

# RED SEAL STUDY GUIDE POWERLINE TECHNICIAN YEAR 1

**25 EXAM PREP QUESTIONS  
WITH ANSWERS**



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UNITY CREST SOLUTIONS INC.

# INTRODUCTION

## **Introducing the Red Seal Study Guide – Powerline Technician.**

Ready to dive into the world of Powerline Technician? Meet your ultimate companion – the Red Seal Study Guide for Powerline Technician. This practical booklet is your go-to practice tool to conquer your Powerline Technician 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 Powerline Technician essentials. It's more than just answering questions – it's about truly grasping the basics of Powerline Technician 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 Powerline Technician expertise. With the Red Seal Study Guide, you're all set to take that significant stride toward becoming a certified Powerline Technician.

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



# DISCLAIMER



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

The Red Seal Study Guide – Powerline Technician 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 Powerline Technician!

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



**1. What does Rs indicate in metering formulas?**

- A: Number of register gears
- B: Number of takeoff gear teeth
- C: Disc Speed
- D: No. of disc shaft teeth

**2. What does it mean when a current peak is half a cycle after the voltage that triggered it?**

- A: Current leader
- B: Factor power
- C: Current lagging
- D: The phase angles

**3. How is the watt-hour meter current coil connected?**

- A: Parallel to customer load
- B: In parallel with line voltage
- C: Following client load
- D: Potential coil parallel

**4. Which distribution system is more cost-effective?**

- A: AC single-phase
- B: Direct current system
- C: AC 3-phase 4-wire system
- D: AC 3-phase 3-wire system

**5. The distribution range includes which voltage?**

- A: 188 kV
- B: 245 kV
- C: 130 kV
- D: 25 kV

See answers on the next page.



1. ☐ A ☒ B ☐ C ☐ D

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**6. What is 100mm on a 1:200 layout drawing?**

- A: 2mm
- B: 200m
- C: 20m
- D: 200mm

**7. A line connecting truss vertices is called**

- A: Top line
- B: Ridgeline
- C: Skyline
- D: Peak line

**8. What substance has the lowest weight/cubic meter?**

- A: Cement
- B: Mortar
- C: Bricks
- D: Plyboard

**9. How wide should a wood utility pole hole be?**

- A: Eight-inch broader than pole diameter
- B: Ten inches broader than a pole
- C: Three inches greater than the pole diameter
- D: Six inches broader than a pole

**10. High-tension cables typically reach:**

- A: 132 KV
- B: 11 KV
- C: 33 KV
- D: 66 KV

See answers on the next page.



6. ☐ A ☐ B ☒ C ☐ D

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10. ☐ A ☒ B ☐ C ☐ D

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**11. When inspecting a pole core sample, what do you check for?**

- A: Moisture content
- B: Psyllium spores
- C: Visible decay
- D: Ring count to determine pole age

**12. A stack of 35 pieces of steel weighs 1800 pounds. A stack of 43 pieces of the same material will weigh how many pounds.**

- A: 2211 pounds
- B: 3265 pounds
- C: 1987 pounds
- D: 1465 pounds

**13. What is the maximum fence post spacing for outdoor electrical equipment guarding?**

- A: 1.5m
- B: 5m
- C: 2m
- D: 3m

**14. Cable dielectric stress is lowest at**

- A: Armor
- B: Bedding
- C: Lead sheath
- D: Conductor surface

**15. Building electrical wiring and cables must meet flame spread regulations from which?**

- A: NFPA Canadian
- B: Canadian Electrical Code
- C: Canadian Gas Association
- D: Canadian National Building Code

See answers on the next page.



11. ☐ A ☐ B ☒ C ☐ D

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**16. EMI has been found in a variable frequency drive (VFD) remote potentiometer wiring. The wire is replaced by which cable?**

- A: AWG 16 shielded triad cable
- B: AWG 19 copper twisted pair cable
- C: Category 5E, FT6, 4 pairs
- D: No.14 AWG 75-ohm, RG 6 coaxial wire

**17. The voltage is 120V and the current is 12A, 60 degrees behind a 60Hz a.c circuit. Which power in watts is correct?**

- A: 840 watts
- B: 720 watts
- C: 925 watts
- D: 680 watts

**18. Members under axial compression and bending moment are called**

- A: Column
- B: Beam
- C: Beam bar
- D: Beam-column

**19. Which crane tests are dry?**

- A: Operational test
- B: Test proximity
- C: Dynamic load
- D: Proximity test

**20. Power factor meters have**

- A: One current and two pressure circuits
- B: One current and one pressure circuit
- C: Two current and one pressure circuits
- D: None of the options listed

See answers on the next page.



16. ☒ A ☐ B ☐ C ☐ D

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**21. Install rods at what angle to the line of pull when utilizing a holdfast as a temporary anchor?**

- A: 150 degrees
- B: 120 degrees
- C: 60 degrees
- D: 90 degrees

**22. About a 150 kVA, single-phase transformer having a secondary voltage of 120/140 is installed at a multi-family dwelling, the full load current rating, in amperes, of the secondary is which of the following number of amperes?**

- A: 1000amps
- B: 625amps
- C: 550amps
- D: 300amps

**23. Pressure cables are not used beyond**

- A: 11 KV
- B: 66 KV
- C: 132 KV
- D: 33 KV

**24. Connect five 12-ohm resistors in parallel. In series with each resistor is a single-pole switch. What will each resistor's current be when all switches are closed, and 24 V is connected?**

- A: 2.0 Amps
- B: 4.0 Amps
- C: 0 Amps
- D: 6.0 Amps

**25. All types of power line insulators are which?**

- A: Bushing, pole, armored, and shielded insulators
- B: Suspension, bell, compressed, bushing, and service insulators
- C: Pin, suspension, post, bushing, spool, and service insulators
- D: Post, stranded, coated, suspension, and pin insulators



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