

2009 WAC/ RCW Part 3

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4. The answers to the quiz questions are found on the course web pages.



5: **Circle** the correct answers on your printed copy of the quizzes as you study the course web pages.

Quiz questions track the web pages as you view them.

6. **Refer** to your printed quizzes to find the correct answers to each of the on-line quiz questions.



You will notice that the questions are exactly the same as your printed ones
This is just like an open book test.

Sections WAC 296-46B-501 through WAC 296-46B-514

1) S.T.E.P. means:

Septic Tank Effluent Pump
Standard Technical Electrical Pump
State Tested Efficiency Pump

2) The pumping chamber must be adequately vented with a minimum _____ inch vent.

- 1
- 2
- 3
- 4

3) Equipment that in normal operation may cause an arc _____ be installed in any pumping chamber.

Is allowed to
Is not allowed to
Is sometimes allowed to

4) Float switches installed in a pumping chamber _____ hermetically sealed.

Must be
Are not required to be

5) Junction boxes and fittings installed in a septic atmosphere _____ of a non-corrosive type.

Must be
Are not required to be
May be

6) Wire splices in junction boxes installed in pumping chambers _____ suitable for wet locations.

Must be
Are not required to be

7) Residential wastewater loading characteristics in a nonresidential installation of less than 3500 gallons of wastewater per day may be certified by:

The building department
The Department of Ecology
State Wastewater treatment Director
The Department of Natural Resources
A professional waste water system design engineer

8) Residential wastewater loading characteristics in a nonresidential installation of more than 3500 gallons of wastewater per day may be certified by:

A professional waste water system design engineer

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The local permitting agency
The plumbing contractor
Department of Ecology
Wastewater Treatment Association

9) Any residential or nonresidential system that has building or structure floor drains being discharged into the system is classified as:

- Class I, Division 1
- Class I, Division 2
- Class 2, Division 1
- Class 2, Division 2

10) Drains from any commercially made tub, shower, basin, sink, or toilet are considered floor drains.

True False

11) In sewage disposal systems, pumping chamber access covers can be covered by gravel but must be accessible for excavation.

True False

12) Indoor grinder pumps installed in chambers with less than fifty gallons capacity are required to meet all of the requirements of this section.

True False

13) Inspection approval is not required prior to covering or concealing any portion of the septic electrical system, including the pump.

True False

14) New septic and effluent tanks containing electrical wires and equipment must be inspected and approved prior to being loaded with sewage.

True False

15) An emergency stop disconnect must be provided at all service stations where pumping equipment serves volatile flammable liquids.

True False

16) The disconnecting means must disconnect all conductors of the circuit supplying the station pumps of supply.

True False

17) The Emergency Stop disconnects the grounded conductor.

True False

18) If a disconnecting pushbutton is used, the pushbutton may also function as the resetting mechanism for the electrically held contactor.

True False

19) The resetting means must be located at least _____ from the disconnecting push button:

- 8 feet
- 12 feet
- 15 feet
- 20 feet
- More than 20 feet

20) The color of the Identification plate for the reset switch must be:

- Black
- Orange
- Red
- White
- Any color

21) The letters of the emergency stop must be _____ high.

- ½ inch
- ¾ inch
- 1 inch
- 2 inches

22) The disconnecting means for attended facilities must be located:

- Outdoors
- Indoors
- Either indoors or outdoors

2009 WAC/RCW Part 3 Quiz 2 Sections WAC 296-46B-517 through WAC 296-46B- 533

1) Hospital Life Safety System: The feeder conductors and equipment used to supply electrical power to the life safety branch must be determined by summation of the connected loads as determined by Article 220 NEC.

True
False

2) Feeder and equipment will be subject to a _____percent multiplier for continuous loads in accordance with Article 220 NEC.

- 75
- 100
- 125
- 150

3) Electrical systems used in outdoor concerts are exempt from NEC requirements.

True
False

4) The ampacity of cables must be determined from what section of the NEC?

- 100
- 200

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300
400
500

5) Any circuit used for construction purposes is not considered to be a temporary installation.

True
False

6) A splice or junction box is not required for all wiring splice or junction connections in a temporary installation.

True
False

7) An electrical permit is not needed if the homeowner makes alterations to his mobile home.

True
False

8) If the homeowner does an alteration to his mobile\manufactured home's electrical system, the "factory assembled structures section" of the department does the inspection.

True
False

9) An electrical service on a mobile home must be installed only by _____.

The homeowner
A certified electrical contractor at the site location
A journeyman electrician at the site
The manufacturer during the manufacturing process

10) A mobile home that is supplied with power using a permanent wiring method, the equipment grounding conductor _____ to be bare.

Will be permitted
Will not be permitted

11) The equipment-grounding conductor must be _____.

Copper
Aluminum
Either copper or aluminum

12) Where electrical power is provided, a floating building _____ a readily accessible service rated disconnect.

Must have
May have
Is not required to have

13) The disconnect must be located on the _____, within sight of the shoreline connection of the dock.

Dock
Floating platform
Shoreline

14) Where shore power is provided, each floating building or similar facility must have a disconnecting means located within _____ of each floating building or similar facility.

Sight
Easy access
25 ft
30 ft

15) The disconnecting means must be installed adjacent to but not in or on the floating building or similar facility.

True
False

16) A portable cord must have the following, EXCEPT:

Extra hard usage
Not less than 75° C
Rated at least 600 volts
Listed for wet locations
Be yellow in color

17) The maximum voltage conductor that may be installed on the floating portion of a floating building is _____?

120 Volts
240 Volts
480 Volts
600 Volts
No limitations

2009 WAC/ RCW Part 3 Quiz 3 Sections WAC 296-46B-555

1) The NEC covers private, non-commercial docks.
True False

2) The minimum distance that a transformer can be located above the deck of a dock is _____.

1 foot
2 feet
3 feet
4 feet
5 feet

3) All electrical connections must be installed at the minimum requirement above the deck of a pier unless the connections are approved for _____ locations.

Submersible
Damp
Wet
Dry
Water spray

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4) The minimum distance that all electrical connections must be installed above the deck of a dock is:

- 1 foot
- 2 feet
- 3 feet
- 4 feet
- 5 feet

5) All gasketed enclosures must be arranged with a _____ to discharge condensation.

- Weep hole
- Air vent
- Light hole
- Knock out plug
- ¼ inch NPT tap

6) For the purposes of NEC 555.10, all enclosures are required to be corrosion resistant.

- True
- False

7) Portable power cables are permitted to be used as a permanent wiring method under or within docks and piers when they are provided with physical protection.

- True
- False

8) For a portable power cable to be used as permanent wiring it should:

- Be rated at 600 volts
- Be sunlight resistant
- Be listed for wet locations
- Be rated for extra-hard usage.
- All of the above

9) You are permitted to mount overhead wiring directly over areas where boats are moored.

- True
- False

10) Power receptacles that provide shore power for boats must be rated not less than _____ amperes.

- 15
- 20
- 30
- 40
- 50

11) Shore power receptacles that provide shore power for boats are required to be a single outlet type, and be of the locking and grounding type or pin and sleeve type.

- True
- False

12) The area directly under a "gas pump" on a dock that could allow the accumulation of flammable liquid is classified as a:

- Class 1 division 1 area
- Class 2 division 1 area
- Class 1 division 2 area

Class 2 division 2 area

2009 WAC/ RCW Part 3 Quiz 4 Sections WAC 296-46B- 600- 680

1) Luminaires in outdoor awnings are required to be suitable for _____ locations.

- Dry
- Damp
- Wet
- Drenched
- Underwater

2) Incandescent lamps or luminaires must be located at least _____ from the awning fabric.

- 12 inches
- 16 inches
- 18 inches
- 24 inches

3) Fluorescent luminaires must be located at least _____ inches from the awning fabric.

- 6
- 12
- 16
- 18

4) For portable outdoor electrical signs, it is required that a receptacle outlet that is considered weatherproof with the supply cord connected is installed within _____ of each electrical sign.

- 6 feet
- 8 feet
- 10 feet
- 12 feet

5) Extension cords are permitted to supply portable outdoor signs.

- True
- False

6) The maintenance disconnect and field installed equipment to a hot tub must be located at least _____ feet away.

- 5
- 6
- 8
- 10
- 12

7) A field installed spa heater must be listed as a "spa heater or swimming pool heater."

- True
- False

8) Hydro massage bathtubs must be listed as a unit and bear a listing mark which reads:

"Hydro massage bathtub."

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“NEMA approved.”
“Meets NEC Standards”
“OSHA Compliant”
None, no marking is needed

9) Electrical components, which have failed and require replacement, are required to be replaced with:
Identical parts
Like in kind parts
Both 1 and 2
Neither 1 nor 2

2009 WAC/RCW Part 3 Quiz 5 Sections: 700 –990

1) All places that have space for _____ or more persons must install exit and emergency lights.
50
100
250

2) All exit and emergency lights must be installed in accordance with Article _____.
300 NEC
400 NEC
500 NEC
600 NEC
700 NEC

3) Device boxes for fire alarms must be _____ in color.
Red
Orange
Silver
Black

4) All device boxes for emergency systems must be _____ in color.
Red
Orange
Silver
Black

5) An electrical work permit is valid for only one specific address.
True False

6) An electrical work permit may be posted after the electrical work is completed.
True False

7) An electrical work permit must be posted at a readily accessible and conspicuous location.
True False

8) Except for emergency repairs to existing electrical systems, electrical work permits must be obtained

and posted at the job site shortly after beginning the installation or alteration.
True False

9) The Class A permit for basic electrical work _____ the replacement of an enclosure that contains an exempted component or combination of components such as an electrical furnace/heat pump.
Allows Does not allow

10) An electrical permit is not required for adding another circuit in a travel trailer.
True False

11) Which activity is not permitted under a 02 License?
Install Romex (non-metallic sheathed cable)
Install wiring in a duplex house
Install a new branch circuit in a single residence
Install wiring for lighting in a residential swimming pool
Install wiring in a 4-plex that has 4 levels above grade

12) An 06 license holder may install both line and low-voltage circuits.
True False

13) On a HVAC service call, it is found that a component must be replaced with a like-in-kind. Which component is NOT considered to be like-in-kind?
One that is exactly identical to the original component
One that has the same operating characteristics as the original
A factory specified replacement component
One that requires rewiring the original system to work
None of the above

14) The 06 license permits repair of line voltage parts that are not exclusively controlled by the HVACR system.
True False

15) The 06 license permits replacement or maintenance of line voltage parts that are not exclusively controlled by the HVACR system.
True False

16) An 06 license allows the following activities except:
Class 2 low-voltage control circuit wiring/components in all residential occupancies
Replace line voltage components within HVAC/refrigeration equipment
Install a 120 V GFI appliance circuit upstream of the disconnect
Replace line voltage flexible supply whips not over six feet in length
All of the above are allowed

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17) An 06A License specialty is not limited by voltage, phase, or amperage.

True False

18) An 06A may install HVAC Class 2 low-voltage control circuits in non-residential installation when:

The installation does not pass between floors
The installation is made in a previously occupied and wired space
The installation is restricted to the HVAC/refrigeration system

All of the above
None of the above

19) The 06B may perform work that does not exceed:
110/120 volts

250 volts
277 volts
460/480 volts

20) An 06B may perform work that is limited to:

Single phase power
Two phase power
Three phase power
Four phase power
No restrictions on phase

21) An 06B may work on electrical systems that do not exceed:

50 amps
100 amps
120 amps
560 amps
No restrictions on amps

22) The (06) Limited Energy Systems specialty electrician _____ allowed to disconnect and reconnect line voltage like in kind when replacing components inside the low voltage control cabinet.

Is Is not

23) The (06) Limited Energy Systems specialty electrician __ allowed to replace line voltage flexible supply whips shorter than 6 feet, provided there are no modifications to the characteristics of the branch circuit/feeder load being supplied by the whip.

Is Is not

24) Which task is permitted for a Telecommunications (09) License?

Install open wiring systems of telecommunication cables
Fire protection signaling systems
Intrusion alarms
HVAC/refrigeration control systems
The installation of line voltage service conductors or equipment

25) The minimum qualifications to take the Electrical Administrators exam are:

Must be a Journeyman electrician
Must be a Master electrician
Must have 5 years of service
Must a degree in electrical engineering
No minimum qualifications are needed

26) Revisions for 03 – Pump and Irrigation require that continuing education be:

25% plumbing, 75% electrical
50% plumbing, 50% electrical
75% plumbing, 25% electrical
100% electrical

27) The use of shipyard or shipboard military experience cannot be used for more than _____ of the minimum work experience.

25%
33.5%
50%
10%

28) Electrical trainees must have _____ hours of classroom training per year to renew their training certificate.

4
8
16
24

2009 WAC Part 3 Quiz 6 RCW 19.280.161- 381

1) Which statement is true?

The department may specify which trades may do electrical work.

The department is permitted to show bias for or against organized labor.

A homeowner may do electrical work on his personal residence.

If a person builds a 4-Plex and has no plans of living in a unit, he may wire it himself.

Linemen performing utility type work need to have an electrician's license.

2) An electrical contractor is discovered by the department to have hired an unlicensed electrician 30 days ago. The minimum penalty that could be levied against the contractor is:

\$50
\$500
\$1500
\$5000
Shut down the business

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3) The maximum penalty would be:

- \$50
- \$500
- \$1000
- \$15000
- Shut down the business

4) What is the purpose of the Electrical Board?

- To advise the director on all matters pertaining to the enforcement of the RCWs
- To determine minimum inspection procedures
- To adopt rules pertaining to the electrical inspection division
- To make recommendations as to proposed rules or amendments
- All of the above

5) Who appoints the Chief Electrical Inspector?

- Director of Labor and Industry
- Washington State Attorney General
- Governor of Washington
- It is an elected position

6) The chief electrical inspector gives the final interpretation of adopted state electrical standards, rules and policies for the department.

- True
- False

7) An electrical inspector must have a minimum of _____ of field experience as a journeyman...

- 1 year
- 2 years
- 3 years
- 4 years
- 5 years

8) ...or have _____ years of electrical training in college in electrical engineering...

- one
- two
- three
- four
- five

9) ...and have _____ years of continuous practical electrical experience in installation work.

- one
- two
- three
- four
- five

10) A failed inspection will require:

- A written report of the inspection made by the inspector

A time and materials estimate needed for the correction

A copy of the failed inspection will given to the jurisdiction's building department

A copy of the failed inspection will be filed with the housing authority

None of these

11) Which statement is true?

Notification of suspension can be sent by regular mail.

A suspension is effective 30 days after the holder receives notice.

Any revocation or suspension is subject to review by an appeal to the board.

An appeal shall be filed within 30 days after notice of the revocation or suspension is given.

The appeal with the department must be accompanied by a certified check for \$500.

12) Thirty (30) days after a new electrical construction installation was inspected and passed, the tenant in a commercial building was electrocuted because of a defect in the electrical installation. Who is liable in this case?

The electrician, because he installed it

Not the electrician, because it passed electrical inspection

The electrical inspector, because he passed the installation

The tenant, because he or she should have been more careful around electricity

The local power provider, because they provided electricity to the job site

13) Which statement is true?

The department may deny renewal of a certificate or license if the applicant owes outstanding penalties for a final judgment.

The department shall notify the applicant of denial by regular mail to the address on the application.

The applicant may appeal the denial within thirty days by filing a notice of appeal with the department.

The appeal must be accompanied by a certified check for five hundred dollars.

The labor board shall conduct the hearing.

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