INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS OF THE PHILIPPINES

Albay-Legazpi Chapter Legazpi City

SEPTEMBER 2009 PEC 2009 REFRESHER I

Multiple Choice. Select the correct answer for each of the following questions. Mark only one answer for each item by shading the box corresponding to the letter of your choice on the answer sheet provided.

1. The demand load for household electric ranges, wall-mounter		
household cooking appliances individually rated in excess of shall be permitted to be computed in		
accordance with Table 2.20.2.10.		
a.) 1 kW	c.) 1 ½ kW	
b.) 1 ¼ kW	d.) 1 ¾ kW	
2. A reliable conductor used to ensure the required conductivity	ity between metal parts which are to be electrically	
connected is called which of the following:		
a.) Connector	c.) Insulated conductor	
<mark>b.)</mark> Bonding jumper	d.) Branch connector	
3. A continuous load is one in which one of the following types of		
for three hours or more:	· · · · · · · · · · · · · · · · · · ·	
a.) Continuous	<mark>c.)</mark> Maximum	
b.) Normal	d.) Limited	
4. If an outlet is in an under floor raceway and is disconnected,	,	
the circuit conductors supplying the outlet:		
a.) A blank cover plate installed on the outlet box	c.) Be spliced and reconnected	
b.) Be removed from the raceway	d.) None of the above	
5. Computation of recessed fluorescent lighting fixture loads sha		
	c.) The total VA of the equipment and lamps	
a.) The total ampere rating of the fixture	<mark>- ,</mark>	
b.) The total wattage of the lighting system	d.) None of the above	
6. An automatic overcurrent device that protects service conductors supplying a specific load, such as an electric		
water heater, shall be permitted to be locked or sealed in orde		
a.) Corrosion	c.) Derating of the conductors	
b.) Tampering	d.) Tripping	
7. Conductors for festoon lighting shall be supported by mess	senger wire if the lighting run exceeds which of the	
following:		
a.) 70 pounds	c.) 100 volts	
<mark>b.)</mark> 40 feet	d.) None of the above	
8. A service mast used to support service drop conductors shall		
a.) Glass or porcelain	c.) Studs or hangers	
<mark>b.)</mark> Braces or guys	d.) None of the above	
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permissible to compute load calculations using the First 8 l a.) 35%	 d.) 180 VA y an existing 115/230, volt-3-wire service, it shall be vA of load at 100 % and the remainder of the load at c.) 50%
<mark>b.)</mark> 40%	D.) 60%
 The conductor between the surge arrester and the line shall not be smaller than copper or aluminum. 	and the surge arrester and the grounding connection
a.) 8.0 mm ²	<mark>c.)</mark> 14 mm²
b.) 22 mm ²	d.) 5.5 mm ²
and plug-connected portable loads.	used, provided the following condition/s is/are met: nultioutlet branch circuit supplying receptacles for cord-
circuit breaker without overload trip adjustment at trip or rating adjustment).	espond with the standard ampere rating of a fuse or a bove its rating (but shall not be permitted to have other
III. The next higher standard rating selected does a.) III only	not exceed 800 amperes. c.) I and III
b.) II and III	d.) all of the above
20. Circuit breakers used as switches in 230-volt and 277-v	
be marked	
a.) SWB <mark>b.</mark>) SWD	c.) CBS d.) CB
21. Conductors supplying only limited loads of a single bran	
heaters, and similar loads – shall not be smaller than	
<mark>a.)</mark> 3.5 mm², 5.5 mm² b.) 8.0 mm², 14 mm²	c.) 5.5 mm², 8.0 mm² d.) 2.0 mm², 3.5 mm²
22. What is the permissible demand factor for computing	
apartment?	
a.) 44%	<mark>c.)</mark> 43% d.) 40%
b.) 41%23. What will be the minimum working space if you will be	/
exposed live parts on one side and grounded parts on the considered as grounded.	
a.) 760 mm	c.) 1100 mm
 b.) 1000 mm 24. Electrical plans and drawings shall be drawn on sheets of 	d.) 1300 mm f the following standard sizes:
	$500 \text{ mm} \times 760 \text{ mm}$
a.) I and II only	c.) II and III only
b.) I and III only	d.) I, II and III
b.) I and III only25. Where the voltage exceeds 600 volts, nominal, and per	d.) I, II and III
b.) I and III only	 d.) I, II and III manent conspicuous warning signs shall be provided, c.) HIGH VOLTAGE – KEEP OUT
 b.) I and III only 25. Where the voltage exceeds 600 volts, nominal, and per reading as follows: a.) DANGER – HIGH VOLTAGE b.) DANGER – KEEP OUT 	 d.) I, II and III manent conspicuous warning signs shall be provided, c.) HIGH VOLTAGE – KEEP OUT d.) DANGER – HIGH VOLTAGE – KEEP OUT
 b.) I and III only 25. Where the voltage exceeds 600 volts, nominal, and per reading as follows: a.) DANGER – HIGH VOLTAGE b.) DANGER – KEEP OUT 26. Three squirrel cage induction motors, 25-hp, 20-hp and 	 d.) I, II and III manent conspicuous warning signs shall be provided, c.) HIGH VOLTAGE – KEEP OUT d.) DANGER – HIGH VOLTAGE – KEEP OUT 10-hp, all rated at 460 volts, three phase, 60 Hz are to
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 b.) I and III only 25. Where the voltage exceeds 600 volts, nominal, and per reading as follows: a.) DANGER – HIGH VOLTAGE b.) DANGER – KEEP OUT 26. Three squirrel cage induction motors, 25-hp, 20-hp and be served by a feeder circuit. Ambient temperature does conductor. a.) 22 mm² TW b.) 22 mm² THHN 	 d.) I, II and III manent conspicuous warning signs shall be provided, c.) HIGH VOLTAGE – KEEP OUT d.) DANGER – HIGH VOLTAGE – KEEP OUT 10-hp, all rated at 460 volts, three phase, 60 Hz are to s not exceed 30 °C. Determine the size of the feeder
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 b.) I and III only 25. Where the voltage exceeds 600 volts, nominal, and per reading as follows: a.) DANGER – HIGH VOLTAGE b.) DANGER – KEEP OUT 26. Three squirrel cage induction motors, 25-hp, 20-hp and be served by a feeder circuit. Ambient temperature does conductor. a.) 22 mm² TW b.) 22 mm² THHN 27. In PEC 2000, Article 2.10 is a.) Branch Circuits b.) Protection Against Lightning 	 d.) I, II and III rmanent conspicuous warning signs shall be provided, c.) HIGH VOLTAGE – KEEP OUT d.) DANGER – HIGH VOLTAGE – KEEP OUT 10-hp, all rated at 460 volts, three phase, 60 Hz are to s not exceed 30 °C. Determine the size of the feeder c.) 14 mm² THW d.) 8.0 mm² THWN c.) Conductors for General Wiring d.) Grounding
 b.) I and III only 25. Where the voltage exceeds 600 volts, nominal, and per reading as follows: a.) DANGER – HIGH VOLTAGE b.) DANGER – KEEP OUT 26. Three squirrel cage induction motors, 25-hp, 20-hp and be served by a feeder circuit. Ambient temperature does conductor. a.) 22 mm² TW b.) 22 mm² THHN 27. In PEC 2000, Article 2.10 is a.) Branch Circuits b.) Protection Against Lightning 28. It shall be permissible to apply a demand factor oft 	 d.) I, II and III manent conspicuous warning signs shall be provided, c.) HIGH VOLTAGE – KEEP OUT d.) DANGER – HIGH VOLTAGE – KEEP OUT 10-hp, all rated at 460 volts, three phase, 60 Hz are to s not exceed 30 °C. Determine the size of the feeder c.) 14 mm² THW d.) 8.0 mm² THWN c.) Conductors for General Wiring d.) Grounding o the name plate rating load of four or more appliances
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33. For 3-wire dc or single-phase ac; 4-wire, 3-phase; 3-wire 2-phase; or 5-wire, 2-phase systems, a further demand factor of 70 percent shall be permitted for that portion of the unbalanced load in excess of _ a.) 100 A c.) 300 A <mark>b.)</mark> 200 A d.) 400 A 34. The load for household electric clothes dryer in a dwelling unit(s) shall be ____ __ or the nameplate rating. a.) 1500 VA <mark>c.)</mark> 5000 VA b.) 2500 VA d.) 1200 VA 35. An insulated grounded conductor larger than _ _ shall be identified either by continuous white or natural gray outer finish or by three continuous white stripes on other than green insulation along its entire length or at the time of installation by a distinctive white marking at its termination. a.) 8.0 mm² c.) 22 mm² d.) 30 mm² b.) 14 mm² 36. All 125-volt and/or 250-volt singe-phase, 15- and 20- ampere receptacles installed in the location specified below shall have ground-fault-circuit-interrupter protection for personnel: a.) Bathrooms c.) a and b b.) Rooftops d.) none of the above 37. Appliance receptacle outlets installed in a dwelling unit for specific appliances, such as laundry equipment, shall be installed within _____ of the intended location of the appliance. <mark>c.)</mark> 1600 mm a.) 760 mm d.) 1800 mm b.) 1200 mm 38. Who will accomplish Box No. 5 of the Application for Electrical Permit Form? a.) PEE who signed and sealed plans & specification c.) Person in charge of installation b.) Electrical Contractor d.) Owner/Authorized Representative 39. What is the computed load for two 4-kW mounted ovens and one 8-kw electric range? a.) 12 kVA c.) 16 kVA d.) 12.8 kVA <mark>b.)</mark> 8.8 kVA 40. Connector fittings shall be used on all lightning conductor at "end-to-end" "tee" or "Y" splices. They shall be attached so as to withstand a pull test of _ a.) 890 N c.) 89 N b.) 980 N d.) 98 N 41. A laundry shop has five 5000 VA electric clothes dryer. What will be the total computed load? c.) 17,500 VA a.) 25,000 VA <mark>b.)</mark> 20,000 VA d.) 16,450 VA 42. Where buildings exceed three stories or 15 metres in height, overhead lines shall be arranged, where wide will be left either adjacent to the buildings or practicable, so that a clear space (or zone) at least _ beginning not over from them to facilitate the raising of ladders when necessary for firefighting. a.) 1600 mm, 2500 mm c.) 1900 mm, 2500 mm b.) 1900 mm, 2100 mm d.) 1600 mm, 2100 mm 43. Which of the following circuits shall not be grounded? I. Cranes II. Health Care Facilities **III. Electrolytic Cells** c.) III only a.) I only b.) I and III only d.) I, II and III 44. Where the grounding electrode conductor is connected to made electrodes as permitted in section 2.50.3.1(c), that portion of the conductor that is the sole connection to the grounding electrode shall not be required to be larger than _ copper wire. a.) 14 mm² <mark>c.)</mark> 22 mm² b.) 8.0 mm² d.) 5.5 mm² 45. What is the size of copper grounding electrode conductors for service entrance having two 80 mm² THW copper wire in parallel? Table 2.50.3.17 c.) 22 mm² a.) 8.0 mm² b.) 14 mm² <mark>d.)</mark> 30 mm² 46. A certain building is being protected by a 1000 AT circuit breaker. What will be the minimum size of equipment grounding conductor for grounding the raceway? Table 2.50.6.13 a.) 38 mm² c.) 60 mm² b.) 50 mm² d.) 80 mm² 47. Sign and outline lighting outlets shall be computed at a minimum of for each required branch circuit. c.) 180 VA a.) 600 VA d.) 1500 VA <mark>b.)</mark> 1200 VA 48. For show window lighting, a load of not less than ____ shall be included for each linear metre of show window, measured horizontally along its base. <mark>a.)</mark> 600 VA c.) 180 VA b.) 1200 VA d.) 1500 VA 49. Overhead spans of open conductors and open multiconductor cables of not over 600 volts above finished grade, sidewalks, or from any platform or projection from which they might reached where the voltage does not exceed 150 volts to ground and accessible to pedestrians only. c.) 4600 mm <mark>a.)</mark> 3100 mm d.) 5500 mm b.) 3700 mm 50. About every 5 years new edition of PEC are issued, incorporating changes approved in the interim period. These changes are considered in the PEC by the use of a.) Italics c.) Parenthesis d.) Vertical Marginal Line b.) Boldface

INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS OF THE PHILIPPINES

Albay-Legazpi Chapter

Legazpi City

SEPTEMBER 2009 PEC 2009 REFRESHER I

Multiple Choice. Select the correct answer for each of the following questions. Mark only one answer for each item by shading the box corresponding to the letter of your choice on the answer sheet provided.

1. The demand load for household electric ranges, wall-mounte household cooking appliances individually rated in excess	
accordance with Table 2.20.2.10. a.) 1 kW	(2) 1 1/ k/M
b.) 1 ¼ kW	c.) 1 ½ kW d.) 1 ¾ kW
2. A reliable conductor used to ensure the required conductivit	
connected is called which of the following:	
a.) Connector	c.) Insulated conductor d.) Branch connector
b.) Bonding jumper3. A continuous load is one in which one of the following types of	
for three hours or more:	
a.) Continuous	c.) Maximum
b.) Normal4. If an outlet is in an under floor raceway and is disconnected, t	d.) Limited
the circuit conductors supplying the outlet:	-
a.) A blank cover plate installed on the outlet box	c.) Be spliced and reconnected
b.) Be removed from the raceway	d.) None of the above
5. Computation of recessed fluorescent lighting fixture loads sha a.) The total ampere rating of the fixture	c.) The total VA of the equipment and lamps
b.) The total wattage of the lighting system	d.) None of the above
6. An automatic overcurrent device that protects service condu	
water heater, shall be permitted to be locked or sealed in orde	
a.) Corrosion	c.) Derating of the conductors
b.) Tampering	d.) Tripping
7. Conductors for festoon lighting shall be supported by messe	
following:	
a.) 70 pounds	c.) 100 volts
b.) 40 feet	d.) None of the above
8. A service mast used to support service drop conductors shall	
a.) Glass or porcelain	c.) Studs or hangers
b.) Braces or guys	d.) None of the above
9. Which of the following entrances does not require a switched	outlet:
a.) An attic	c.) A walk through porch door
b.) A drive through garage door	 All of these require a switched outlet
10. Service entrance equipment includes which of the following:	
	vice disconnecting means
a.) I only	c.) I & III only
b.) II & III only	d.) II only
11. In the computation of branch-circuit, feeder and service load be dropped?	ds, what fraction of an ampere shall be permitted to
a.) 0.4	c.) 0.5 or larger
b.) 0.6	d.) 0.5 or smaller
12. Service entrance conductors exceeding 600 V, nomin	
multiconductor cable. Multiconductor cable shall not be smaller than	
a.) 8.0 mm ² , 5.5 mm ²	c.) 14 mm ² , 5.5 mm ²
b.) 22 mm², 14 mm²	d.) 14 mm², 8.0 mm²
13 is a device that, when interrupting ratings in its curr	ent limiting range, will reduce the current flowing in
the faulted circuit to a magnitude substantially less than that	obtainable in the same circuit if the device where
replaced with a solid conductor having comparable impedance	9.
 a.) current-limiting over-voltage protective device 	c.) current-limiting overcurrent protective device
 b.) voltage-limiting overcurrent device 	 d.) ground fault circuit interrupter
14. Which of the following electrodes shall not be permitted?	
I. Rod and pipe electrodes II. Plate electrodes	III. Aluminum electrodes
a.) I and II	c.) I and III
b.) II and III	d.) III only
15. The rating of a silicon carbide-type surge arrester shall	
continuous phase-to-ground voltage available at the point of a	
a.) 125	c.) 100
b.) 115	d.) 80
16. Outlets for heavy duty lamp holders shall be computed at a r	
a.) 1200 VA	c.) 1500 VA

b.) 600 VA	d.) 180 VA
17. For an existing dwelling unit presently being served b	
permissible to compute load calculations using the First 8 k	
a.) 35%	c.) 50%
b.) 40%	D.) 60%
18. The conductor between the surge arrester and the line	and the surge arrester and the grounding connection
shall not be smaller than copper or aluminum.	
a.) 8.0 mm ²	c.) 14 mm ²
b.) 22 mm ²	d.) 5.5 mm ²
19. For devices rated 800 ampere or less, the next higher s	
of the conductors being protected) shall be permitted to be	
	nultioutlet branch circuit supplying receptacles for cord-
and plug-connected portable loads.	are a with the standard amount rating of a fues or a
	espond with the standard ampere rating of a fuse or a pove its rating (but shall not be permitted to have other
trip or rating adjustment).	ove its rating (but shall not be permitted to have other
III. The next higher standard rating selected does r	not exceed 800 amperes
a.) III only	c.) I and III
b.) II and III	d.) all of the above
20. Circuit breakers used as switches in 230-volt and 277-v	
be marked	
a.) SWB	c.) CBS
b.) SWD	d.) CB
21. Conductors supplying only limited loads of a single bran	,
heaters, and similar loads – shall not be smaller than	
a.) 3.5 mm ² , 5.5 mm ²	c.) 5.5 mm ² , 8.0 mm ²
b.) 8.0 mm ² , 14 mm ²	d.) 2.0 mm ² , 3.5 mm ²
22. What is the permissible demand factor for computing	,
apartment?	
a.) 44%	c.) 43%
b.) 41%	d.) 40%
23. What will be the minimum working space if you will be	working on 440-volt equipment wherein there are an
exposed live parts on one side and grounded parts on the	e other side? Also, Concrete, brick or tile walls shall be
considered as grounded.	
a.) 760 mm	c.) 1100 mm
b.) 1000 mm	d.) 1300 mm
24. Electrical plans and drawings shall be drawn on sheets o	
	500 mm x 760 mm
a.) I and II only	c.) II and III only
b.) I and III only	d.) I, II and III
25. Where the voltage exceeds 600 volts, nominal, and per	rmanent conspicuous warning signs shall be provided,
reading as follows:	
a.) DANGER – HIGH VOLTAGE	
b.) DANGER – KEEP OUT	d.) DANGER – HIGH VOLTAGE – KEEP OUT
26. Three squirrel cage induction motors, 25-hp, 20-hp and	
be served by a feeder circuit. Ambient temperature does	s not exceed 30°C. Determine the size of the reeder
conductor. a.) 22 mm ² TW	$a > 14 \text{ mm}^2 \text{THW}$
b.) $22 \text{ mm}^2 \text{ THHN}$	c.) 14 mm² THW d.) 8.0 mm² THWN
27. In PEC 2000, Article 2.10 is	
a.) Branch Circuits	c.) Conductors for General Wiring
b.) Protection Against Lightning	d.) Grounding
28. It shall be permissible to apply a demand factor of t	
fastened in place, other than electric ranges, clothes	
equipment, that are served by the same feeder or service i	
a.) 40% b.) 75%	c.) 80%
b.) 75%	c.) 80% d.) 60%
b.) 75%29. A load of not less than shall be included for each 2-	c.) 80% d.) 60% -wire laundry branch circuits installed.
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA 	c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA b.) 5000 VA 	c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA
 b.) 75% 29. A load of not less than shall be included for each 2-a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall
 b.) 75% 29. A load of not less than shall be included for each 2-a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall
 b.) 75% 29. A load of not less than shall be included for each 2-a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that ladders, stairs, fire escapes, or similar locations. 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall are designed to be opened, doors, porches, balconies,
 b.) 75% 29. A load of not less than shall be included for each 2-a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that ladders, stairs, fire escapes, or similar locations. a.) 1000 mm 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall are designed to be opened, doors, porches, balconies, c.) 760 mm d.) 2100 mm
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that ladders, stairs, fire escapes, or similar locations. a.) 1000 mm b.) 1600 mm 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall are designed to be opened, doors, porches, balconies, c.) 760 mm d.) 2100 mm
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that ladders, stairs, fire escapes, or similar locations. a.) 1000 mm b.) 1600 mm 31. Where a main bonding jumper is a screw only, the screw 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall are designed to be opened, doors, porches, balconies, c.) 760 mm d.) 2100 mm
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that ladders, stairs, fire escapes, or similar locations. a.) 1000 mm b.) 1600 mm 31. Where a main bonding jumper is a screw only, the screw with the screw installed. a.) white b.) gray 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall are designed to be opened, doors, porches, balconies, c.) 760 mm d.) 2100 mm v shall be identified with a finish that shall be visible c.) green d.) black
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that ladders, stairs, fire escapes, or similar locations. a.) 1000 mm b.) 1600 mm 31. Where a main bonding jumper is a screw only, the screw with the screw installed. a.) white b.) gray 32. Which of the following is/are grounding electrode conduct 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall are designed to be opened, doors, porches, balconies, c.) 760 mm d.) 2100 mm v shall be identified with a finish that shall be visible c.) green d.) black tor material?
 b.) 75% 29. A load of not less than shall be included for each 2- a.) 1200 VA b.) 5000 VA 30. Service conductors installed as open conductors or mu have a clearance of not less than from windows that ladders, stairs, fire escapes, or similar locations. a.) 1000 mm b.) 1600 mm 31. Where a main bonding jumper is a screw only, the screw with the screw installed. a.) white b.) gray 32. Which of the following is/are grounding electrode conduct 	 c.) 80% d.) 60% wire laundry branch circuits installed. c.) 1500 VA d.) 2500 VA liticonductor cable without an overall outer jacket shall are designed to be opened, doors, porches, balconies, c.) 760 mm d.) 2100 mm v shall be identified with a finish that shall be visible c.) green d.) black tor material? clad aluminum

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33. For 3-wire dc or single-phase ac; 4-wire, 3-phase; 3-wire 2-phase; or 5-wire, 2-phase systems, a further demand factor of 70 percent shall be permitted for that portion of the unbalanced load in excess of _ a.) 100 A c.) 300 A b.) 200 A d.) 400 A 34. The load for household electric clothes dryer in a dwelling unit(s) shall be _____ or the nameplate rating. c.) 5000 VA a.) 1500 VA b.) 2500 VA d.) 1200 VA 35. An insulated grounded conductor larger than _ _ shall be identified either by continuous white or natural gray outer finish or by three continuous white stripes on other than green insulation along its entire length or at the time of installation by a distinctive white marking at its termination. a.) 8.0 mm² c.) 22 mm² b.) 14 mm² d.) 30 mm² 36. All 125-volt and/or 250-volt singe-phase, 15- and 20- ampere receptacles installed in the location specified below shall have ground-fault-circuit-interrupter protection for personnel: a.) Bathrooms c.) a and b b.) Rooftops d.) none of the above 37. Appliance receptacle outlets installed in a dwelling unit for specific appliances, such as laundry equipment, shall be installed within _____ of the intended location of the appliance. c.) 1600 mm a.) 760 mm d.) 1800 mm b.) 1200 mm 38. Who will accomplish Box No. 5 of the Application for Electrical Permit Form? a.) PEE who signed and sealed plans & specification c.) Person in charge of installation b.) Electrical Contractor d.) Owner/Authorized Representative 39. What is the computed load for two 4-kW mounted ovens and one 8-kw electric range? a.) 12 kVA c.) 16 kVA d.) 12.8 kVA b.) 8.8 kVA 40. Connector fittings shall be used on all lightning conductor at "end-to-end" "tee" or "Y" splices. They shall be attached so as to withstand a pull test of _ a.) 890 N c.) 89 N b.) 980 N d.) 98 N 41. A laundry shop has five 5000 VA electric clothes dryer. What will be the total computed load? c.) 17,500 VA a.) 25,000 VA b.) 20,000 VA d.) 16,450 VA 42. Where buildings exceed three stories or 15 metres in height, overhead lines shall be arranged, where wide will be left either adjacent to the buildings or practicable, so that a clear space (or zone) at least _ beginning not over from them to facilitate the raising of ladders when necessary for firefighting. a.) 1600 mm, 2500 mm c.) 1900 mm, 2500 mm b.) 1900 mm, 2100 mm d.) 1600 mm, 2100 mm 43. Which of the following circuits shall not be grounded? I. Cranes II. Health Care Facilities **III. Electrolytic Cells** c.) III only a.) I only b.) I and III only d.) I, II and III 44. Where the grounding electrode conductor is connected to made electrodes as permitted in section 2.50.3.1(c), that portion of the conductor that is the sole connection to the grounding electrode shall not be required to be larger than _ copper wire. a.) 14 mm² c.) 22 mm² b.) 8.0 mm² d.) 5.5 mm² 45. What is the size of copper grounding electrode conductors for service entrance having two 80 mm² THW copper wire in parallel? Table 2.50.3.17 c.) 22 mm² a.) 8.0 mm² b.) 14 mm² d.) 30 mm² 46. A certain building is being protected by a 1000 AT circuit breaker. What will be the minimum size of equipment grounding conductor for grounding the raceway? Table 2.50.6.13 a.) 38 mm² c.) 60 mm² b.) 50 mm² d.) 80 mm² 47. Sign and outline lighting outlets shall be computed at a minimum of for each required branch circuit. c.) 180 VA a.) 600 VA d.) 1500 VA b.) 1200 VA 48. For show window lighting, a load of not less than ____ shall be included for each linear metre of show window, measured horizontally along its base. a.) 600 VA c.) 180 VA b.) 1200 VA d.) 1500 VA 49. Overhead spans of open conductors and open multiconductor cables of not over 600 volts above finished grade, sidewalks, or from any platform or projection from which they might reached where the voltage does not exceed 150 volts to ground and accessible to pedestrians only. c.) 4600 mm a.) 3100 mm d.) 5500 mm b.) 3700 mm 50. About every 5 years new edition of PEC are issued, incorporating changes approved in the interim period. These changes are considered in the PEC by the use of a.) Italics c.) Parenthesis d.) Vertical Marginal Line b.) Boldface