COMMERCIAL REFRIGERATION II PRACTICE EXAM (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

1. **What does a crankcase pressure regulator do?**
   A. It will not allow the compressor suction pressure to rise above the CPR setpoint.
   B. It increases compressor efficiency.
   C. It regulates liquid line temperature.
   D. It controls condenser fan speed.

2. **If noncondensable gases are present in the system, which statement best describes the expected condenser pressure relative to the PT chart for the same refrigerant and temperature?**
   A. Higher than the PT chart value.
   B. Lower than the PT chart value.
   C. Equal to the PT chart value.
   D. Unrelated to the PT chart value.

3. **The coil of a current relay used with small single-phase compressors should have a resistance of approximately:**
   A. 0.01 Ω
   B. 0.1 Ω
   C. 1 Ω
   D. 10 Ω

4. **What type of systems normally use crankcase pressure regulators?**
   A. Low-temperature refrigeration applications such as walk-in and reach-in freezers
   B. High-temperature comfort cooling systems
   C. Medium-temperature display cases
   D. Industrial process chillers with glycol

5. **In a performance log, baseline condenser data is typically recorded as?**
   A. Temperature of Air In
   B. Battery State of Charge
   C. Water pH
   D. Ventilation Rate

6. **During troubleshooting, if the superheat value of the refrigerant leaving an evaporator is higher than normal:**

   A. The evaporator is starved for refrigerant.

   B. The refrigerant charge is excessive.

   C. The condenser is oversized.

   D. The metering device is stuck closed.

7. **The coil of a potential relay used with small single-phase compressors should have a resistance of approximately:**

   A. 1 Ω

   B. 10,000 Ω

   C. 100 Ω

   D. 0.1 Ω

8. **Which of the following is a potential cause of overfeeding the TEV?**

   A. Oversized TEV

   B. Low superheat adjustment

   C. TEV sensing bulb not making good thermal contact

   D. TEV not receiving power

9. **To manually defrost a frozen evaporator coil, technicians should:**

   A. Use a heat gun to accelerate the melting of the ice.

   B. Pour hot water over the coil.

   C. Run the blower without power to the compressor.

   D. Use a hair dryer on the coil.

10. **Why is nitrogen used to purge the system before using the flushing solvent?**

   A. Nitrogen is cheaper

   B. Nitrogen is more reactive

   C. Nitrogen absorbs moisture

   D. Nitrogen is heavier than air

Answers

1. A
2. A
3. B
4. A
5. A
6. A
7. B
8. A
9. A
10. A

Explanations

1. What does a crankcase pressure regulator do?

A. It will not allow the compressor suction pressure to rise above the CPR setpoint.

B. It increases compressor efficiency.

C. It regulates liquid line temperature.

D. It controls condenser fan speed.

The essential idea is to protect the compressor by keeping crankcase pressure from getting too high. A crankcase pressure regulator senses the pressure inside the crankcase and, if it rises above a preset value, opens a path to vent the excess vapor back into the compressor's suction side. This keeps the crankcase pressure at a safe level and helps prevent issues like oil foaming, oil carryover into the suction, and potential bearing or seal damage. In normal operation, this means the suction pressure is kept within the regulator's setpoint limits, avoiding excessive rise. It's not about boosting efficiency, regulating liquid-line temperature, or controlling condenser fan speed, which are handled by other parts of the system.

2. If noncondensable gases are present in the system, which statement best describes the expected condenser pressure relative to the PT chart for the same refrigerant and temperature?

A. Higher than the PT chart value.

B. Lower than the PT chart value.

C. Equal to the PT chart value.

D. Unrelated to the PT chart value.

Noncondensable gases in the condenser impede heat transfer, creating an insulating layer and lowering the condenser's effectiveness. Because the refrigerant can't condense as easily, the system must build a higher pressure to achieve condensation at the same temperature. The PT chart shows the saturated vapor pressure for a pure refrigerant at a given temperature; with noncondensables present, the actual condenser pressure ends up higher than that chart value. This is why the condenser pressure is higher than the PT chart value for the same refrigerant and temperature.

3. The coil of a current relay used with small single-phase compressors should have a resistance of approximately:

A. 0.01 Ω

B. 0.1 Ω

C. 1 Ω

D. 10 Ω

The coil in a current relay used with a small single phase compressor is designed to carry the motor's current with as little voltage loss as possible while still producing a strong magnetic pull to operate the relay during startup. A value around 0.1 ohm provides a very small voltage drop at the high starting current, so most of the supply voltage stays across the compressor and the relay can respond quickly. If the coil resistance were much higher (like 1 ohm or 10 ohms), the coil would drop more voltage and waste more power, potentially starving the compressor during startup and making the relay operate less reliably. If it were much lower (like 0.01 ohm), it would still be possible in principle, but it's not practical given typical coil designs and tolerances; a practical, robust choice sits near 0.1 ohm. So, a coil resistance of about 0.1 ohm is the best balance to ensure reliable relay operation without imposing a significant voltage drop on the running compressor.

4. What type of systems normally use crankcase pressure regulators?

A. Low-temperature refrigeration applications such as walk-in and reach-in freezers

B. High-temperature comfort cooling systems

C. Medium-temperature display cases

D. Industrial process chillers with glycol

Crankcase pressure regulators are used to manage the pressure inside the compressor crankcase, especially when suction pressures are very low. In low-temperature refrigeration systems like walk-in and reach-in freezers, the evaporating temperatures are so low that refrigerant can condense and migrate into the crankcase, or oil can be carried away from the lubrication area. The regulator keeps the crankcase pressure at a controlled level, typically near the low suction pressure, which helps prevent refrigerant from entering the oil, improves oil return, and reduces the risk of compressor damage during startup and operation. That's why these devices are normally found in low-temperature applications. Higher-temperature comfort cooling, display cases at typical temps, and industrial process chillers with glycol don't typically require this kind of crankcase control, since their operating pressures and lubrication challenges are different.

5. In a performance log, baseline condenser data is typically recorded as?

A. Temperature of Air In

B. Battery State of Charge

C. Water pH

D. Ventilation Rate

Condenser performance depends on the air that carries away the rejected heat. Recording the temperature of the air entering the condenser gives a consistent starting point to evaluate how effectively the condenser is rejecting heat under those conditions. This inlet-air baseline helps you interpret head pressure, cooling capacity, and overall efficiency, and it allows meaningful comparisons across tests or setups. The other options don't fit as baseline condenser data: battery state of charge is about energy storage components, not the condenser; water pH concerns water quality in water-cooled systems, not the air-side baseline; and ventilation rate matters, but without tying it to the actual inlet air temperature and flow, it doesn't provide the direct baseline needed for condenser performance.

6. During troubleshooting, if the superheat value of the refrigerant leaving an evaporator is higher than normal:

A. The evaporator is starved for refrigerant.

B. The refrigerant charge is excessive.

C. The condenser is oversized.

D. The metering device is stuck closed.

High superheat at the evaporator outlet means the evaporator isn't getting enough liquid refrigerant to fully evaporate. With insufficient liquid, only a small amount boils in the coil and most of what leaves the evaporator is vapor at a temperature higher than the coil's saturated vapor temperature, so the suction gas shows a large rise above the evaporating temperature. This is a clear sign the evaporator is starved for refrigerant. An excessive charge tends to cause liquid flooding and can lower or normalize superheat, not raise it. An oversized condenser doesn't directly set evaporator superheat, and a metering device stuck closed would also starve the evaporator, but the symptom described most directly points to insufficient refrigerant reaching the evaporator.

7. The coil of a potential relay used with small single-phase compressors should have a resistance of approximately:

A. 1 Ω

B. 10,000 Ω

C. 100 Ω

D. 0.1 Ω

A potential relay coil in small single-phase compressors is a sensing element that must energize the relay while drawing only a tiny amount of current from the line. That means the coil should have high impedance so it doesn't load the circuit or waste power during starting. A coil around ten kilo-ohms achieves this, delivering only a few milliamps of current at typical line voltages (for example, about 12 mA at 120 V or 23 mA at 230 V), which is enough to operate the relay without affecting the motor's start winding. If the coil were much lower in resistance, it would waste more power and introduce unwanted heating, potentially disturb the start sequence or trip protective devices. Very high or very low values would either fail to energize reliably or waste power; the ten-kilo-ohm range is a practical balance for a sensing coil. That's why the coil resistance is approximately ten thousand ohms.

8. Which of the following is a potential cause of overfeeding the TEV?

A. Oversized TEV

B. Low superheat adjustment

C. TEV sensing bulb not making good thermal contact

D. TEV not receiving power

Thermostatic expansion valves meter refrigerant to the evaporator based on the evaporator load and the suction-line temperature to keep the evaporator's superheat at the set point. The valve's capacity to pass refrigerant is limited by its size and design, so the amount of flow is a balance between how open the valve is and how much the evaporator can accept. If the valve is oversized for the system, it has more flow capacity than the evaporator needs. Even with a nearly closed position, an oversized valve can still pass more refrigerant than the evaporator can vaporize. That extra liquid refrigerant entering the evaporator leads to overfeeding, where the evaporator gets flooded with liquid and the evaporator output isn't properly vaporizing before returning to the compressor. Other factors can disrupt operation, such as the sensing bulb not making good thermal contact, which can cause incorrect readings and unstable flow, or a setting that tries to control to a very low superheat, but these aren't as direct and reliable a cause of persistent overfeeding as using a valve that's too large for the system. The valve isn't powered, so it doesn't depend on any external power source. So, the best answer is that an oversized TEV tends to overfeed the evaporator because its capacity exceeds what the system load requires.

9. To manually defrost a frozen evaporator coil, technicians should:

A. Use a heat gun to accelerate the melting of the ice.

B. Pour hot water over the coil.

C. Run the blower without power to the compressor.

D. Use a hair dryer on the coil.

When manually defrosting an evaporator coil, you want to apply heat in a controlled, focused way to melt the ice quickly without introducing liquids or risking damage to the unit. A heat gun provides directed, adjustable heat that can be swept across the frost, raising its temperature rapidly and melting it without flooding electrical components or insulation. Pouring hot water can cause water to contact electrical parts and may lead to further icing or damage, while simply running the blower without heat won't remove the ice since there's nothing to melt it. A hair dryer could help, but a heat gun offers more heat and faster melting, making the defrost process more efficient.

10. Why is nitrogen used to purge the system before using the flushing solvent?

A. Nitrogen is cheaper

B. Nitrogen is more reactive

C. Nitrogen absorbs moisture

D. Nitrogen is heavier than air

When you purge a system before flushing solvent, you want to replace the air (which brings in moisture and oxygen) with a gas that won't react with residual refrigerants or solvents. Nitrogen is chosen mainly because it's inexpensive and readily available, so you can purge large volumes without adding cost burden. Its inert nature means it won't react with remaining refrigerant, oil, or the flushing solvent, reducing the risk of unwanted chemical reactions during the purge. It's also dry, helping to keep moisture levels down while displacing air. The idea isn't that nitrogen absorbs moisture or is heavier than air; those aren't the reasons it's used. The cost-effectiveness of nitrogen makes it the practical choice for routine purging operations.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

https://commercialrefrigeration2.examzify.com

We wish you the very best on your exam journey. You've got this!