each section of the exam: Core, Type I, Type II and Type III. Then score it with the separate answer key and fill in the Weakness Map at the end of the key: count your correct answers in each section, and study the sections marked Focus first or Review before the others. The interactive version on the Diagnostic page of the EPA 608 bonus site scores your Weakness Map automatically.

EPA 608 Week 1 Diagnostic

40 questions • 10 from each exam section • Answer key and Weakness Map in the separate Answer Key file
Choose the single BEST answer for each question. Allow 45 minutes.

Section 1: Core Questions 1-10

1. An R-134a system reads 18.4 psig suction with a 38°F suction line, and 124.2 psig head with a 92°F liquid line. What are the superheat and subcooling?

- **A.** 8°F superheat and 18°F subcooling
- **B.** 18°F superheat and 8°F subcooling
- **C.** 20°F superheat and 10°F subcooling
- **D.** 38°F superheat and 92°F subcooling

2. The compressor raises the vapor pressure so that the refrigerant can condense. At what temperature must condensing take place?

- **A.** Below the temperature of the air or water cooling the condenser
- **B.** At the same temperature as the evaporator
- **C.** At the temperature of the space being cooled
- **D.** Above the temperature of the air or water cooling the condenser

3. When the venting prohibition first took effect on July 1, 1992, which refrigerants did it cover?

- **A.** CFCs and HCFCs
- **B.** HFCs and HFOs
- **C.** All refrigerants including CO2
- **D.** CFCs only

4. A technician has held Type II since 2019. In March 2027 she adds Type III. Which question bank will her Type III come from, and must she retest Type II?

- **A.** The old bank; she must also retest Type II
- **B.** The revised bank; no Type II retest is needed
- **C.** The old bank; no Type II retest is needed
- **D.** The revised bank; she must also retest Type II

5. A technician wants to add fluorescent dye to find an intermittent leak. What condition applies?

- **A.** Add dye only to systems over 50 lb
- **B.** Use any dye that glows under a black light
- **C.** Use only a dye the equipment manufacturer approves
- **D.** Add dye only with the system evacuated

6. A refrigerant cylinder is cold and its pressure is low. Which method of warming it must never be used?

- **A.** An open flame or torch
- **B.** Moving it into a heated shop
- **C.** Letting it stand indoors to warm
- **D.** Placing it in a warmer part of the truck

7. Why is a machinery-room detector for an A1 refrigerant never set as a percentage of its LFL?

- **A.** A1 refrigerants are lighter than air and rise past the sensor
- **B.** A1 refrigerants have an LFL too high to measure in a room
- **C.** A1 refrigerants do not propagate flame, so they have no LFL
- **D.** A1 refrigerants must be detected by an ultrasonic sensor

8. After charging a new R-32 heat pump, what does UL 60335-2-40 require the technician to do?

- **A.** Add 10% above the nameplate charge for safety
- **B.** Report the charge weight to EPA within 30 days
- **C.** Paint the suction line red at the service port
- **D.** Label the unit with the charge weight and date

9. A new low-pressure chiller uses R-1233zd(E). Which family is it in?

- **A.** HCFO
- **B.** HFC
- **C.** HFO
- **D.** HCFC

10. Who certifies recovery and recycling equipment under §82.158?

- **A.** The equipment manufacturer by self-declaration
- **B.** An EPA-approved equipment testing organization
- **C.** The technician's certifying program
- **D.** EPA's Stratospheric Protection Division directly

Section 2: Type I: Small Appliances Questions 11-20

11. What score does the regulation require to pass a mail-in Type I test?

- **A.** 18 of 25 (70%)
- **B.** 20 of 25 (80%)
- **C.** 21 of 25 (84%)
- **D.** 25 of 25 (100%)

12. A technician recovers refrigerant to dispose of a factory-sealed reach-in that holds 12 lb of R-404A. What record must the technician keep, and for how long?

- **A.** No record, because factory-sealed units are small appliances
- **B.** Company, location, date, refrigerant and monthly totals, 3 years
- **C.** A signed statement for the final processor only, for 1 year
- **D.** The leak-rate calculation and the dates of any leak repairs, for 3 years

13. A technician has recovered R-12 from an old refrigerator and R-134a from a newer one. How should the refrigerants be stored?

- **A.** In one cylinder if the total stays under 80% of capacity by weight
- **B.** In one cylinder, since both are medium-pressure
- **C.** In one cylinder labeled as a mixture for reclaim
- **D.** In separate recovery cylinders, one refrigerant per cylinder

14. A refrigerator's compressor has burned out and will not run. The recovery machine was made in 2018. What does the rule require?

- **A.** Recover 80% of the charge or reach 4 in. Hg vacuum
- **B.** Recover 90% of the charge, since the machine is certified
- **C.** Recover 70% of the charge or reach 0 psig
- **D.** Recover 90% of the charge or reach 4 in. Hg vacuum

15. A person services only their own appliances, each fitted with a permanently attached pump-out unit. What does the regulation say about self-contained equipment?

- **A.** They must have their pump-out units recertified yearly
- **B.** They do not need certified self-contained equipment
- **C.** They must own at least one certified self-contained machine
- **D.** They must use self-contained equipment on any unit over 5 lb

16. A restaurant is retiring one of its R-134a reach-in coolers. The technician wants to charge the recovered R-134a into the same restaurant's other R-134a reach-in. What does Section 608 require?

- **A.** It may go only back into the same appliance it came from
- **B.** It must be destroyed, since used refrigerant cannot be reused
- **C.** Nothing more; it may go into another appliance of the same owner
- **D.** It must first be reclaimed to AHRI 700 purity by an EPA-certified reclaimer

17. A technician is asked to recover R-1234yf from a passenger car's air conditioner. Which rule covers this work?

- **A.** Section 609, because it is motor vehicle air conditioning
- **B.** Section 608 Type I, because the charge is under 5 lb
- **C.** Section 608 Type II, because R-1234yf is an A2L
- **D.** Section 608 Type I, because the system is factory charged

18. On a frost-free refrigerator with a dead compressor, which appliance component can help release trapped refrigerant during passive recovery?

- **A.** The door heater
- **B.** The defrost heater
- **C.** The evaporator fan
- **D.** The condenser fan

19. An R-32 window air conditioner is low on charge, and the technician has only R-410A on the truck. What should the technician do?

- **A.** Recharge only with R-32, the refrigerant on the nameplate
- **B.** Top off with R-410A, since its pressures are close to R-32
- **C.** Recover the R-32 and convert the unit to R-410A
- **D.** Top off with R-410A, then add an A2L warning label

20. Why can't an R-134a charge simply be added to an old compressor that still holds mineral oil?

- **A.** Mineral oil raises R-134a's standing pressure well above the PT chart value
- **B.** R-134a does not mix with mineral oil, so oil may not return
- **C.** Mineral oil and R-134a react to form sulfur dioxide in the compressor
- **D.** Mineral oil absorbs R-134a and turns it into a flammable mixture

Section 3: Type II: High- and Medium-Pressure Appliances Questions 21-30

21. Why should a technician wear gloves and safety glasses when disconnecting a hose from a liquid line?

- **A.** Hose fittings can carry stray electrical current from the unit
- **B.** Refrigerant oil spray is the main inhalation hazard at the port
- **C.** Liquid refrigerant is strongly corrosive to skin at room temperature
- **D.** Escaping liquid boils at a very low temperature and causes frostbite

22. For a non-major repair (not followed by evacuation) on an R-410A unit, the gauge settles at 3 psig after recovery. May the technician open the system?

- **A.** Yes; small units have no required level
- **B.** No; it must be no higher than 0 psig
- **C.** No; it must reach 10 in. Hg vacuum
- **D.** Yes; anything under 5 psig is allowed

23. Evacuation of a rooftop unit on a 35°F day is very slow. What helps moisture leave the system?

- **A.** Warming the system to help the moisture boil off
- **B.** Switching to a smaller pump to keep water liquid
- **C.** Closing the low-side valve to focus on the high side
- **D.** Adding a little refrigerant to absorb the moisture

24. A technician brushes bubble solution on joints of a system held at 500 microns. Will this find the leak?

- **A.** Yes, if the solution is applied thickly enough
- **B.** No; bubbles form only when gas pushes outward
- **C.** Yes; the vacuum pulls the solution in visibly
- **D.** No; bubbles work with refrigerant but not air

25. A partly filled R-410A recovery cylinder is left in a truck bed until it reaches 120°F. About what pressure is it under?

- **A.** About 318 psig
- **B.** About 201 psig
- **C.** About 419 psig
- **D.** About 260 psig

26. Why are new residential air conditioners moving from R-410A to R-32 and R-454B?

- **A.** They have a much lower global warming potential
- **B.** R-32 and R-454B are nonflammable
- **C.** R-410A may no longer be used for service
- **D.** R-410A depletes stratospheric ozone

27. An owner asks a technician to top off a low R-22 system with R-407C, since it was sold as an R-22 replacement. What is the right answer?

- **A.** Yes, if R-407C makes up no more than 10% of the charge
- **B.** Yes; R-407C is designed to mix with R-22 in the system
- **C.** No; mixed refrigerant cannot be reclaimed as either product
- **D.** Yes, as long as the oil is changed after the top-off

28. An R-22 comfort chiller leaked more than 125% of its full charge during calendar year 2026. By what date must the owner's chronic-leaker report reach EPA?

- **A.** January 1, 2027
- **B.** April 10, 2027
- **C.** December 31, 2026
- **D.** March 1, 2027

29. A test fluid's liquid-phase saturation pressure at 104°F reads 160 psig on an accurate gauge at sea level. What is its EPA pressure class?

- **A.** Medium-pressure
- **B.** Very high-pressure
- **C.** Low-pressure
- **D.** High-pressure

30. A rooftop unit's nameplate is missing, and the refrigerant is unknown. What should the technician do before connecting a recovery machine?

- **A.** Recover it into a cylinder with R-410A
- **B.** Identify the refrigerant with a PT check or an identifier
- **C.** Recover it into an empty cylinder and let the reclaimer identify it
- **D.** Assume R-22, since it is the most common

Section 4: Type III: Low-Pressure Appliances Questions 31-40

31. Besides oxygen displacement, what serious effect can breathing high concentrations of refrigerant vapor cause?

- **A.** Night blindness
- **B.** Skin rash
- **C.** Heart irregularities
- **D.** Hearing loss

32. Why is 0 psig not good enough before a major repair on a large R-11 chiller?

- **A.** A large mass of refrigerant vapor would still be inside
- **B.** The rupture disc needs a vacuum to reseat
- **C.** The purge unit cannot operate at 0 psig
- **D.** Air would be drawn into the shell as soon as the chiller is opened

33. Why is a leak test on a low-pressure chiller usually done with the chiller idle and warmed, rather than while it is running?

- **A.** The purge unit vents the test gas during operation
- **B.** A running evaporator is in a vacuum, so leaks there admit air
- **C.** A running chiller would trip the rupture disc
- **D.** The compressor noise prevents any leak detection

34. Which set of numbers is correct for low-pressure chiller service?

- **A.** Leak test 5 psig max; rupture disc 10 psig; recovery 29.9 in. Hg vacuum
- **B.** Leak test 10 psig max; rupture disc 15 psig; recovery 25 in. Hg vacuum
- **C.** Leak test 15 psig max; rupture disc 10 psig; recovery 25 mm Hg absolute
- **D.** Leak test 10 psig max; rupture disc 15 psig; recovery 25 mm Hg absolute

35. An old prep sheet lists the low-pressure recovery level for pre-1993 recovery equipment as "25 in. Hg vacuum." What is the correct requirement?

- **A.** 25 in. Hg vacuum for pre-1993 equipment only
- **B.** 25 mm Hg absolute in both equipment-date columns
- **C.** 25 in. Hg vacuum for every low-pressure chiller, any equipment date
- **D.** 25 mm Hg absolute for post-1993 equipment only

36. Refrigerant recovered from Company A's chiller is to be charged into a chiller owned by Company B. What is required first?

- **A.** A written OK from both building owners
- **B.** Recycling on site through a filter-drier
- **C.** An acid test showing the charge is clean
- **D.** Reclamation by an EPA-certified reclaimer

37. R-123 at 40°F is 18.1 in. Hg vacuum. About what is that in mm Hg absolute?

- **A.** About 460 mm Hg absolute
- **B.** About 742 mm Hg absolute
- **C.** About 300 mm Hg absolute
- **D.** About 18 mm Hg absolute

38. A refrigerant's liquid-phase saturation pressure at 104°F is 60 psia. Which certification covers servicing an appliance that uses it?

- **A.** Type III or Universal
- **B.** Type II or Universal
- **C.** Type I or Universal
- **D.** Universal only

39. An owner plans to send an R-123 chiller's purge exhaust to a device that destroys refrigerant at 99% efficiency and to leave that refrigerant out of leak-rate calculations. What else is required?

- **A.** Report the destroyed amount to EPA each March 1
- **B.** Obtain EPA approval at least 30 days before starting
- **C.** Notify EPA within 60 days of first using the practice
- **D.** Nothing, since 99% exceeds the required efficiency

40. A 700 lb R-123 comfort-cooling chiller uses the rolling-average method. Additions in the past 365 days were 30 lb, 25 lb and 20 lb, with no verification tests in that period. What is the result?

- **A.** About 10.7%; over 10%, so repair is required
- **B.** About 10.7%; under 20%, so no repair is needed
- **C.** About 2.9%; under 10%, so no repair is needed
- **D.** About 7.9%; under 10%, so no repair is needed