

01	☐ A	☐ B	☐ C	☐ D	☒ E
02	☐ A	☐ B	☐ C	☒ D	☐ E
03	☐ A	☐ B	☐ C	☒ D	☐ E
04	☐ A	☐ B	☐ C	☒ D	☐ E
05	☒ A	☐ B	☐ C	☐ D	☐ E
06	☐ A	☐ B	☒ C	☐ D	☐ E
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13	☐ A	☐ B	☐ C	☒ D	☐ E

14	☒ A	☐ B	☐ C	☐ D	☐ E
15	☐ A	☐ B	☐ C	☒ D	☐ E
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27	☐ A	☐ B	☐ C	☒ D	☐ E
28	☐ A	☐ B	☐ C	☒ D	☐ E
29	☐ A	☐ B	☐ C	☒ D	☐ E
30	☒ A	☐ B	☐ C	☐ D	☐ E
31	☐ A	☐ B	☒ C	☐ D	☐ E
32	☐ A	☐ B	☒ C	☐ D	☐ E
33	☒ A	☐ B	☐ C	☐ D	☐ E
34	☐ A	☐ B	☐ C	☐ D	☒ E
35	☐ A	☐ B	☐ C	☒ D	☐ E
36	☐ A	☒ B	☐ C	☐ D	☐ E
37	☐ A	☐ B	☐ C	☒ D	☐ E
38	☐ A	☐ B	☐ C	☐ D	☒ E
39	☒ A	☐ B	☐ C	☐ D	☐ E

PRACTICE QUESTIONS

CONNECTICUT OCCUPATIONAL TRADES

WZ982GYG

CT ST-1 Solar

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for CONNECTICUT OCCUPATIONAL TRADES WZ982GYG , each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, WZ982GYG
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

MULTIPLE CHOICE

Which of the following are core components of a typical grid-tied photovoltaic (PV) system? (Choose two.)

- ☒ **A** PV modules (solar panels)
- ☐ **B** Condensing boiler
- ☒ **C** Grid-tie inverter
- ☐ **D** Hydraulic ram pump

ANSWER A • C

WHY A grid-tied PV system requires PV modules to generate DC power and a grid-tie inverter to convert that DC power into AC power synchronized with the utility. A condensing boiler is a heating appliance, and a hydraulic ram pump is a mechanical water-pumping device — neither belongs in a PV system.

QUESTION 2

MULTIPLE CHOICE

Which of the following are recognized hazards that a ST-1 licensed solar worker must address when working on a rooftop installation? (Choose two.)

- ☒ **A** Fall hazards from unprotected edges
- ☐ **B** Lead contamination in potable water lines
- ☒ **C** Live DC voltage present at PV modules in daylight
- ☐ **D** Naturally occurring asbestos in soil

ANSWER A • C

WHY OSHA-recognized rooftop hazards for solar work include falls from unprotected edges and exposure to live DC conductors — PV modules produce voltage whenever they are exposed to light, even at low levels. Lead in potable lines and naturally occurring asbestos in soil are unrelated to typical rooftop solar installation hazards.

QUESTION 3

TRUE FALSE

Personal fall arrest systems used during rooftop solar installation must be inspected for damage and wear before each use.

☒ **A** True☐ **B** False**ANSWER A**

WHY True. OSHA requires that personal fall arrest equipment be inspected by the worker before each use to identify defects such as frayed straps, damaged hardware, or deteriorated webbing that could compromise the system during a fall.

QUESTION 4

SINGLE CHOICE

What is the primary function of the inverter in a grid-tied photovoltaic system?

☐ **A** To store excess DC electricity in batteries for nighttime use☒ **B** To convert DC electricity produced by the modules into AC electricity synchronized with the utility grid☐ **C** To mechanically track the sun across the sky to maximize irradiance☐ **D** To step up the array voltage so that modules can be wired in series**ANSWER B**

WHY The inverter's primary job is DC-to-AC conversion and synchronization with the utility grid's voltage and frequency. Battery storage, tracking, and series-string voltage behavior are separate functions handled by other components or by module wiring choices, not by the inverter itself.

QUESTION 5

SINGLE CHOICE

According to the National Electrical Code, where must the PV system disconnecting means be located?

- ☐ A Inside a locked attic space only accessible to the installer
- ☐ B On the roof directly adjacent to the array, regardless of accessibility
- ☒ C In a readily accessible location, either outside the building or inside nearest the point of entry of the system conductors
- ☐ D Inside the inverter enclosure only, with no external disconnect required

ANSWER C

WHY NEC Article 690 requires the PV disconnect to be in a readily accessible location, typically outside the building or inside nearest the point of conductor entry, so that first responders and utility personnel can quickly isolate the array. Attic-only or roof-only placements do not satisfy the readily accessible requirement.

QUESTION 6

SINGLE CHOICE

When assessing a site for a rooftop photovoltaic array, which factor most directly limits the annual energy production of the array?

- ☐ A The color of the homeowner's roof shingles
- ☒ B Shading of the array during peak sun hours from nearby trees or obstructions
- ☐ C The interior paint color of the home
- ☐ D The age of the home's existing electrical service panel

ANSWER B

WHY Shading during peak sun hours dramatically reduces the irradiance reaching the modules and therefore the array's annual energy yield. Roof shingle color, interior paint, and panel age have only minor or no direct impact on annual PV production compared to shading.

QUESTION 7 SINGLE CHOICE

Which statement about working on energized PV circuits is correct?

- ☐ A PV modules become completely safe to touch once covered with an opaque blanket
- ☒ B PV modules can still produce hazardous DC voltage in daylight even when disconnected from the inverter
- ☐ C PV conductors can only be de-energized by opening the AC disconnect on the inverter

ANSWER B

WHY PV modules are current-producing devices that generate voltage whenever they are illuminated, regardless of whether the inverter is connected. Even partial daylight or shading can produce hazardous DC voltage at the module terminals and along string wiring. Covering a module with a blanket does not eliminate the hazard, and AC disconnects do not de-energize the DC side of the array.

QUESTION 8 SINGLE CHOICE

Under the National Electrical Code, what is the intent of the array rapid shutdown requirement?

- ☐ A To allow the inverter to shut down the entire building's electrical service during a fire
- ☒ B To reduce voltage in array and PV system conductors to safe levels at the array boundary quickly so first responders are not exposed to lethal DC voltage
- ☐ C To shut down the array during nighttime to save energy
- ☐ D To disconnect only the AC output of the inverter from the utility grid

ANSWER B

WHY NEC 690.12 rapid shutdown is a life-safety provision intended to reduce conductor voltages at and inside the array boundary quickly after activation, so that firefighters and other first responders are not exposed to energized DC conductors on a burning or compromised rooftop.

QUESTION 9

SINGLE CHOICE

Which item of personal protective equipment (PPE) is required for workers performing rooftop solar installations at heights of 6 feet or more above a lower level?

- ☐ A Class D hard hat only
- ☐ B Hearing protection only
- ☒ C Fall protection such as a harness and lanyard anchored to a qualified anchor point
- ☐ D Respiratory protection for silica dust

ANSWER C

WHY OSHA fall protection standards require a personal fall arrest system (or other compliant fall protection) for workers exposed to falls of 6 feet or more to a lower level. A Class D hard hat addresses impact hazards, hearing protection addresses noise, and respiratory protection addresses airborne contaminants — none of these alone address the fall hazard on a rooftop.