

# RED SEAL STUDY GUIDE ELECTRICIAN YEAR 3

**250 EXAM PREP QUESTIONS  
WITH ANSWERS**



APPRENTICES | INSTRUCTORS | INSTITUTES

[RedSealStudyGuide.ca](http://RedSealStudyGuide.ca)

UNITY CREST SOLUTIONS INC.

# INTRODUCTION

## Introducing the Red Seal Study Guide – Electrician

Ready to dive into the world of Electrician? Meet your ultimate companion – the Red Seal Study Guide for Plumbers. This practical booklet is your go-to practice tool to conquer your Electrician exam.

Presented in an easy Q&A format, this guide lets you preview the kinds of questions you'll tackle on the real exam day. Consider it a sneak peek into what's coming your way!

Inside its pages, you'll find a treasure trove of Electrician essentials. It's more than just answering questions – it's about truly grasping the basics of Electrician in a way that sticks. Whether you're starting fresh or aiming to refine your skills, this guide has got you covered.

So, get set to challenge yourself, learn in a breeze, and build up your Electrician expertise. With the Red Seal Study Guide, you're all set to take that significant stride toward becoming a certified Electrician.

Ready to get started? For more information, tips, and resources, head over to [www.RedSealStudyGuide.ca](http://www.RedSealStudyGuide.ca)  
Electrician success starts here – dive in!



# DISCLAIMER



## **Study Guide Disclaimer: Important Notice**

The Red Seal Study Guide – Electrician is a reference tool meant to enhance your exam preparation. It offers insights into potential question formats. However, it's vital to know that this guide should complement, not replace, official government-issued study materials.

For comprehensive readiness, we recommend using both this guide and official resources provided by relevant authorities. Please note that this guide covers exams across Canadian provinces, but slight content variations might exist.

For your best chance at success, ensure a well-rounded preparation approach that includes official materials.

Good luck on your path to becoming a certified Electrician!

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head over to [www.RedSealStudyGuide.ca](http://www.RedSealStudyGuide.ca)  
Let's craft your future together!



**1. On a 480-volt circuit, a voltage drop of 19.2 volts was measured. What does the percentage of voltage drop?**

- A: 2%
- B: 5%
- C: 2.5%
- D: 4%

**2. Three turns of wire are wrapped around the movable jaw of a clamp-on ammeter. How much current is flowing in the circuit if the meter indicates a current of 15 amperes?**

- A: 5 amperes
- B: 10 amperes
- C: 25 amperes
- D: 45 amperes

**3. An RS flip-flop can be constructed using**

- A: 2 NAND gates
- B: 2 OR gates
- C: 2 AND gates
- D: 2 NOR gates

**4. At the 15 A motor, the maximum size of the plug fuse to be utilized for the protection of the circuits contained in the conduit shall be:**

- A: 15 A
- B: 20 A
- C: 30 A
- D: 25 A

**5. On a 120-volt circuit, a voltage drop of 3 volts has been measured. What does the percentage of voltage drop?**

- A: 2.5%
- B: 3%
- C: 5%
- D: 2%

See answers on the next page.



1. ☐ A ☐ B ☐ C ☒ D

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2. ☒ A ☐ B ☐ C ☐ D

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5. ☒ A ☐ B ☐ C ☐ D

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**6. At what percentage of the rated coil voltage will a relay seal in?**

- A: 50
- B: 75
- C: 85
- D: 100

**7. A kilogram light fixture must be supported separately from the outlet box.**

- A: 16
- B: 29
- C: 22
- D: 18

**8. Which rule in the Canadian Electrical Code would apply to exit signs?**

- A: 48-400
- B: 46-500
- C: 44-300
- D: 46-400

**9. What is the highest temperature that Mineral Insulated Cable can withstand?**

- A: 100 degrees
- B: 75 degrees
- C: 90 degrees
- D: 60 degrees

**10. N-type and P-type diode semiconductor materials are the two types.**

- A: True
- B: False

See answers on the next page.



6. ☐ A ☐ B ☒ C ☐ D

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7. ☐ A ☒ B ☐ C ☐ D

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9. ☐ A ☐ B ☒ C ☐ D

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10. ☒ A ☐ B ☐ C ☐ D

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**11. If a circuit has a resistance of 8 ohms and a current of 4 amperes, what is the voltage across the circuit?**

- A: 2 V
- B: 12 V
- C: 16 V
- D: 32 V

**12. Is it necessary for a squirrel cage induction motor to have some rotor slip to produce torque?**

- A: True
- B: False

**13. Can you use a pull-chain light with a shade and guard over combustible material?**

- A: True
- B: False

**14. A manual or automatic transfer switch must connect a hospital's essential and delayed vital branches to the emergency power supply.**

- A: True
- B: False

**15. If one of the three cooling fans in a UPS unit malfunctions, the unit must be shut down promptly.**

- A: True
- B: False

See answers on the next page.



11. ☒ A ☐ B ☐ C ☐ D

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15. ☐ A ☒ B ☐ C ☐ D

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**16. The binary value for 28 is 11100.**

- A: True
- B: False

**17. With an electromagnetic relay, typically closed connections are open:**

- A: True
- B: False

**18. Should the motor connection box supply conductor ampacity be based on insulation degrees C?**

- A: 45
- B: 75
- C: 35
- D: 90

**19. Which represents an electric circuit's source voltage?**

- A: SV
- B: V
- C: v
- D: E

**20. Which abbreviation would most likely represent "grade" on an electrical drawing?**

- A: GR
- B: GRDE
- C: EA
- D: GL

See answers on the next page.



16. ☒ A ☐ B ☐ C ☐ D

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17. ☒ A ☐ B ☐ C ☐ D

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18. ☐ A ☒ B ☐ C ☐ D

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19. ☐ A ☐ B ☐ C ☒ D

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**21. If the power rating of a device is 240 watts and the voltage across it is 120 volts, what is the current flowing through the device?**

- A: 1 A
- B: 2 A
- C: 4 A
- D: 8 A

**22. A breaker can disconnect a furnace.**

- A: True
- B: False

**23. When an 8-pole alternator rotates at 600 rpm, its frequency is**

- A: 80 Hz
- B: 20 Hz
- C: 60 Hz
- D: 40 Hz

**24. An uncharged 4-microfarad capacitor is paralleled with a 2-microfarad capacitor charged to 150 volts. What is the combination's voltage?**

- A: 50 volts
- B: 300 volts
- C: 500 volts
- D: 250 volts

**25. For a circuit with a capacitance of 20 microfarads and a voltage of 50 volts, what is the stored energy in the capacitor?**

- A: 500 joules
- B: 1,000 joules
- C: 2,500 joules
- D: 5,000 joules



21. ☐ A ☐ B ☒ C ☐ D

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22. ☒ A ☐ B ☐ C ☐ D

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24. ☒ A ☐ B ☐ C ☐ D

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25. ☐ A ☒ B ☐ C ☐ D

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- 2). (A) (B) (C) (D)
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