

RED SEAL STUDY GUIDE ELECTRICIAN YEAR 4

**25 EXAM PREP QUESTIONS
WITH ANSWERS**



APPRENTICES | INSTRUCTORS | INSTITUTES

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
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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Let's craft your future together!



1. Overload devices open circuits at predefined overload conditions.

- A: True
- B: False

2. A single screw terminal can loop fire alarm system wiring to twin terminals.

- A: True
- B: False

3. What is rigid PVC conduit's maximum installation temperature?

- A: 50 C
- B: 60 C
- C: 90 C
- D: 75 C

4. A fire alarm panel's circuit breaker should be what color?

- A: Orange
- B: Green
- C: Black
- D: Red

5. Self-excited generators are excited by:

- A: Battery
- B: Generator
- C: Field
- D: Armature

See answers on the next page.



1. ☒ A ☐ B ☐ C ☐ D

Note: _____

2. ☐ A ☒ B ☐ C ☐ D

Note: _____

3. ☐ A ☐ B ☐ C ☒ D

Note: _____

4. ☐ A ☐ B ☐ C ☒ D

Note: _____

5. ☐ A ☐ B ☐ C ☒ D

Note: _____



6. What is the maximum current rating before sheath currents derate cables?

- A: 400A
- B: 300A
- C: 200A
- D: 250A

7. Furnace isolation switches are not on the furnace.

- A: True
- B: False

8. The RPM speed for a 60-cycle 8-pole motor is which?

- A: 1200
- B: 1800
- C: 800
- D: 900

9. What current is drawn by six 80-watt fluorescent bulbs on a 120-volt circuit with a 0.91 power factor?

- A: 4.4 amps
- B: 2.57 amps
- C: 3.2 amps
- D: 4.7 amps

10. Fire alarm systems must be powered by a separate circuit as close to the service box load terminals as possible.

- A: True
- B: False

See answers on the next page.



6. ☐ A ☐ B ☒ C ☐ D

Note: _____

7. ☒ A ☐ B ☐ C ☐ D

Note: _____

8. ☐ A ☐ B ☐ C ☒ D

Note: _____

9. ☒ A ☐ B ☐ C ☐ D

Note: _____

10. ☒ A ☐ B ☐ C ☐ D

Note: _____



11. An infrared camera creates a thermographic image of building heat loss.

- A: True
- B: False

12. A heat-treating plant's electric furnaces need 60 kW at 240 volts, single-phase. These furnaces' total amperage at unity power factor?

- A: 100 amps
- B: 200 amps
- C: 250 amps
- D: 150 amps

13. Delta-connect three 600/208/120-volt transformers. What will the remaining two secondary connections look like before connecting them?

- A: 347 V
- B: 600 V
- C: 120 V
- D: 208 V

14. Equipment used to convert D.C. to A.C. is:

- A: Inverter
- B: Regulator
- C: Rectifier
- D: Converter

15. Pendants cannot be smaller than what AWG size supplies mogul or medium screw shell lamp holders?

- A: 16 AWG
- B: 18 AWG
- C: 14 AWG
- D: 12 AWG

See answers on the next page.



11. ☒ A ☐ B ☐ C ☐ D

Note: _____

12. ☐ A ☐ B ☒ C ☐ D

Note: _____

13. ☒ A ☐ B ☐ C ☐ D

Note: _____

14. ☒ A ☐ B ☐ C ☐ D

Note: _____

15. ☐ A ☐ B ☒ C ☐ D

Note: _____



16. Install a plant smoke detector. Required minimum voltage wiring?

- A: 200 V
- B: 300 V
- C: 350 V
- D: 400 V

17. 600 V to 24 V transformers don't need grounded secondary.

- A: True
- B: False

18. One 3-phase power wattmeter reads twice when troubleshooting. Power factor in percentage?

- A: 45%
- B: 87%
- C: 55%
- D: 69%

19. LEDs only illuminate when reverse biased.

- A: True
- B: False

20. Which is not a conductor?

- A: Silver
- B: Aluminum
- C: Copper
- D: PVC

See answers on the next page.



16. ☐ A ☒ B ☐ C ☐ D

Note: _____

17. ☐ A ☒ B ☐ C ☐ D

Note: _____

18. ☐ A ☒ B ☐ C ☐ D

Note: _____

19. ☐ A ☒ B ☐ C ☐ D

Note: _____

20. ☐ A ☐ B ☐ C ☒ D

Note: _____



21. Batteries used as an emergency power supply must supply the load for the time indicated in the national building code but in no case less than 30 min.

- A: True
- B: False

22. What current flows in a 60 Hz 120-volt circuit with 10 μ f capacitance?

- A: 0.555 amps
- B: 1.12 amps
- C: 0.786 amps
- D: 0.452 amps

23. As load current fluctuates, transformer exciting current magnetic flux remains constant.

- A: True
- B: False

24. Should fire alarm conductors share a raceway with other circuits?

- A: True
- B: False

25. The synchronous speed of a 50 Hz six-pole squirrel cage induction motor is?

- A: 1000 RPM
- B: 1500 RPM
- C: 1200 RPM
- D: 1800 RPM



21. ☒ A ☐ B ☐ C ☐ D

Note: _____

22. ☐ A ☐ B ☐ C ☒ D

Note: _____

23. ☒ A ☐ B ☐ C ☐ D

Note: _____

24. ☐ A ☒ B ☐ C ☐ D

Note: _____

25. ☒ A ☐ B ☐ C ☐ D

Note: _____



- 1). (A) (B) (C) (D)
- 2). (A) (B) (C) (D)
- 3). (A) (B) (C) (D)
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- 23). (A) (B) (C) (D)
- 24). (A) (B) (C) (D)
- 25). (A) (B) (C) (D)





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