

Electrical Wiring Industrial (Canadian) 7th edition
Herman Test Bank

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Unit 1 - Contract Documents and Drawings

1. When referring to the *MasterFormat*[®] specification, which division does general electrical work fall under?

- a. Division 11 b. Division 23
- c. Division 26 d. Division 33

ANSWER: c

2. For which type of payment agreement is a contractor required to complete a job for a fixed dollar amount, regardless of any problems that may be encountered?

- a. lump sum b. unit price
- c. cost plus fee d. net sum

ANSWER: a

3. According to the simplified form of tender, how much of a tender deposit is the bidding contractor required to leave?

- a. \$5 000 b. \$6 000
- c. \$15 000 d. \$20 000

ANSWER: d

4. Refer to the Drawing Set. Which drawing shows the electrical ratings and location of the two new transformers feeding the building?

- a. E2 b. E4
- c. E6 d. E9

ANSWER: a

5. Refer to the Drawing Set. On which drawing can the details about the cable tray and conductor placement in the cable tray be found?

- a. E4 b. E6
- c. E9 d. E10

ANSWER: c

6. Refer to the Drawing Set. A measurement of 50 mm is taken from drawing E3. What length does this represent in the actual building?

- a. 50 mm b. 500 mm
- c. 5 m d. 50 m

ANSWER: c

7. Refer to the Drawing Set. Which drawing contains information about the building's power distribution?

- a. elevation drawing b. electrical detail drawing
- c. lighting and power drawing d. power riser diagram

ANSWER: d

8. Refer to the Drawing Set. According to the Electrical Elevations and Details Drawing E8, what is the width of MCC-101 (as measured with a ruler)?

- a. 50 mm b. 100 mm
- c. 1 m d. 5 m

ANSWER: c

Unit 1 - Contract Documents and Drawings

9. Which of the following are given on the site plan to indicate existing and new grading levels?

- a. bench marks b. contour lines
- c. building locations d. light standards

ANSWER: b

10. Refer to the Drawing Set As given on the site plan, what is the reference point from which all elevations are located?

- a. bench mark b. contour line
- c. building location d. light standard

ANSWER: a

11. Refer to the Drawing Set What does the standard format symbol consisting of two unshaded concentric circles stand for?

- a. fire hydrant b. gas main
- c. water main d. existing tree to remain

ANSWER: d

12. Refer to the Drawing Set. What is the typical setpoint for the exhaust fan control circuit?

- a. 21°C b. 28°C
- c. 35°C d. 42°C

ANSWER: b

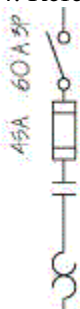
13. Refer to the symbol and the Drawing Set. What does it represent in the industrial building's drawings?



- a. isolation switch b. motorized damper
- c. unfused disconnect switch d. combination starter

ANSWER: d

14. Refer to the symbol and the Drawing Set. What does it represent in the industrial building's drawings?



- a. contactor b. combination magnetic starter
- c. switch and fuse d. fusible disconnect

ANSWER: d

15. What type of drawing shows the vertical faces of a building?

- a. one-line diagram b. elevation
- c. site plan d. floor plan

ANSWER: b

Unit 1 - Contract Documents and Drawings

16. What type of scale uses feet and inches?

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

ANSWER: a

17. When pricing a job, which of these factors would be considered to adjust the standard labour units?

- a. number of apprentices b. job site conditions
- c. lengths of conductors d. number of devices

ANSWER: b

18. After a contract is awarded, which document authorizes a contractor to add an extra receptacle not on the original prints?

- a. change order b. material take-off
- c. amended electrical floor plan d. job specifications

ANSWER: a

19. What designation satisfies the safety standard requirements for all electrical equipment installed in Canada?

- a. inspected by ESA b. ULC approved
- c. OHSA compliant d. made in Canada

ANSWER: b

20. An electrical job has been completed and has passed the final inspection. When can additional lighting circuits be added?

- a. when there is a new electrical permit
- b. when the inspector has given approval
- c. when there is a Request for Change Order
- d. any time they are required

ANSWER: a

21. Briefly describe the difference between an addendum and a change order.

ANSWER: An addendum is an addition or clarification issued to bidders *before* the bidding is closed, whereas a change order is a change made to the contract *after* the contract has been awarded.

22. What are shop drawings used for?

ANSWER: They are provided by equipment manufacturers to show details of the equipment for a specific job.

23. Outline the steps involved when creating a job estimate.

ANSWER: The main steps include preparing a material take-off, tabulating and pricing, and then summarizing the costs. Material take-offs mean counting, measuring, and listing all the material, devices, and equipment required to complete the installation and fulfill the contract. Pricing means assigning actual individual costs for each item, as well as the labour required to install everything. Standard labour units are usually used, as established by various organizations, based on specified working conditions. These units would be adjusted according to actual job conditions. Summarizing the job estimate will also include other costs, such as overhead, tool and equipment rentals, travel, and, of course, profit.

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Unit 1 - Contract Documents and Drawings

24. Often it is difficult to find specified equipment at the time and in the required quantity on a project. What is required if unapproved equipment is to be used on the job?

ANSWER: Arrangements must be made for field approval by the inspection authority before it can be installed.

25. According to the industrial building's specifications, what is the requirement to ensure bonding in raceways?

ANSWER: According to Technical Specification 26 05 33, a separate bonding conductor must be provided in all non-metallic raceways.

26. What do the specifications say about the electrical contractor's responsibility for the telephone system?

ANSWER: Referring to Technical Specification 27 30 00, the contractor must supply and install a complete system of empty conduits (minimum 21 mm), with pull strings, terminal cabinets, pull boxes, and outlets as shown on the drawings or described therein.