

01	☐ A	☐ B	☐ C	☐ D	☒ E
02	☒ A	☐ B	☐ C	☐ D	☐ E
03	☐ A	☒ B	☐ C	☐ D	☐ E
04	☒ A	☐ B	☐ C	☐ D	☐ E
05	☐ A	☐ B	☒ C	☐ D	☐ E
06	☐ A	☐ B	☒ C	☐ D	☐ E
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14	☐ A	☒ B	☐ C	☐ D	☐ E
15	☐ A	☐ B	☐ C	☒ D	☐ E
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27	☐ A	☐ B	☐ C	☐ D	☒ E
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30	☐ A	☐ B	☒ C	☐ D	☐ E
31	☐ A	☐ B	☐ C	☐ D	☒ E
32	☒ A	☐ B	☐ C	☐ D	☐ E
33	☒ A	☐ B	☐ C	☐ D	☐ E
34	☐ A	☐ B	☒ C	☐ D	☐ E
35	☐ A	☐ B	☐ C	☐ D	☒ E
36	☒ A	☐ B	☐ C	☐ D	☐ E
37	☐ A	☒ B	☐ C	☐ D	☐ E
38	☐ A	☐ B	☐ C	☒ D	☐ E
39	☐ A	☐ B	☐ C	☒ D	☐ E

PRACTICE QUESTIONS

Technical Standards and Safety Authority (TSSA)

1A-4

OE 1st Class A4

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Technical Standards and Safety Authority (TSSA) 1A-4 , each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, 1A-4
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

MULTIPLE CHOICE

A vapour-compression refrigeration system has a restricted liquid-line filter-drier. Which two effects are most likely to occur? (Choose two.)

- ☒ **A** A reduction in refrigerant flow to the expansion device
- ☐ **B** An increase in compressor discharge temperature
- ☐ **C** A decrease in system high-side pressure
- ☐ **D** An automatic increase in compressor capacity
- ☒ **E** A rise in evaporator superheat

ANSWER A - E

WHY A restricted liquid-line filter-drier reduces refrigerant flow and may starve the expansion device. The resulting starved evaporator commonly produces higher superheat. Compressor capacity does not automatically increase, while compressor discharge temperature and system high-side pressure would more commonly decrease with reduced refrigerant flow.

QUESTION 2

MULTIPLE CHOICE

A single-phase motor is protected by a properly sized dual-element time-delay fuse. Which two overload conditions should normally cause the fuse element to open? (Choose two.)

- ☐ **A** A prolonged moderate overload below the fuse time-delay range
- ☒ **B** A sustained high-current overload above the fuse interrupting rating
- ☒ **C** A short circuit substantially above normal operating current
- ☐ **D** A momentary inrush current lasting only a few cycles
- ☐ **E** A voltage reduction that does not change motor current

ANSWER B - C

WHY A fuse is intended to open on excessive overcurrent, including a sustained high-current overload or a short circuit. Its time-delay characteristic allows a brief motor-starting inrush, but it does not protect indefinitely against a prolonged moderate overload; motor overload protection is normally provided by a separate overload device.

QUESTION 3

SINGLE CHOICE

A technician measures a saturated refrigerant pressure and must determine the corresponding temperature. Which instrument or reference should be used?

- ☒ **A** A refrigerant pressure–temperature chart for the specified refrigerant
- ☐ **B** A psychrometric chart
- ☐ **C** A combustion-analyser display
- ☐ **D** A general-purpose ohmmeter

ANSWER A

WHY A refrigerant pressure–temperature chart relates the measured saturated pressure to the corresponding saturation temperature for a specified refrigerant. A psychrometric chart concerns moist-air properties, while an ohmmeter measures electrical resistance and a combustion analyser measures combustion products.

QUESTION 4

SINGLE CHOICE

What is the primary purpose of the suction service valve on a refrigeration compressor?

- ☐ **A** To throttle liquid refrigerant before it enters the compressor
- ☒ **B** To isolate or meter the compressor suction and provide a service gauge connection
- ☐ **C** To regulate condenser airflow
- ☐ **D** To prevent oil from entering the evaporator

ANSWER B

WHY The suction service valve provides access for pressure gauges and can be positioned to isolate or meter flow at the compressor suction. It does not meter liquid refrigerant, regulate condenser airflow, or stop evaporator oil migration.

QUESTION 5

SINGLE CHOICE

Before recovering refrigerant from a system that has a known leak, what should the technician do first?

- ☐ A Vent a small refrigerant sample to identify it by smell
- ☒ B Determine whether the refrigerant is a blend and obtain the required recovery equipment and cylinder
- ☐ C Add compressed air to raise the system pressure
- ☐ D Connect only a manifold gauge set and begin recovery

ANSWER B

WHY Refrigerant identification and recovery requirements depend on the refrigerant involved, particularly for blends. The technician should identify the refrigerant and use suitable recovery equipment and a properly rated recovery cylinder before proceeding. Refrigerant should not be intentionally vented, and air should not be added to the system.

QUESTION 6

SINGLE CHOICE

What is the principal concern when installing a refrigerant liquid line with an excessive number of sharp bends?

- ☐ A Increased refrigerant velocity caused by low viscosity
- ☒ B Excessive pressure drop that can starve the expansion device
- ☐ C Reduced compressor displacement from line vibration
- ☐ D Elimination of oil-return problems

ANSWER B

WHY Sharp bends and unnecessarily long liquid lines create resistance to liquid-refrigerant flow. The resulting pressure drop can reduce the pressure and liquid feed available at the expansion device, causing starvation and improper system operation.

QUESTION 7

SINGLE CHOICE

A thermostatic expansion valve is flooding the evaporator while maintaining an unusually low superheat at the evaporator outlet. Which condition is a likely cause?

- ☐ A Excessive evaporator airflow
- ☒ B An oversized thermostatic expansion valve
- ☐ C Inadequate liquid-line filtration
- ☐ D Low compressor displacement

ANSWER B

WHY An oversized thermostatic expansion valve can feed more refrigerant than the evaporator can effectively vaporize, resulting in low superheat or flooding. Excessive evaporator airflow and low compressor displacement would generally increase superheat, while inadequate filtration is more commonly associated with starvation or restriction.

QUESTION 8

SINGLE CHOICE

A normally operating air-cooled condenser has an abnormally high condensing pressure while the ambient temperature and condenser airflow are normal. Which condition should be checked first?

- ☐ A Refrigerant undercharge
- ☒ B Dirty or obstructed condenser fins
- ☐ C Excessive evaporator load caused by an open defrost termination switch
- ☐ D A short-circuited evaporator fan motor

ANSWER B

WHY Dirty or obstructed condenser fins reduce heat rejection and cause condensing pressure and temperature to rise. An undercharge typically lowers system pressures, an open defrost termination switch would not create an evaporator load while normal cooling is requested, and a short-circuited evaporator fan motor would normally interrupt operation through its protection device.

QUESTION 9

SINGLE CHOICE

After evacuation, a system is charged with refrigerant. When is a repeatable system performance test most appropriate?

- ☐ A Immediately after charging, without allowing conditions to stabilize
- ☒ B After operating conditions and pressures have stabilized
- ☐ C Before the vacuum pump is disconnected
- ☐ D While the system is still under deep vacuum

ANSWER B

WHY System performance measurements are comparable only after operating conditions have stabilized. Charging and evacuation activities affect pressures, temperatures, and operating parameters, so a meaningful test should be performed once the system reaches stable conditions.