

2008 NEC Update Chapters 1 – 3 Quizzes Rv 2.18.2010

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

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

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Quiz 1

Question 1: Overall purpose of the NEC is to establish a set of standards for the practical safeguarding of persons and property from the hazards arising from the use of electricity, to serve as a text book in electrical training classes, is to design new electrical products, to be a practical guide for the “do it yourself.”

Question 2: The NEC is revised every year.
2 years.
3 years.
5 years.

Question 3: The number of major Chapters, excluding TABLES that the NEC covers is:
2
5
8
10

Question 4: An electrical utility may wire lighting system on easements or on-right-of ways, using their own standards and not the guidelines as shown in the NEC, because “other agreements” had been made.

True
False

Question 5: The reason(s) for bonding is (are) make sure that there is an continuous electrical path to carry an electrical fault current minimize possible electrical voltage differences between conductive parts in a system.
both of the above
neither of the above

Question 6: A CLOTHES CLOSET is a _____ room or space intended primarily to store garments and apparel.
small
cozy
non-habitable
windowless

Question 7: Which of the following is not a DEVICE as defined in the NEC.
high pressure cut out
pilot light switch
low pressure switch
fraction horsepower motor

Question 8: EQUIPMENT is a general term including material, fittings, devices, appliances, luminaries, apparatus, machinery and the like used as a part of, or in connection with, an electrical installation.

True
False

Question 9: GROUND means
dry soil
the earth
soil and rocks but not any body of water
none of the above

Question 10: GROUNDED means
connected to a conductive body that extends the ground connection
resting on the earth
an object that cannot be moved
electricity flowing from one hot leg to another

Question 11: An EGC – Equipment Grounding Conductor is a conductive path installed to connect normally non-current carrying metal parts of equipment together and to the system grounded conductor or to the grounding electrode conductor or both.

True
False

Question 12: GROUNDING ELECTRODE is a conducting object through which a direct connection to the earth is established.

True
False

Question 13: The minimum number of connections for intersystem bonding is _____.

3
5
6
not specified

Question 14: Which of the following are needed to classify an area as a kitchen?
a sink with running water and waste connections
a table or counter of some type for food preparations
a permanently installed stove, grill top, oven or similar device to cook the food
all of the above

Question 15: A screw shell type lamp-holder _____ a luminaire.
is considered to be
is NOT considered to be

Question 16: NEUTRAL POINT is the common point on
a Wye-connection in a polyphase system
the midpoint on a single phase, 3 wire system

the midpoint of single-phase portions of a 3-phase delta system
the a midpoint of a 3-wire, direct current system
all of the above

Question 17: A grounding electrode conductor is present at the neutral point, which connects to the ground and to the neutral conductor.

True
False

Question 18: QUALIFIED PERSON is one who has skills and knowledge related to the construction and operation of the electrical equipment and installation and has received safety training to recognize and avoid the hazards involved.

True
False

Question 19: Short circuit rating gives a maximum value to the amount of current that could pass through the device when a short circuit current occurs without physically exploding
that would guarantee that the device will work after sustaining a short circuit
both a and b
neither a or b

Question 20: In earlier versions of the code, a Surge Protective Device was known as a Transient Voltage Surge Suppressor.

True
False

Question 21: What is the number of basic classifications of surge protectors?

2
4
6
8

Question 22: Electrical Equipment (switches, conduit, conductor, etc.) must be protected from the weather unless it is marked suitable for outdoor use.

True
False

Question 23: All panel box installation mounting holes must be covered and sealed.

True
False

Question 24: The 2008 NEC requires that only industrial panels need to have warning signs indicating the potential of electric arc flash hazards.

True
False

Question 25: Table 110.20 Enclosure Selection specifies enclosure type for:
indoor applications
outdoor applications
non-hazardous installations
voltages 600 or less
all of the above

Question 26: Generally an electrical equipment room that has LESS than 600 volts, LESS than 1200 amps and equipment width LESS than 6 feet in width must have _____ entrance/egress doors.

- 1
- 2
- 3
- 4

Question 27: Generally an electrical equipment room that has LESS than 600 volts, LESS than 1200 amps and equipment width GREATER than 6 feet in width must have _____ entrance/egress doors.

- 1
- 2
- 3
- 4

Question 28: Generally an electrical equipment room that has LESS than 600 volts, GREATER than 1200 amps and an equipment width LESS than 6 feet in width must have _____ entrance/egress doors.

- 1
- 2
- 3
- 4

Question 29: Generally an electrical equipment room that has LESS than 600 volts, GREATER than 1200 amps and an equipment width GREATER than 6 feet must have _____ entrance/egress doors.

- 1
- 2
- 3
- 4

Question 30: Generally an electrical equipment room that has MORE than 600 volts, with UNSPECIFIED AMPS and an equipment width LESS than 6 feet must have _____ entrance/egress doors.

- 1
- 2
- 3
- 4

Question 31: Generally an electrical equipment room that has MORE than 600 volts, with UNSPECIFIED AMPS and an equipment width

MORE than 6 feet must have _____ entrance/egress doors.

- 1
- 2
- 3
- 4

Question 32: The exception to the two-door rule allowing a single entrance/egress door occurs when: permitted if equipment allows a continuous and unobstructed way of exit travel if work space is at least 2 x greater than Table 110.26A1 / 110.34 (A) requires either a or b
NONE – no exceptions to this rule

Question 33: The minimum dimensions for a panic door are
24 inches x 6 ft
30 inches x 7 ft
32 inches x 7 ½ ft
36 inches x 7 ft
not addressed in code

Question 34: If an electrical equipment room door or an access enclosure door is locked, it is considered only accessible to qualified persons
True
False

Question 35: Article 110.31: The FPN for reference to the NESC has been changed to the NEC to avoid confusion.
True
False

Quiz 2

Question 1: Grounded conductors must be _____
continuous.
non-continuous.
either continuous or non-continuous.

Question 2: Ground conductors _____ depend on cable armor or a raceway or on the connection to a metallic enclosure.
should
should not

Question 3: Ungrounded conductors of a multiwire branch circuit must be disconnected simultaneously.
True
False

Question 4: For a multiwire branch circuits, those having 2 or 3 ungrounded conductors, the ungrounded conductors MAY come from more than one panel box.

True
False

Question 5: All ground and ungrounded conductors in a multiwire branch circuit must be grouped within the panel board or at another point where they originate.

True
False

Question 6: Ungrounded conductors in a multiwire branch circuit can be grouped together by wire ties

tape
both of the above
neither of the above

Question 7: If the multiwires are in a cable and it is obvious that they are grouped, then other means of identification are not needed.

True
False

Question 8: If there is more than one system voltage present in a building, each of the ungrounded conductors will need to be identified with phase or line system

both a and b
neither a or b

Question 9: If there is more than one system voltage present in a building, each of the ungrounded conductors will need to be identified. This identification must be

readily available
permanently posted
located at each of the branch circuit panel boxes
all of the above
none of the above

Question 10: A GFCI is now required in all 125 v-15/20 amp circuits in garages that are on the ground floor or below grade in all 125 v-15/20 amp circuits that are in accessory buildings the ground floor or below in all 125 v-15/20 amp circuits in unfinished basements

all of the above

Question 11: A GFCI is now required to protect fire and burglar alarm systems.

True
False

Question 12: The office break-room has a sink, a microwave, counter top stove and counter tops for food preparation. The 125 –volt 15/20 amp circuits in this break-room must be GFCI protected.

True
False

Question 13: All 125-volt 15/20 amp receptacle outlets located outdoors must now be GFCI protected whether they are accessible to the public or not (except for industrial locations).

True
False

Question 14: A GFCI is required on receptacle outlets within _____ feet an outside edge of a sink.

2
4
6
8
10

Question 15: GFCI protection is now required for both 120-volt and 240 –volt receptacles that may be found supplying power for boat hoists.

True
False

Question 16: Combination type AFCI protectors are now required on branch circuits in dwelling units that serve most habitable rooms except:

unfinished basements
garages
bathrooms
all of the above
none of the above

Question 17: Ungrounded conductors are permitted to be sized at _____% of current load, even when the load is continuous.

75%
100%
110%
125%

Question 18: The branch circuits in each dwelling unit of a multi-occupancy dwelling are to be supplied by only that dwelling unit.

True
False

Question 20: A duplex wall receptacle has the upper receptacle controlled by a wall switch. The lower portion of the receptacle _____ be counted to meet the required spacing requirements for receptacles.

can
can not

Question 21: A breakfast room counter top will need to meet the same receptacle placing requirements as dwelling unit kitchens.

True

False

Question 22: In a dwelling unit, countertop receptacles are required if the countertop is _____ inches or wider.

- 6
- 12
- 18
- 24

Question 23: In a dwelling unit with countertop receptacles, the spacing between receptacles should be no more than _____ inches.

- 6
- 12
- 18
- 24

Question 24: In a dwelling unit, countertop receptacles are required to be installed directly behind a range or counter-mounted cooking unit or sink.

- True
- False

Question 25: An outdoor receptacle is required to be installed on One and Two-family dwellings at grade level. The receptacle must be accessible

- _____ when standing on the grade
- not more 6 ½ ft above grade
- both a and b
- neither a or b

Question 26: A GFCI protected receptacle should be located at the front and back of a house.

- True
- False

Question 27: For apartments on the ground floor that have individual entry ways, a receptacle will need to be installed not more than _____ ft above grade.

- 1
- 4
- 5
- 6 ½
- 7

Question 28: Dwellings that have Balconies, Decks and Porches that have usable area of _____ sq ft or larger will need to have a receptacle.

- 6
- 12
- 18
- 20

Question 29: The receptacle on a balcony should be installed _____ feet or less than the flooring surface.

- 1
- 4
- 5
- 6 ½
- 7

Question 30: In a single-family garage, what is the minimum number of GFCI protected receptacles required for general use?

- one
- two
- three
- four

Quiz 3

Question 1: In a dormitory, a receptacle must be placed so that no wall space at the floor line is more than _____ ft. from a receptacle.

- 2
- 4
- 6
- 8
- 10

Question 2: A receptacle outlet must be installed within _____ inches of the top of a show window.

- 12
- 16
- 18
- 24
- 36

Question 3: If a show window is longer than _____ ft. then additional receptacles must be installed for every _____ ft. of linear space.

- 12,12
- 16,16
- 18,18
- 24, 24
- 36,16

Question 4: Grounded conductors that are not connected to an over-current device may be sized at _____ % of the continuous load plus 100 percent of the non-continuous load.

- 75
- 100
- 125
- 150

Question 5: When a building has feeders supplied by more than one nominal voltage system, all ungrounded conductors shall be identified by phase or line and system at all termination, connection and splice points.

- True

False

Question 6: The 2008 NEC specifies the color code for each phase marking.

True
False

Question 7: The marking method for feeders with more than one voltage system in a building shall be permanently posted at each feeder panel-board or similar feeder distribution equipment.

True
False

Question 8: When sizing a branch circuit load for a heat pump, the load may be _____ % of the nameplate rating when the used without any supplemental electric heating.

75
100
125
150
165

Question 9: On an outdoor lighting circuit using a common neutral, one phase carries a load of 10 amps and the second phase carries a load of 17 amps. The neutral conductor must be sized to carry a load of _____ amps.

7
10
17
27

Question 10: Clearances for overhead conductors are measured from grade and not from a grounded object.

True
False

Question 11: Flexible metal conduit is permitted as raceway on the exterior surface of a building.

True
False

Question 12: Any device which "ties" breaker switches together for a simultaneous disconnect is permitted.

True
False

Question 13: When the branch circuit disconnecting means consists of more than one disconnect, the _____ rating of disconnects shall be permitted.

combined
individual

Question 14: A building with more than one occupancy shall be permitted to have one set of service-entrance conductors for each service to run to each occupancy or group of occupancies.

True
False

Question 15: Service-entrance conductors can be installed in a cable tray with other conductors when they are red in color they are separated by a permanent barrier marked "SERVICE-ENTRANCE CONDUCTORS" they great than 00 in size service-entrance conductors are never allowed in a cable tray with other conductors

Question 16: Raceways for service-entrance cables must be "suitable for use in wet locations" and allowed to drain, but do not need to be raintight.

True
False

Question 17: SERVICE HEADS must be listed for wet locations.

True
False

Question 18: Meter disconnect switches must have proper short-circuit current and interrupting ratings.

True
False

Question 19: The disconnect for a premise high voltage distribution system on private property is capable of being accessed, but is not required to be within arms length when standing on the ground.

True
False

Question 20: The Overcurrent protection for 18 AWG cooper (non-continuous) shall not be more than _____ amps.

3
5
7
9
10

Question 21: The Overcurrent protection for 16 AWG cooper (non-continuous) shall not be more than _____ amps.

3
5
7
9
10

Question 22: On a transformer, a single larger tap with smaller taps feeding these panelboards is permitted.
True
False

Question 23: If the installation of a transformer is at an industrial location, only qualified persons service the system. Protection of the transformer secondary is not required.
True
False

Question 24: A battery OCPD will need to be located within 25 feet of the storage battery terminals in the storage battery room out side of the entry door of the storage battery room as close as practical to the storage battery terminals

Question 25: The maximum length of battery conductors is _____ ft.
25
35
45
60
no limit

Question 26: In an APARTMENT building which is under continuous building management supervision, it is permitted that only the managers have access to the SERVICE OVERCURRENT PROTECTION DEVICES.
True
False

Question 27: In a MOTEL/HOTEL which is under continuous building management supervision, it is permitted that only the managers have access to the service OVERCURRENT PROTECTION DEVICES.
True
False

Question 28: Over current devices are permitted to be located over steps.
True
False

Question 29: For calculated applications, the engineer shall ensure that the downstream circuit breaker(s) that are part of the series combination remain _____ during the interruption period of the line side fully rated current-limiting device.
passive
active

Question 30: A new method of determining the size of feeder taps has been developed Table

240.92(B) but can only be used in supervised industrial locations.
True
False

Question 31: On an ungrounded system, if both phases are faulted to ground it creates a phase-to-phase fault. This will have enough fault current to trip a circuit breaker or blow a fuse
True
False

Quiz 4

Question 1: Several new methods are acceptable to connect grounding or bonding conductor to a j-metal box. One acceptable method would be:
Thread-forming machine screws that engage not less than two threads in the enclosure
Thread-forming machine screws that engage not less than one thread in the enclosure
soldering the connecting wire to the metal enclosure.

Question 2: A machine screw-type fastener that is secured with a nut is an acceptable method to attach a grounding conductor.
True
False

Question 3: An on-site generator is considered a separately derived system when the grounded conductor from the service can be disconnected from the load by the transfer switch.
True
False

Question 4: Underwater swimming pools lights that are supplied by a listed swimming transformer must from an isolated winding type with ungrounded secondary and be provided with a grounded metal barrier between the primary and secondary windings.
True
False

Question 5: When a service has more than a single enclosure, the main bonding jumper for each enclosure shall be sized on the largest ungrounded service conductor serving that enclosure.
True
False

Question 6: The connection of a grounding electrode taps from a separately derived systems shall be made _____.
at the same point on the separately derived system where the system bonding jumper is installed
at the service
at the grounding electrode connection

Question 7: Using a grounded conductor instead of an equipment grounding conductor to ground equipment and raceways in a separate building is permitted only for existing premises wiring systems, but the following requirements must be met:
an equipment grounding conductor is not run with the supply to the building or structures
there are no continuous metallic paths bonded to the grounding system in each building or structure involved
ground-fault protection of equipment has not been installed on the supply side of the feeder(s)
all of the above

8
10
12

Question 8: In a separately derived system, the grounded conductor is switched by the transfer switch.
True
False

Question 9: There are several methods to connect the metal frame of a building to the earth so that it can be used as a grounding electrode. All of the following are permitted except _____.
a ground ring
rod or pipe electrode
plate electrode
metal underground water pipe

Question 10: A concrete encased electrode must be at least _____ feet long.
5
10
15
20
50

Question 11: A concrete encased electrode must have at least _____ inches of concrete encasing it.
1
2
3
4
6

Question 12: Ground electrodes may be made of iron.
True
False

Question 13: A supplemental grounding electrode is now referred to as "AUXILIARY GROUNDING ELECTRODE."
True
False

Question 14: If a second grounding rod electrode is installed, it must be at least _____ feet in length.
6

Question 15: If a second grounding rod electrode is installed, it must be spaced at least _____ feet away from the 1st rod electrode

6
8
10
12

Question 16: The common ground electrode conductor must be sized based on Table 250.66, and based on the sum of the circular mil area of the _____ ungrounded service entrance conductors.
smallest
average
largest

Question 17: The individual ground electrode conductor when installed at a common location will need to be connected on the supply side of the service disconnecting means. It will need to be sized based on Table 250.66 and is based on the _____ service-entrance conductor.
smallest
average
largest

Question 18: A grounding electrode terminal must be accessible except:
at the conductor termination an exothermic or other irreversible compression fitting is used
a mechanical means is used to fasten or attach the fitting structural steel
the structural steel has been fire proofed
only when all of the above are utilized

Question 19: A bonding bar must be connected with at least _____ AWG copper conductor to the equipment grounding conductor in the service equipment enclosure.
2
4
6
8
10

Question 20: Each of the occupants in a multiple occupancy building is permitted to bond the common water supply of non-metallic pipe that branches off with copper supplies with the bonding jumper sized from Table 250.122.
True
False

Question 21: Equipment supplied by Class 1 circuits shall be grounded unless operating at less than ____ volts.

- 12
- 24
- 48
- 50
- 120

Question 22: The GREEN thermostat wire on most air conditioning systems is connected to ____
the indoor fan system
the compressor system
ground electrode
grounded conductor

Question 23: Grounding conductors should be fire rated when used with fire-rated circuits. A THHN insulated grounding conductor that is not fire-rated shall not be used in these fire-rated systems unless they are specified as part of the system.

- True
- False

Question 24: There are times when a single equipment-grounding conductor is run with multiple circuits in the same cable, cable tray or raceway. In order to do so, the single equipment-grounding conductor must:

- meet requirements of 392.3 B 1c
- be either insulated, covered or bare
- be at least 4 AWG
- all of the above

Question 25: The size of a motor circuit equipment-grounding conductor with an instantaneous trip circuit breaker should not be smaller than a conductor listed in table 250.122 (A).

- True
- False

Question 26: Section 250.122(F)(2) deals with sizing equipment grounding conductors when parallel ungrounded conductors were protected by a ground-fault protection of equipment type device.

- is currently enforced.
- has been deleted in the 2008 NEC.

Question 27: It shall be permissible to ground a meter enclosure by connecting to the grounded circuit conductor on the load side of the service disconnect when following condition(s) apply:
No service ground-fault protection is installed
All meter enclosures are located immediately adjacent to the service disconnecting means
The size of the grounded circuit conductor is not smaller than the size specified in Table 250.122 for equipment grounding conductors 250.146
Only when all of the above are utilized

Question 28: A surface mounted box is considered to be grounded and bonded when the device is attached to the cover with at least _____ fastener(s) that are permanent or have a thread locking or screw locking means and

- 1
- 2
- 3
- 4

Question 29:when the cover mounting holes are located on a _____ portion of the cover.

- flat non-raised
- flat raised
- rounded non-raised
- rounded raised

Question 30: An isolated receptacle has an insulated ground conductor coming directly from the service panel which does not connect to a separately grounded outlet box.

- True
- False

Quiz 5

Question 1: What is the maximum number of nail plates that can be used to protect conductors through a bored hole?

- 1
- 2
- 3
- no maximum

Question 2: Cable assemblies and raceways that are installed under a roof that is made from corrugated sheet roof decking must be installed at least _____ inches from the underside of the decking.

- 1
- 1 ½
- 2
- 2 1/4

Question 3: Rigid metal conduit that is installed under a roof that is made from corrugated sheet roof decking must be installed at least 1-½ inches from the underside of the decking.

- True
- False

Question 4: All conductors installed in raceways that are underground must be rated for wet locations.

- True
- False

Question 5: Underground cable installed under a building must be in a raceway. The raceway _____

required to extend past the outside walls of the building.
is
is not

Question 6: In general, all conductors emerging from grade must be protected by a raceway or an enclosure at least _____ above grade.
18 inches
24 inches
36 inches
5 feet
8 feet

Question 7: An aluminum raceway can be embedded in concrete _____.
if it does not pass under a building.
only if it has supplementary corrosion protection.
if the concrete is at least 2 inches thick.
under no circumstances.

Question 8: Conductors installed in a raceway in an above ground-wet location must be rated for a wet location.
True
False

Question 9: In fire rated ceiling assemblies, the ceiling support wires must be flagged or identified.
True
False

Question 10: In non-fired rated ceiling assemblies, the ceiling support wires are required to be flagged or identified.
True
False

Question 11: Raceways or cables installed into the bottom of open bottom equipment are not required to be mechanically secured to the equipment.
True
False

Question 12: ENT in an environment air space _____
should never be installed under any circumstances.
can be installed if it is run perpendicular to the support structure.
can be installed if it is contained inside a metal raceway.
if the ENT is Schedule 80.

Question 13: A buried cable over 600 Volts is going to be installed with concrete placed directly above it. The depth of the cable can be reduce if the cable is located _____
at a residential building site.

at a commercial site.
at an industrial establishment.
all of the above.

Question 14: At an industrial establishment, a buried cable over 600 Volts is going to be installed. For every 2 inches of concrete that placed directly above a direct buried cable, the depth can be reduced by _____ inches.
2
4
6
8
12

Question 15: If conductors are installed in a raceway without keeping a minimum spacing for _____ or more, then the conductors must be de-rated.
12 inches
16 inches
24 inches
36 inches
40 inches

Question 16: A conduit is installed 1/2" above a roof which has a summer design temperature of 100 degrees. What temperature should be used for de-rating purposes?
100
140
160
180
200

Question 17: A conduit is installed 6 inches above a roof, which has a summer design temperature of 130 degrees. What temperature should be used for de-rating purposes?
100
140
160
180
200

Question 18: In a residential dwelling, the main power feeder is the one that supplies the entire load in a dwelling unit.
True
False

Question 19: Any non-combustible surface that is next to a flush-type cover for a cabinet or cutout box must not have gaps larger than _____".
1/8
1/4
1/2
1

Question 20: If a conductor is more than 12" long and is looped, then the conductor is counted as 2 conductors for the purpose of box fill calculations.
True
False

Question 21: A dryer receptacle which is 2 1/2 inches in width would need to be counted _____ times for box fill calculations.
1
2
3
4

Question 22: A cover can be used as a surface extension as long as the following requirement (s) is (are) met.
the cover must be unlikely to fall off if the mounting screws become loose
the connection be connection be flexible to allow removal of the cover and access to the box
the grounding is independent of between the box and the cover.
all of the above

Question 23: The minimum depth of an outlet box without enclosed devices is _____.
1/4 inch
1/2 inch
3/4 inches
15/16 inches
1 inch

Question 24: The minimum depth of an outlet box with an enclosed device is _____.
1/4 inch
1/2 inch
3/4 inches
15/16 inches
1 inch

Question 25: If equipment projects greater than 1 7/8-in into the box, then the box depth will need to be at least ____ deeper than the equipment.
1/4 inch
1/2 inch
3/4 inches
15/16 inches
1 inch

Question 26: If the equipment conductors are 8, 6, or 4 AWG, then the box depth for this application will need to be at least _____.
3/4 inches
15/16 inches
1 3/16 inches
1 inch
2 1/16 inches

Question 27: If the equipment conductors are 12 or 10 AWG, then the box depth for this application will need to be at least _____.
3/4 inches
15/16 inches
1 3/16 inches
1 inch
2 1/16 inches

Question 28: If the equipment conductors are 14 AWG or smaller, then the box depth for this application will need to be at least _____.
3/4 inches
15/16 inches
1 3/16 inches
1 inch
2 1/16 inches

Quiz 6

Question 1: An outlet box supporting a ceiling light must be able to support at least _____ pounds.
10
20
30
40
50

Question 2: A wall mounted box used to support a luminaire must be marked or labeled in the interior of the box with the maximum weight that it can support if it is different than _____ lbs
10
20
30
40
50

Question 3: When installing a luminaire that weighs more than 50 pounds in a ceiling mounted box
the light needs to be independently supported.
the outlet box must be marked for at least the weight of the light will need to be used.
either of the above
neither of the above

Question 4: A smoke detector, weight less than 6 pounds, may be attached to an outlet box if it is attached with at least 2 No. 6 or larger screws.
True
False

Question 5: For raceways containing conductors of 4 AWG or larger, _____ and for cables containing conductors of 4 AWG or larger, the minimum dimensions of pull or junction boxes installed in a

raceway or cable run shall comply with (A)(1) through (A)(3) of 314.28(A) that are required to be insulated that are insulated that are required to be bare

Question 6: Only open bottom handhold enclosures are required to be identified as suitable for use in underground systems.
True
False

Question 7: Armored cable can be used for services.
True
False

Question 8: Metal clad cable can be used for wet locations if the metallic covering is impervious to moisture. a lead sheath of moisture impervious jacket is provided under the metal covering. the insulated conductors under the metallic covering are list for use in wet locations and a corrosion-resistant jacket is provided over the metallic sheath. any one of the above.

Question 9: Metal Clad Cable should not be used if it is subject to physical abuse or if it is subject to corrosive conditions.
True
False

Question 10: In a fire rated application, NM, NMC, NMS cables are allowed if they have been protected by enclosure in EMT.
True
False

Question 11: NM or NMS can be installed in damp or wet locations.
True
False

Question 12: Which of the following non-metallic-sheathed cables can be install in concrete or adobe.
NM
NMC
NMS
all of the above
none of the above

Question 13: When the cable is installed in either concrete or adobe, the cable must be protected by a 1/16 inch steel sheet OR be in a cable channel so that the top of the cable is at least _____ from the surface.
1
1 ¼

1 ½
2

Question 14: In a crawlspace, a cable with #6 conductors may be install directly to the bottom of the joists without any protection.
True
False

Question 15: In an unfinished basement, when NM cable is run in a conduit, the sheath of the cable must extend into the outlet box at least _____ and
¼ inch
½ inch
¾ inch
1 inch

Question 16: the cable must be secured within _____ inches of the point where it enters the conduit or tubing.
1
6
12
16
24

Question 17: A single NM cable containing 2 current carrying conductors is installed through a single opening in wood and the opening is fire stopped with thermal insulation. The de-rating factor for the 2 current carrying conductors is _____
100% (no de-rating)
80%
70%
50%
45%

Question 18: The maximum length that a TC-ER cable can be installed without continuous support is _____ ft.
1
2
4
6
8

Question 19: Service Entrance (SE) cable may be installed underground.
True
False

Question 20: Underground Service Entrance (USE) cable may be installed either underground or aboveground.
True
False

Question 21: EMT can be installed without support if the following condition(s) is/are met.
Cannot be connected to an enclosure through an oversized, concentric, or eccentric knockout
Cannot be longer than 18-inches
It cannot include a coupling
It will need to terminate in an outlet, junction or cabinet
All of the above

5
6
8

Question 22: RMC galvanized steel can be used under all atmospheric conditions and occupancies.
True
False

Question 30: Locations that need flexibility after installation using 2 ½ FMC. the length between the termination point has been increased to ____ ft..
3
4
5
6
7

Question 23: Red Brass RMC – can be installed for direct burial
for swimming pool applications
both a and b
neither a or b

Question 31: On an installation using FMC that does not require flexibility afterwards, an equipment ground conductors does not need to be installed if _____.
a. the total length of the FMC is 6 ft or less
b. the total length of the FMC is greater than 6 ft
c. the Over current protection is more than 20 amperes
b and c

Question 24: Aluminum RMC rigid can be install in concrete or direct contact with earth with approved supplementary corrosion protection.
True
False

Quiz 7

Question 1: To be supported of Liquidtight Flexible Metal Conduit, FMC that is fished between access points through concealed spaces in finished buildings or structures in not required.
True
False

Question 25: Ferrous fittings and raceways that are protected only by enamel can only be used indoor or outdoor where there are not any corrosive influences.
True
False

Question 2: Locations that need flexibility after installation using LFMC, the length for sizes ½” – 1 ¼” this length has been increase to _____ ft.
3
4
5
6
8

Question 26: Flexible Metal Conduit may no longer be installed in any wet locations.
True
False

Question 27: FMC that is fished between access points through concealed spaces in finished buildings or structures not required to be supported.
True
False

Question 3: Locations that need flexibility after installation using LFMC, the length between the termination point and the last support with the following has been increased. For sizes 1 ½” – 2” this length has been increased to _____ ft.
3
4
5
6
8

Question 28: In locations that need flexibility after installation using ½ -1 ¼ FMC, the length between the termination point has been increased to ____ ft.
3
4
5
6
8

Question 4: Locations that need flexibility after installation using LFMC, the length between the termination point and the last support with the following has been increased. For sizes 2 ½” and larger this length has been increased to _____ ft.
3
4

Question 29: Locations that need flexibility after installation using 1 1/2 FMC. the length between the termination point has been increased to ____ ft..
3
4

5
6
8

Question 5: PVC conduit can be used for exposed work, but the must be Schedule ____.

40
60
80
none of the above

Question 6: Both homogenous and non-homogenous PVC conduit can be used for direct burial and underground encased in concrete.

True
False

Question 7: HDPE can be used above ground but must be encased in at least ____ inches of concrete.

2
3
4
5
6

Question 8: The maximum allowed size for HDPE is _____ inches.

2
3
4
5
6

Question 9: HDPE can be joined which of following methods.

heat fusion
electrofusion
mechanical fittings
all of the above

Question 10: Conduit when exposed to heat or cold expands or contracts. PVC expands _____ RTRC.

the same as
more than twice that of
less than
none of the above, neither expand or contract

Question 11: When installing ENT in pre-finished walls where securing is impracticable, ENT can be fished when using unbroken lengths without couplings.

True
False

Question 12: Auxiliary Gutters are used to provide additional wiring space at the equipment.

True
False

Question 13: In a metal wireway, the Total conductor fill must not exceed _____ of the wireway

10
20
30
50
75

Question 14: What is the maximum number of conductors that can be present in a metal wireway without adjustment factors?

<10
<20
<30
<50
<75

Question 15: The following are construction requirements for a wireway.

Wireways shall be of substantial construction and shall provide a complete enclosure for the contained conductors

Interior and exterior surfaces are protected from corrosion

corners are tight

when panels are fastened together, spacing of rivets or screws must be 12" or less apart

all of the above

Question 16: Cable splices are not permitted to project above the cable tray side rails, even when they would not be subject to physical damage.

True
False