NABCEP.PVIP.v2022-03-18.q23

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NEW QUESTION: 1
Which of the following MUST be referenced for determining a site's design wind speed?
A. The ASHRAE Handbook_fundamentals in effect
B. The NEC version in effect
C. The jurisdiction's local building code in effect
D. The module manufacture's design wind speed
Answer: A (LEAVE A REPLY)

NEW QUESTION: 2
An installer is hired to troubleshoot a 10-year-old roottop system with open-circuitvoltage of 300V. The ground-fault detection (GFD) device has tripped. The insulation on the exposed source circuit cables has deterlorated with multiple cracks and has no flexibility. Which concern is the MOST likely safely issue when servicing this array?
A. Short-circuit current is present at the PV source-circuit terminals of the disconnect device because of electrical leakage.
B. Cracked insulation has allowed water intrusion that resulted in oxidation of the copper conductors.
C. Ungrounded conductors are conducing current event the ground-fault device has activated.
D. Insulation has become an electrical conductor since it has changed its composition.
Answer: (SHOW ANSWER)

NEW QUESTION: 3
A bank of batteries with capability of supplying 250A and a maximum voltage of 325V is housed in a concrete structure in a very humid location. There is service access alsie between rows of batteries. What is the REQUIRED safety distance between the rows of batteries.

A. 4 ftWhether or not the building is equipped with a dehumidifier or the batteries are insulting surfaces
B. 6 ft.When the floor is insulated and no dehumidifier is installed.
C. 3 ft. when insulted conducted conductors are used between terminals.
D. 3-1/2If the building is equipped with a dehumidifier and the batteries are on insulting surfaces
Answer: C (LEAVE A REPLY)

NEW QUESTION: 4
A PV system was installed in July 2017 under the 2017 NEC. The system has a string inverter located inside a garage on a wall 10 ft, from the outside wall and 1oft, from the ac load center at the point of utility connection.
The PV system has a PV array on the roof. Which of the following represents the PV rapid shutdown system requirement for the controlled PV system conductors associated with this PV array?
A. Within the array boundary and more than 3.ft from the point of entry of the building.
B. More than 1 ft, from the VP array and more than 5 ft. In length the building.
C. More than 10ft, from the PV array or more than 5 ft. in length inside the building
D. More than 1 ft, from the PV array or more than 3 ft, from the point of entry of the building.
Answer: D (LEAVE A REPLY)

NEW QUESTION: 5
An 8 AWG bare copper equipment ground conductor (EGC) is wire tied to the module mounting structure of a commercial rooftop solararray. After a few years of operation, some spots on the EGC begin to turn a green color and appear to be corroding more significantly that other places. What would the MOST likely cause of the problem?
A. Bypass dlode failures inducing current on the EGC
B. Array racking touching the EGC at multiple points
C. A break in the EGC, leaving the array ungrounded
D. Nyton wire ties in contact with the copper wire
Answer: B (LEAVE A REPLY)

NEW QUESTION: 6
A homeowner is concerned that a 6kWdc PV system might be experiencing a performance issue. The homeowner has noticed what appears to be declining production. The installer analyzes the following data acquisition system (DAS) results for each year since the installation:

Month/Year	kWh produced	Peak sun hours measured
June 2014	750	160
June 2015	770	155
June 2016	710	145
June 2017	670	138
Dec 2014	225	45
Dec 2015	212	43
Dec 2016	255	52
Dec 2017	246	51

Given the data, which is the MOST likely conclusion to draw?

A. The system has experienced above-average degradation and a module warranty claim should be explored.

B. There is an intermittent inverter failure that is causing production to be lower than expected and the inverter should be repaired.

C. A combination of normal module degradation combined with cloudy weather has caused lower output in the past few years.

D. There is a problem with the DAS because the peak sun hours do not correlate with production values and the das should be repaired.

Answer: C (LEAVE A REPLY)

NEW QUESTION: 7

A 1. 100 ft, 2 ranch home with cathedralcallingshas a 14 ft. x 41 ft. 8 in , south-facing , composite shingle roof. An engineer has determined that the home's 2 in, x 6 in. on-center roof rafters are strong enough to gold a solar electric system. The system will have 62.25 in. x 32.50 in. modules with a 1-in gap between modules and a standard twin-rillmounting system number of modules that can fit on the roof on under these conditions?

A. 35 modules in landscape

B. 28 modules in portrait

C. 40 modules in landscape

D. 30 modules in portrait

Answer: A (LEAVE A REPLY)

NEW QUESTION: 8

Which insulation color is allowed for a current-carrying roottop dc conductor on a functionally grounded 6kw PV system?

A. White

B. Red

C. Green/yellow

D. Green

Answer: B (LEAVE A REPLY)

NEW QUESTION: 9
A metal condult containing an array circuit with Vmo of 400Vdc is connected to a metal enclosure at the location where the concentric knockouts have been punched by the manufacturer. Which method of attachment should be used?
A. Threaded coupling
B. Sealing locknut
C. Grounding bushing
D. Insulated bushing
Answer: C (LEAVE A REPLY)

NEW QUESTION: 10
When installing an ungrounded PV system with an open-circuit voltage of 450Vdc and a maximum voltage of
3000Vdc which procedures should be followed to establish an electrically safe condition?
A. Apply lockout/tagout devices and install a listed isolation transformer.
B. Verify that disconnecting device blades are closed and test conductors using an adequately rated detector.
C. Mount inverters on nonconductive supports and temporarily ground one dc circuit conductor.
D. Determine possible sources electrical supply an avoid exposure to energized conductors or parts.
Answer: D (LEAVE A REPLY)

NEW QUESTION: 11
The AHJ for enforcement of the NEC has which responsibility?
A. Inspecting installations under the exclusive control of the electric utility
B. Inspecting factory-installed wire and equipment construction methods
C. Approval equipment installation methods for efficiency, convenience, and adequacy for good service
D. Making interpretations of the rules and deciding on approval of equipment and material
Answer: (SHOW ANSWER)

NEW QUESTION: 12
A PV technician is installing a 6.5KWac inverter using a 40A backfed breaker. The single line shows a 200A panelboard with a 200A breaker, but the installer finds that the panelbord actually has a 150A main breaker.
Which of the following is the CORRECT installation option?
A. Install a 30A backfed circuit breaker.
B. Replace the 200A panel with a 150A panel.
C. Complete the installation as noted above.
D. Change the main circuit breaker to a 200A unit.

Answer: C (LEAVE A REPLY)

NEW QUESTION: 13
A tap conduct is to be connected to a feeder supplied by both a utility service source and a utility-interactive inverter source. The feeder utility source is a 400A breaker in a service panel, the inverter overcurrent protection device is rated at 100A, and the inverter continuous output current is 72. The tap conductor that is to be installed will be 17 ft. long. It will be located in a raceway and will supply a subpanel with a 50A main breaker.
What is the MINIMUM required ampacity of the tap conductor?
A. 163
B. 400A
C. 72
D. 50A
Answer: A (LEAVE A REPLY)

NEW QUESTION: 14
A grounding electrode is required at the location of all ground-mounted and pole-mounted PV arrays. Which typeof grounding electrode is NOT permitted for arrays. Which type of the grounding electrode is NOT permitted for array grounding?
A. Metal frame of a building or structure in direct with the earth for 10 ft. or more.
B. Aluminum structural member in direct contact with the earth for 10ft, or more
C. Concrete-encased 4 AWG copper conductor at least 20 ft, in length
D. Metal underground water pipe in direct contact with the earth for 10 ft. or more.
Answer: B (LEAVE A REPLY)

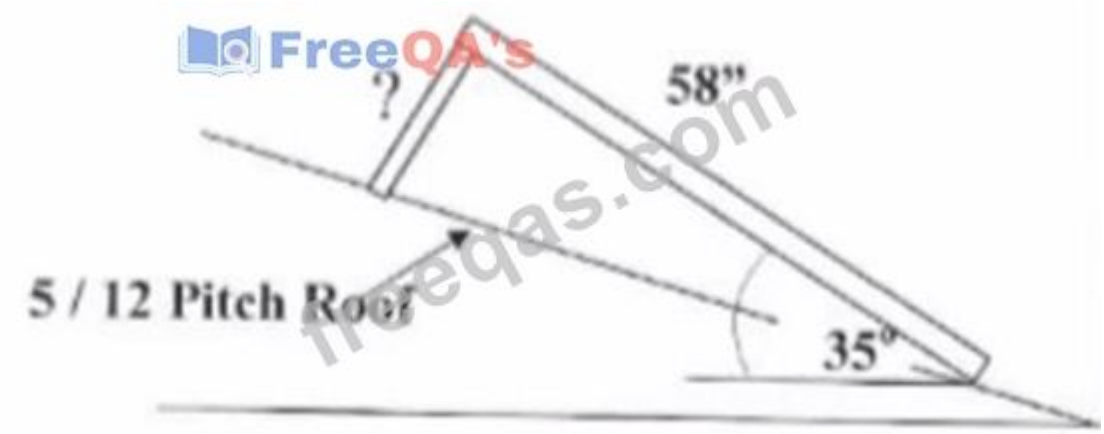
NEW QUESTION: 15
Which of the following tests measures axial uplift whenperforming load testing of driven-pile foundation members
A. Resistance to withdraw (pull-out) force
B. Resistance to twisting
C. Resistance to horizontal movement
D. Resistance to downward (Sinking force
Answer: A (LEAVE A REPLY)

NEW QUESTION: 16
Which of the following voltages should be included on the dc disconnected label to indicate MAXIMUM system voltage?
A. 600 V
B. Non-temperature-corrected V
C. Source circuit V
D. Temperature-corrected V

Answer: D (LEAVE A REPLY)

NEW QUESTION: 17
A grid-connected PV system on a dwelling is producing 30% less power than expected. The conductors from threes strings of modules enter into a 3-pole fused dc disconnect, and each ungrounded conductor is connected to a separate pole. On the inverter side of the switch terminals, the three strings are combined. The dc disconnect switch is opened. The voltages on the array side of theswitchare 440 on string #1, 444V on string #2, and 0V on string #3. The dc disconnect is then closed and the inverter resumes operating, still producing about 30% less power than expected. A clamp-on ammeter is used to measure the dc current of each string of each string of modules where they enter the rooftop junction box. The operating currents of each string are 3.9A for string #1, 3 85A for string #2, and 4.3 A for string #3. What is the MOST likely with the system?
A. String #3 has an open connection and is not contributing any voltage.
B. There is lower module mismatch in string #3 than in string #1 and #2.
C. Positive and negative output conductors of string #3 are faulted together.
D. A ground fault is causing the current from strings #1 and #2 to flow into string #3.
Answer: C (LEAVE A REPLY)

NEW QUESTION: 18
A PV array with 58 in. X 38 in modules in portrait orientation is to be mounted at a 35 tiit angle on a shingle roof that has a 5:12 pitch. Assuming the support leg is attached to the top of the modules and is perpendicular to its face, what is the length of the support leg for the modules?



A. 24.24 in.
B. 40.50 in.
C. 12.73 in.
D. 18.25 in.
Answer: (SHOW ANSWER)

NEW QUESTION: 19
A project is using a PV module with a 25-38dc maximum power voltage range and a single input inverter with an operating windows of 250vdc-450dc. The dwelling the system is to be installed on has a 5:12 roof with a southeastem face that can accommodate 14 modules and southwestern face that can accommodate 10 modules.
What is the MAXIMUM number of modules that can be installed for proper inverter maximum power point tracking?
A. 18
B. 24
C. 20
D. 14
Answer: C (LEAVE A REPLY)

NEW QUESTION: 20
Which is a requirement for designated battery rooms?
A. illumination shall be provided by lightingoutlets controlled by automated means only.
B. must be equipped withpanic hardware and open m the directionof egress.
C. Gas pipe equipment must be constructed and installed for a Hazardous Class I location.
D. Battery cabinets, racks, or trays must have a minimum clearance of 12 in. from any wall.
Answer: (SHOW ANSWER)

NEW QUESTION: 21
A ground resistance measurement on a newly installed grounding electrode indicates a resistance of 130. The earth connection may be improved by connecting the existing electrode to a:
A. Supplemental grounding electrode located 5 ft, away.

B. Buried water piping system using 40 ft. of 2 in. PVC piping located 10 ft awat.
C. Supplement 1/4 in, in thick aluminumplate electrode buried 30 in. down and located 7 ft, away.
D. Supplemental copper plated steel grounding electrode located 8 ft, away.
Answer: D (LEAVE A REPLY)

NEW QUESTION: 22
Which load path connections need to be analyzed when determining live and dead loads on a PV array system installed directly to a metal seam roof?
A. Module to rail to metal seam roof, metal seam roof to top plate system
B. Module to rail, rail to roof sheathing, roof sheathing to wall, wall to base plate/foundation system
C. Rail to metal seam roof, metal seam roof to top plate, top plate to wall system
D. Module to rail to metal seam roof, metal seam roof sheathing/rather system.
Answer: D (LEAVE A REPLY)

NEW QUESTION: 23
When running horizontal 1-1/4 in, electrical metallic tubing (EMT) with compression fittings, what is the MAXIMUM permissible distance between condult supports?
A. 20 ft
B. 3 ft
C. 14 ft
D. 10 ft
Answer: (SHOW ANSWER)