

***Electrical Wiring Commercial (Canadian) 9th edition
Mullin Test Bank***

SKU: 9780176929763-TEST-BANK

Unit 1 - Commercial Building Plans and Specifications

1. What percentage of the contract price is normally made up by performance bond?

- a. 25% b. 50%
- c. 100% d. 200%

ANSWER: c

2. What is the name given to the brief description of the project and its location?

- a. proposal b. notice to bidder
- c. instruction to bidder d. addendum

ANSWER: c

3. Which term refers to the document that outlines modifications made to the contract documents before bidding closes?

- a. surety bond b. specification
- c. change order d. addendum

ANSWER: d

4. What is the specification division number for electrical work?

- a. 11 b. 23
- c. 26 d. 48

ANSWER: c

5. On what drawing will you find the dimensions of the lot?

- a. site plan b. elevation
- c. floor plan d. section

ANSWER: a

6. What drawing shows the vertical faces of a building?

- a. floor plan b. elevation
- c. section d. site plan

ANSWER: b

7. What type of scale is used for a drawing that is measured in feet and inches?

- a. engineering b. imperial
- c. metric d. architectural

ANSWER: d

8. If told to look for a drawing marked B-B, what type of drawing are you looking at?

- a. legend of symbols b. details drawing
- c. architectural drawing d. elevation drawing

ANSWER: b

9. According to the Supplementary General Conditions, who is responsible for any utilities that are damaged?

- a. the contractor b. the municipal government
- c. the crew d. the site owner

ANSWER: a

Name: _____ Class: _____ Date: _____

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10. What is the specification division number for equipment work?

- a. 11 b. 23
- c. 26 d. 48

ANSWER: a

11. Which term is often used for the construction plans for a building?

- a. shop drawings b. architectural
- c. blueprints d. plots

ANSWER: b

12. Which drawing is the architectural floor plan for the basement?

- a. A1 b. A2
- c. A3 d. A4

ANSWER: b

13. On which drawing would you find the legend for electrical symbols?

- a. A1 b. E1
- c. E2 d. E3

ANSWER: b

14. Which document is required to fix errors in the drawings that are noticed after the job has been awarded?

- a. change order b. addendum
- c. alternate d. proposal

ANSWER: a

15. Besides the CSA, which organization is accredited to provide approval of electrical equipment in Canada?

- a. NSC b. CEC
- c. ULC d. SCC

ANSWER: c

16. When was the first edition of the *Canadian Electrical Code* finalized?

- a. 1927 b. 1930
- c. 1955 d. 1966

ANSWER: a

17. What is the multiplier provided in the *CEC* for converting metres to feet?

- a. 0.621 b. 2.205
- c. 3.281 d. 10.764

ANSWER: c

18. How often is the *CEC* updated?

- a. every year b. every two years
- c. every three years d. every five years

ANSWER: c

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19. What is the metric designator for a raceway of trade size 2"?

- a. 21 mm b. 41 mm
- c. 53 mm d. 78 mm

ANSWER: c

20. In the metric system, what is the prefix for 1 000 000?

- a. giga- b. centi-
- c. mega- d. kilo-

ANSWER: c

21. Which term in the *CEC* is used to indicate a mandatory requirement?

- a. approved b. may
- c. shall d. practicable

ANSWER: c

22. How many pounds are there in one kilogram?

- a. 0.7376 b. 1.0
- c. 2.205 d. 3.0

ANSWER: c

23. What is the unit symbol for millimetres?

- a. mm b. cm
- c. m d. km

ANSWER: a

24. What does the word *kilo-* mean in SI prefixes?

- a. one-tenth b. ten
- c. one thousand d. one million

ANSWER: c

25. What size is a 3/4 conduit in metric?

- a. 12 mm b. 16 mm
- c. 21 mm d. 27 mm

ANSWER: c

26. What is the unit symbol for ohms?

- a. ? b. O
- c. μ F d. km

ANSWER: a

27. According to the job specifications, who is responsible for installing the commercial building's primary service and transformer?

- a. the municipal government b. the electrical contractor
- c. the supply authority d. the site owner

ANSWER: c

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28. Whose responsibility is it to obtain the electrical permit?

- a. the electrical contractor b. the municipal government
- c. the crew d. the site owner

ANSWER: a

29. On Drawing E3, the measurement of the drug store's track lighting is 89 mm. What is the track's actual length?

- a. 0.89 m b. 4.4 m
- c. 8.9 m d. 17.8 m

ANSWER: b

30. What does the "instruction to bidders" document encompass?

ANSWER: This section provides the contractor with a brief description of the project, its location, and how the job is to be bid (lump sum, one contract, or separate contracts for the various construction trades, such as plumbing, heating, electrical, and general). In addition, bidders are told where and how the plans and specifications can be obtained prior to the preparation of the bid, how to make out the proposal form, where and when to deliver the proposal, the amount of any bid deposits required, any performance bonds required, and bidders' qualifications. Other specific instructions may be given, depending upon the job.

31. What is involved when estimating an electrical project?

ANSWER: The main steps in estimating include the following:

Preparing a material take-off involves counting, measuring, and listing the quantities of materials and equipment required to complete the installation. This is often done in a way that will allow easy assignment of labour units.

Tabulating and pricing is the process of assigning labour units and prices for everything on the material list. Standard labour units are used for this, as found in various estimating manuals.

Summarizing the total projected costs means putting together the costs of material, labour, job factors (such as working heights, multiple buildings), direct job expenses (such as equipment, travel and warehousing), overhead, and profit.

32. What is the purpose of the *CEC*, and how is it applied in each province and city?

ANSWER: As outlined in *CEC Section 0, Object*, the purpose of the code is to establish safety standards for the installation and maintenance of electrical equipment. In its preparation, consideration has been given to the prevention of fire and shock hazards, as well as proper maintenance and operation. The *CEC* is the basic standard for the installation and construction of all electrical systems in Canada. However, some provincial and local codes contain specific amendments that must be adhered to in all electrical wiring installations under their jurisdiction.

33. The *CEC* definition for the term *accessible* may refer to either equipment or wiring methods. Explain the difference.

ANSWER: Referring to *Section 0, Definitions*,

Accessible (as applied to equipment) means admitting close approach because the equipment is not protected by elevation, locked doors, or other means.

Accessible (as applied to wiring methods) means

- (a) not permanently enclosed in the building structure or finish, or
- (b) may be removed without disturbing the building structure or finish.

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34. How are commas, periods, and spaces used to make long numbers easier to read?

ANSWER: In the United States, it is the practice to use a period as the decimal marker and a comma to separate a string of numbers into groups of three for easier reading. In many other countries, the comma is used as the decimal marker and spaces are used to separate a string of numbers into groups of three. The SI system, taking something from both, uses the period as the decimal marker and the space to separate a string of numbers into groups of three, starting from the decimal point and counting in either direction, for example, 12 345.789 99. An exception to this occurs when there are four numbers on either side of the decimal point. In this case, the third and fourth numbers from the decimal point are not separated, for example, 2015.1415.