

2009 WACS/RCW Part 1 Questions

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2009 WAC/RCW Part 1 Quiz 1 Sections WAC 296-46B-005 through WAC 296-46B-010

Question 1: The electrical inspectors will:

- Give information as to the interpretation of WAC standards
- Lay out electrical work
- Act as a consultant for the owners

Question 2: The department may enforce city electrical ordinances where those governmental agencies do not make electrical inspections under an established program.

- True
- False

Question 3: When may a variance from the electrical installation requirements be granted by the department?

- When it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety.
- During emergency conditions.

- In jurisdictions that do not employ a full time inspector.

Question 4: Who may request a variance?

- Only the property owner
- Only the electrical contractor
- Only the licensed electrician on the job site
- Any electrical permit holder

Question 5: In requesting the variance, the permit holder must make the request in writing, using a form provided by the department, and the variance must include:

- A description of the installation as installed or proposed
- A detailed list of the applicable code violations
- A detailed list of safety violations
- A description of the proposal for meeting equivalent objectives for code and/or safety violations

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e. All of the above

Question 6: Electrical wiring must be accessible at the time of inspection.

- a. True
- b. False

Question 7: Fished wire requires visual inspection.

- a. True
- b. False

Question 8: Wires pulled into conduit systems are considered concealed.

- a. True
- b. False

Question 9: Grounding conductors in flexible conduit systems must be made up at the time of the rough-in cover inspection.

- a. True
- b. False

Question 10: If the wiring is inspected prior to the exterior sheathing nail, the wiring and device boxes must be a minimum of _____ from the exterior surface.

- a. 1 inch
- b. 1 ½ inches
- c. 2 inches
- d. 2 ½ inches
- e. 3 ½ inches

Question 11: Prior to completion of an exterior wall cover inspection, all wiring and device boxes must be protected by a steel plate a minimum of 1.6 mm or _____ thick and it will cover the area of the wiring or box.

- a. 1/16 inch
- b. 1/8 inch
- c. 3/32 inch
- d. 5/32 inch
- e. 1/4 inch

Question 12: Only listed materials may be used in electrical installations.

- a. True
- b. False

Question 13: Equipment is allowed to be energized before standards are met without specific permission from the chief electrical inspector.

- a. True
- b. False

Question 14: The inspection of telephone lines along state highway right of ways is conducted by:

- a. Department of Transportation
- b. Department of Electrical Inspection

c. Highway Commission

Question 15: Listed tamper-resistant receptacles or listed tamper-resistant receptacle cover plates are NOT required in:

- a. All licensed child group care facilities
- b. All grade schools with children 6 - 10 years of age
- c. Psychiatric patient care facilities
- d. They are required at all of the above

2009 WAC Part 1 Quiz 2 Sections WAC 296-46B-020

Question 1: Does the term "electrical equipment" include conductors?

- a. Yes
- b. No

Question 2: If no wiring is installed in the conduit/raceway at the time of installation, is the conduit considered to be electrical equipment?

- a. Yes
- b. No

Question 3: Does an "electrical products certification laboratory" need to be accredited by the state of Washington to perform certification of electrical products?

- a. Yes
- b. No

Question 4: HVAC means:

- a. Heating Ventilation Air Conditioning
- b. High Voltage Alternating Current
- c. High Vacuum Systems

Question 5: "HVAC/refrigeration system" excludes non-HVAC/refrigeration control systems such as:

- a. Fire alarm systems
- b. Pressure cut-offs
- c. Compressor lube oil protection switch
- d. None of the above

Question 6: The item that is NOT required for Identification Plate Letters is:

- a. Letters to be engraved in block letters
- b. Letters to be at least 1/4 inch
- c. Letters to be in contrasting colors
- d. Letters to be on a black background

Question 7: "Like-in-kind" means having similar characteristics, such as:

- a. Voltage requirement
- b. Current draw
- c. Short circuit characteristics
- d. Function within the system
- e. All of the above

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Question 8: "Low voltage" means:

- a. Less than 240 volts
- b. Less than 120 volts
- c. 30 volts maximum
- d. 12 volts DC or less
- e. None of the above

Question 9: An organization sponsoring a 1-day HVAC controls course would be classified as a "training school".

- a. Yes
- b. No
- c. Need more information.

Question 10: "Under the control of a utility" for the purposes of RCW 19.28.091 and 19.28.101 is when electrical equipment:

- a. Is not owned by a utility
- b. Is located in a vault, room, closet, or similar enclosure that is secured by a lock so that access is restricted to the utility's personnel.
- c. Is under contract, the utility is obligated by contract to maintain the equipment and access is restricted to only utility's personnel or other.
- d. All of the above

Question 11: "Utilization voltage" means the voltage level employed by the utility's customer for connection to lighting fixtures, motors, heaters, or other electrically operated equipment including power transformers.

- a. True
- b. False

Question 12: "Variance" is essentially an authorized change approved by the chief electrical inspector if safety can be maintained.

- a. True
- b. False

2009 WAC Part 1 Quiz 3 Sections WAC 296-46B-030

Question 1: An "industrial control panel" can be wired by the plant electrician.

- a. True
- b. False

Question 2: An industrial control panel could include a cathode ray tube, a power supply and a line voltage process motor.

- a. True
- b. False

Question 3: An industrial control panel may not include motor branch circuit protective devices.

- a. True

- b. False

Question 4: "Industrial utilization equipment" is equipment directly used in a manufacturing process and includes cold storage equipment.

- a. True
- b. False

Question 5: A "manufacturing process" is to make a raw material into a finished product for sale, including warehousing of the product for future distribution.

- a. True
- b. False

Question 6: Normal department inspection includes equipment that has obtained a variance.

- a. True
- b. False

Question 7: A "panel" can mean more than one box or enclosure.

- a. True
- b. False

Question 8: Industrial control panels meet the minimum electrical safety standards for installations if they have a UL label.

- a. True
- b. False

Question 9: Appropriate safety standards are found in the:

- a. NEC 2005 Handbook
- b. NFPA 79
- c. International Electro-technical Commission 60204
- d. WAC/RCW
- e. All of the above

Question 10: Once industrial utilization equipment is marked by the department, the equipment is suitable for installation only at a specific location in the state without modification so long as the equipment is being used as industrial utilization equipment.

- a. True
- b. False

Question 11: The department may authorize, on a case-by-case basis, use of the industrial control panel or equipment, for a period not to exceed _____ before its final inspection, listing, or evaluation.

- a. 30 days
- b. 60 days
- c. 6 months
- d. 1 year
- e. None

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2009 WAC Part 1 Quiz 4 Sections WAC 296-46B-040

Question 1: Traffic Management Systems include a number of items. Which item is NOT included?

- a. Traffic illumination
- b. Traffic signal systems
- c. Traffic monitoring systems
- d. Toll booths
- e. The electrical service cabinet

Question 2: Does the in-ground induction detection loop require an electrical inspection?

- a. Yes
- b. No

Question 3: Jurisdictions will be considered owners of traffic management systems when doing electrical work for other jurisdiction(s) under a valid inter-local agreement, as permitted by chapter 39.34 RCW.

- a. True
- b. False

Question 4: WSDOT and jurisdictions with an established electrical inspection authority may perform electrical inspection on their rights of way traffic management systems for each other if no inter-local agreement is in affect.

- a. True
- b. False

Question 5: In underground installations other than open trenching, raceways require a visual inspection.

- a. True
- b. False

Question 6: A written request must be made a minimum of _____ working days prior to the day inspection is needed.

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5

Question 7: The identification plate for a traffic control must be located:

- a. On the inside of the cabinet
- b. On the outside of the front door panel of the cabinet
- c. Nowhere, it is not required

Question 8: In traffic control enclosures, wires carrying different voltages are permitted in the same raceway.

- a. True
- b. False

2009 WAC Part 1 Quiz 5 Sections WAC 296-46B-110 through WAC 296-46B-225

Question 1: Where metallic plugs or plates are used with nonmetallic enclosures, they shall be recessed at _____ from the outer surface of the enclosure.

- a. 1/16 inch
- b. 1/8 inch
- c. 3/16 inch
- d. 1/4 inch
- e. 0, (flush - no recess)

Question 2: Flash protection warnings shall be placed on an identification plate.

- a. True
- b. False

Question 3: An identification plate is required unless the disconnect is a circuit breaker/fused switch installed within a panel board and the circuit breaker/fused switch:

- a. Is identified by a panel board schedule.
- b. Is in a single family residence
- c. Is in a service less than 60 amps
- d. All of the above
- e. None of the above

Question 4: In a commercial building, the identification plate is not required to include the identification designation of the circuit source panel board that supplies the disconnect.

- a. True
- b. False

Question 5: Where electrical equipment is installed to obtain a series combination rating, the identification must be in the form of an identification plate that is substantially _____ in color.

- a. Yellow
- b. Red
- c. Black
- d. Green

Question 6: Each cable operating at over 600 volts and installed on customer-owned systems must be legibly marked in a permanent manner at each termination point and at each point the cable is accessible. Which marking is NOT required?

- a. Phase designation
- b. Operating voltage
- c. Circuit number

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d. Wire size

Question 7: On non-dwelling units, GFCIs are:

- a. Required on 15 amp 1 phase circuits
- b. Required on 20 amp 1 phase circuits
- c. Not required on 208/240 circuits
- d. 1 and 2 but not three

Question 8: Branch circuits are not required to be taken to all unfinished spaces adaptable to future dwelling unit living areas that are not readily accessible to the service or branch circuit panel board.

- a. True
- b. False

Question 9: The maximum number of dwellings for a septic or water well system that can be supplied by one of the dwellings is:

- a. One
- b. Two
- c. Three
- d. No limit

Question 10: Are receptacle outlets that are installed inside appliance garages permitted to be counted as a required countertop outlet?

- a. Yes
- b. No

Question 11: In determining feeder and service entrance conductor sizes and equipment ratings, the currently adopted Washington State Energy Code unit lighting power allowance table and footnotes may be used in lieu of NEC 220.3.

- a. True
- b. False

Question 12: Where the feeder disconnecting means is installed outside a building or structure, it must be on the building or structure or within sight and within _____ feet of the building or structure supplied.

- a. 5
- b. 10
- c. 15
- d. 25
- e. 50

Question 13: The building disconnecting means may supply only one building unless the secondary building has a separate building disconnecting means. The disconnecting means must have an identification plate with at least _____ inch high letters.

- a. ½ inch
- b. ¾ inch
- c. 1 inch
- d. 1 1/2 inch

Question 14: The feeder disconnecting means may be installed anywhere inside a building or structure when there is another feeder disconnecting means, located elsewhere on the premises, with overcurrent protection sized for the feeder conductors.

- a. True
- b. False

2009 WAC Part 1 Quiz 6 RCW 19.280.01 – 0.610

Question 1: Industrial control panels must be listed and labeled by an accredited electrical product testing laboratory.

- a. True
- b. False

Question 2: A residential building is moved within the city, but the original occupancy classification has not changed and the building is not substantially remodeled. The building must comply with all the requirements of this chapter.

- a. True
- b. False

Question 3: If the same moved building was substantially remodeled, must it comply with the requirements found in the WACs and RCWs?

- a. Yes
- b. No

Question 4: A city or town may require a better standard of construction or higher standard of materials if the city:

- a. Has a population greater than 100,000
- b. Has a City Manager
- c. Is located in Spokane or King County
- d. None of the above - there are no requirements placed on the city

Question 5: How are disputes regarding local regulation resolved?

- a. Dispute Resolution Center
- b. Small Claims Court
- c. Arbitration
- d. District Court

Question 6: The department shall appoint 2 members to serve on the panel and the city shall appoint 2 members. What is the total number of members to serve on the panel?

- a. 4
- b. 5
- c. 6
- d. 8

Question 7: An electrical contractor's license is needed when:

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- a. Running a new 240v circuit
- b. Cleaning the outdoor coil of a heat pump
- c. Running electrical load calculations

Question 8: What is required to be included with an electrical contractor application?

- a. Name, address and employer social security number
- b. Employee race, national origin and sexual orientation
- c. Electrical education and experience
- d. All of the above

Question 9: The amount of the bond shall be:

- a. \$2000
- b. \$4000
- c. \$6000
- d. \$10000

Question 10: Which is not a specialty electrical contractor?

- a. Pump and Irrigation
- b. HVAC
- c. Signs
- d. Appliance repair
- e. None of the above

Question 11: To become a general or specialty electrical contractor, the applicant must possess a valid master journeyman electrician's certificate of competency.

- a. True
- b. False

Question 12: To become a specialty electrical contractor, the applicant must possess a valid master journeyman electrician's certificate of competency in the specialty for which the application has been made.

- a. True
- b. False

Question 13: To become a general electrical contractor, the applicant must possess a valid general administrators certificate.

- a. True
- b. False

Question 14: To become a specialty electrical contractor, the applicant must possess a valid specialty administrator certificate for the specialty for which the application has been made.

- a. True
- b. False

Question 15: A purpose and function of the board is to establish electrical field service competency licenses.

- a. True

- b. False

Question 16: A purpose and function of the board is to establish and administer written examinations for general electrical administrators certificates.

- a. True
- b. False

Question 17: Which statement is true?

- a. Each electrical contractor shall have a firm member as a Master Electrician or Administrator.
- b. The Administrator may be a part-time supervisory employee.
- c. An individual may work for more than one contractor.
- d. If the Administrator is terminated, the contractor has 120 days to hire another administrator.
- e. The contractor has 14 days to contact the department if the administrator dies.

Question 18: Which statement is true?

- a. The Administrator's license expires on the holder's birthday.
- b. The Administrator's license must be renewed every 2 years.
- c. The Administrator must take 4 hours annually of a department-approved continuing education class.
- d. Upon renewal, the administrator must retake the test.

Question 19: Can the department accept a continuing education course offered in another state as meeting the requirements for maintaining a current Washington state certificate?

- a. Yes
- b. No

Question 20: Fees generated from Administrators License fees exceed the costs of administering and enforcing the requirements of this chapter.

- a. True
- b. False

Question 21: Which statement is NOT TRUE?

- a. The department may deny an application for an administrators certificate for up to two years if the applicant's previous administrator's certificate has been revoked for a serious violation.
- b. A serious violation is a violation that is classified as a Class I or Class 2 Felony or Misdemeanor.
- c. The certificate may be renewed for a three-year period without examination by appropriate application unless the certificate has been revoked.

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- d. A person may take the administrator's examination as many times as necessary to pass without limit.

Question 22: The designated master electrician or administrator shall be a member of the firm or is a supervisory employee and shall be available during working hours to carry out the duties of an administrator.

- a. True
- b. False

Question 23: The designated master electrician or administrator shall ensure that the proper electrical safety procedures are used.

- a. True
- b. False

Question 24: The designated master electrician or administrator shall notify the department in writing within 30 days if the master electrician terminates the relationship with the electrical contractor.

- a. True
- b. False

2009 WAC/RCW Part 1 Quiz 7 RCW 19.280.081 - 141.0

Question 1: Which activity requires an electrical license?

- a. Utility personnel working on transmission lines.
- b. Utility personnel working a side job on a commercial establishment.
- c. Mechanic installing 12 v lights on a farm tractor.
- d. Mechanic installing 12 v lights on a licensed motor vehicle.
- e. Hooking up a meter on a commercial property

Question 2: An inspector is to inspect all wiring, appliances, devices, and equipment on an installation.

- a. True
- b. False

Question 3: An inspector who finds a dangerous electrical condition may not disconnect the wires and leave notice that he or she has done so.

- a. True
- b. False

Question 4: Any person may reconnect such defective conductors or equipment without the approval of the department.

- a. True
- b. False

Question 5: The director, through the electrical inspector, has the right during reasonable hours to enter a building and make an electrical inspection.

- a. True
- b. False

Question 6: Some electrical wiring is permitted to be concealed prior to inspection.

- a. True
- b. False

Question 7: At the time of the inspection, most -- but not all -- electrical wiring must be accessible to permit the inspector to verify conformance with the national electrical code and any other requirements of this chapter.

- a. True
- b. False

Question 8.: An electrical work permit fee may be charged for plug-in portable appliances.

- a. True
- b. False

Question 9: Electrical permits are required for lineman to work on utility-owned equipment.

- a. True
- b. False

Question 10: There is a section in this chapter that authorizes the inspection of some wiring owned by or under the control of the utility.

- a. True
- b. False

Question 11: It is always mandatory to install electrical wiring, appliances, devices, or equipment in accordance with this chapter (RCW 19.28).

- a. True
- b. False

Question 12: What is the amount of the certified check when requesting a ruling from the board on an electrical issue?

- a. \$100
- b. \$200
- c. \$500
- e. \$1000

Question 13: What range of monetary penalty could be assessed against a person or a firm violating RCW 19.28?

- a. \$50 - \$1,000
- b. \$50 - \$5,000
- c. \$50 - \$10,000

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Question 14: How many days do you have to file an appeal?

- a. 10
- b. 20
- c. 30
- d. 60

Question 15: The appeal must be accompanied by a certified check for _____.

- a. \$10
- b. \$50
- c. \$100
- d. \$200

Question 16: Does the RCW apply to a building owned by a telephone company which is exclusively used for telephone communication systems?

- a. Yes
- b. No

Question 17: Does the RCW apply to a building owned by a telephone company that is used by house employees?

- a. Yes
- b. No

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