Started on	Saturday, 15 February 2025, 1:34 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:34 AM
Time taken	9 secs
Grade	**0.00** out of 10.00 (**0**%)

Question 1

Not answered

Marked out of 8.00

Identify the typical sections in a final site survey report from the descriptions of their contents.

Address, coordinates, boundaries and ownership of the site	Choose...
Details of proposed PV system installation options	Choose...
Details of energy services and infrastructure at the site	Choose...
Details of applicable permits, approvals, regulations and standards	Choose...
Current energy needs and usage at the site	Choose...
Details of proposed battery storage installation options	Choose...
Scope and objectives of the survey	Choose...
Survey methods, sources and types of data to be collected	Choose...

Your answer is incorrect.

The correct answer is:
Address, coordinates, boundaries and ownership of the site → Site Details,

Details of proposed PV system installation options → Photovoltaic (PV) Assessment,

Details of energy services and infrastructure at the site → Existing Electrical infrastructure,

Details of applicable permits, approvals, regulations and standards → Regulatory Requirements,

Current energy needs and usage at the site → Energy Assessment,

Details of proposed battery storage installation options → Battery Storage Assessment,

Scope and objectives of the survey → Overview,

Survey methods, sources and types of data to be collected → Methodology

Question 2

Not answered

Marked out of 2.00

Identify whether the following statements are true or false in relation to completion of the final site survey report.

A copy of the final site survey report should be provided to the client.	✖
Grid-connect options specified in the report should be explained to the client.	✖

Refer to content page 6.3

Started on	Saturday, 15 February 2025, 1:33 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:33 AM
Time taken	18 secs
Grade	**0.00** out of 35.00 (**0**%)

Question 1

Not answered

Marked out of 6.00

Match each of the technical solar terms to the correct definition.

The quantity of solar energy available at a surface over a given time period	Choose...
The average hours of sunlight received at a location for a given time period	Choose...
The angle between the horizontal plane and the plane of a photovoltaic module	Choose...
A coordinate indicating the north-south position of a point on the earth	Choose...
A coordinate indicating the east-west position of a point on the earth	Choose...
The quantity of solar power available at a surface at a given instant in time	Choose...

Your answer is incorrect.

Refer to content page 6.2

The correct answer is:
The quantity of solar energy available at a surface over a given time period → Irradiation,

The average hours of sunlight received at a location for a given time period → Sunshine hours,

The angle between the horizontal plane and the plane of a photovoltaic module → Tilt angle,

A coordinate indicating the north-south position of a point on the earth → Latitude,

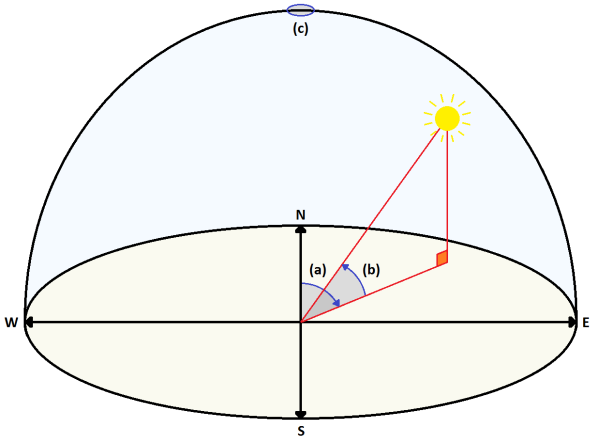
A coordinate indicating the east-west position of a point on the earth → Longitude,

The quantity of solar power available at a surface at a given instant in time → Irradiance

Question 2

Not answered

Marked out of 3.00



In the diagram above:

- (a) is the ✖ .
- (b) is the ✖ .
- (c) is the ✖ .

The azimuth angle is the angle on the horizontal plane between the sun and true north.

The altitude angle is the angle between the horizon and the sun.

The zenith is the point directly overhead.

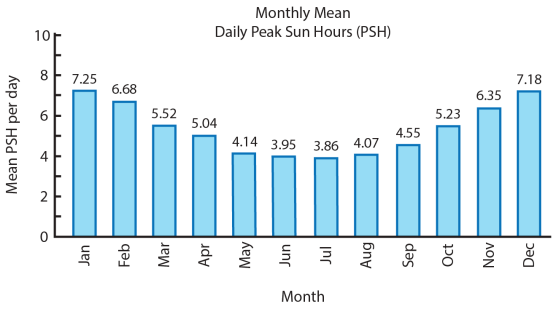
Refer to content page 6.2 for further guidance.

Question 3

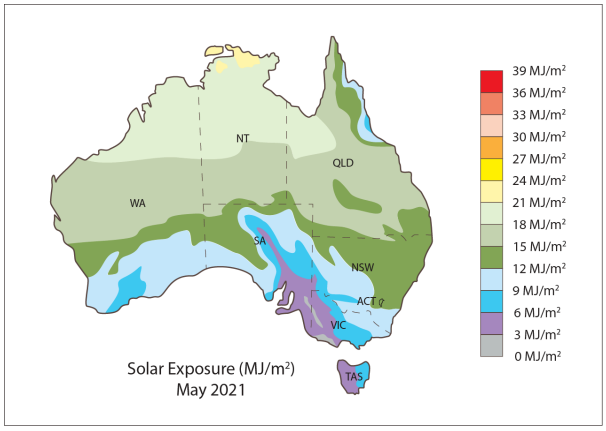
Not answered

Marked out of 3.00

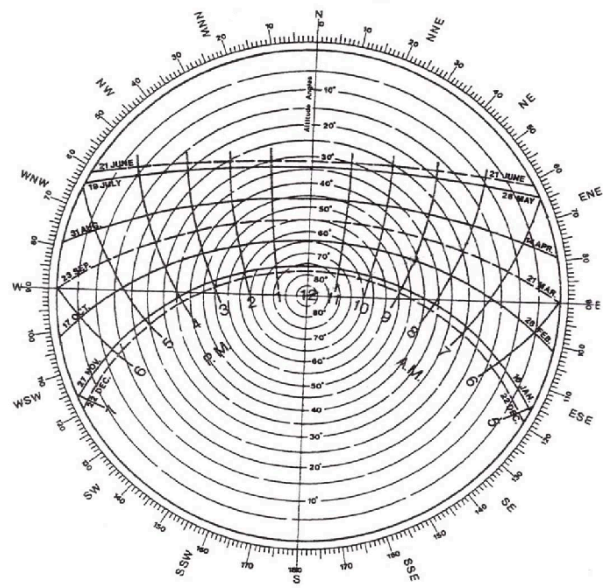
Identify each of the following types of solar radiation data.



Choose...



Choose...

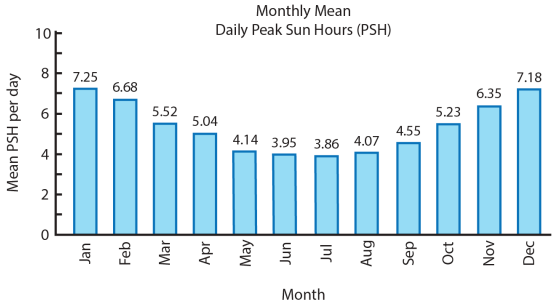


Choose...

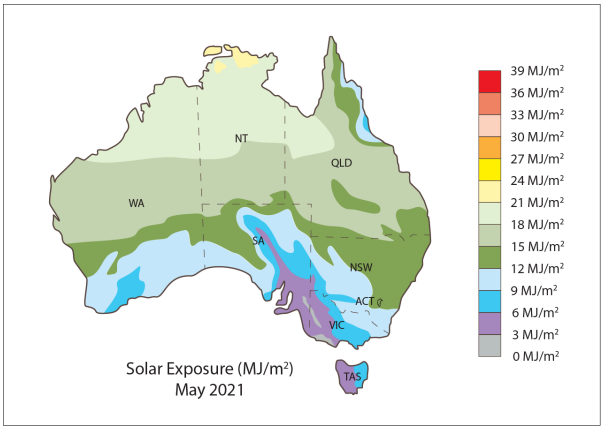
Your answer is incorrect.

Refer to content page 6.2

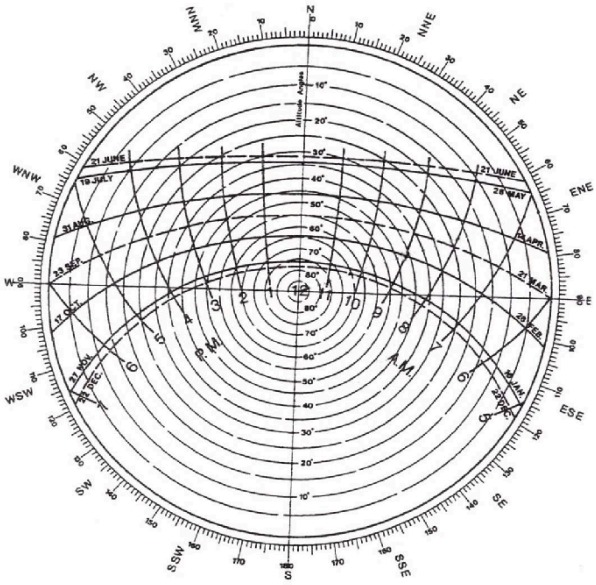
The correct answer is:



→ Irradiation chart,



→ Solar contour map,

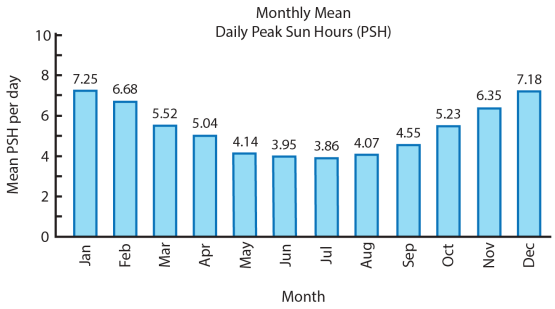


→ Sun path diagram

Question 4

Not answered

Marked out of 4.00



Interpret the irradiation chart to identify the average irradiation at that location for:

a) The summer months (December, January and February).

b) The winter months (June, July and August).

Provide each answer in PSH, correctly rounded to three significant figures.

Summer Average Irradiation: ✖ PSH

Winter Average Irradiation: ✖ PSH

Working for (a)

7.18 + 7.25 + 6.68 = 21.11

21.11/3 = 7.036 = 7.04 PSH

Working for (b)

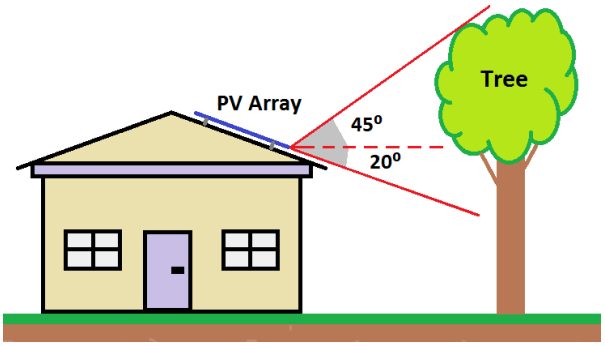
3.95 + 3.86 + 4.07 = 11.88

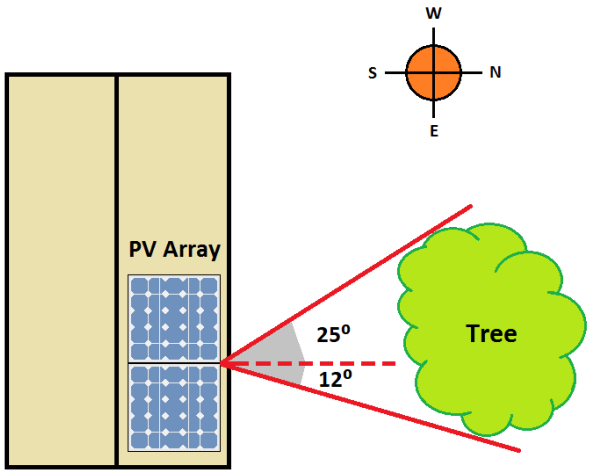
11.88/3 = 3.96 PSH

Question 5

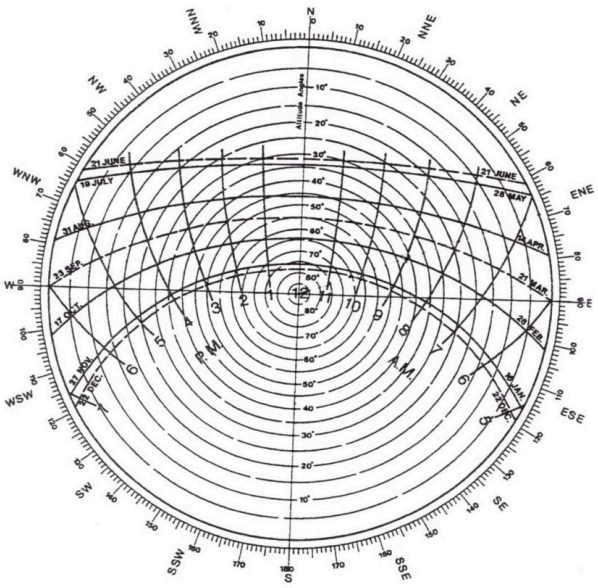
Not answered

Marked out of 4.00





The array pictured above is installed at latitude 35⁰. The customer regularly maintains the tree, keeping it at its current size.

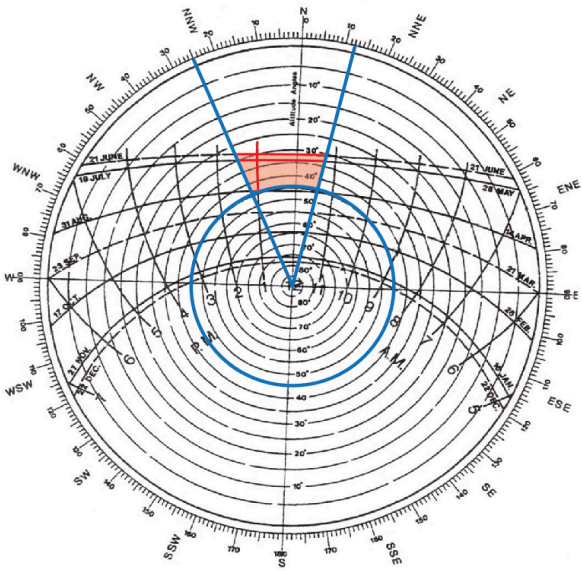


Latitude 35⁰ south

Use the sun path diagram to determine whether the following statements are true or false.

The array will be shaded by the tree from 12 p.m. till 1 p.m. on the 1st of June.	✖

The array will be shaded by the tree at 11 a.m. on the 8th of April.	✖
The array will be shaded by the tree from 12:30 p.m. till 1:30 p.m. on the 11th of September.	✖
The array will be shaded at 1 p.m. on the 27th of July.	✖



Latitude 35° south

Refer to content page 6.2 for further guidance.

Question 6

Not answered

Marked out of 1.00

The ideal orientation for a PV array in Australia, is to be facing ✖ .

Refer to content page 6.2

Question 7

Not answered

Marked out of 4.00

Which of the following factors will directly affect the energy output of a fixed PV array?

- [ ] Orientation
- [ ] Aesthetics
- [ ] Tilt angle
- [ ] Cloud cover
- [ ] Shading

Your answer is incorrect.

The orientation and tilt angle will affect the irradiance of the modules due to the solar window at the given latitude.

Shading and cloud cover will reduce the amount of direct incident radiation reaching the panels.

The aesthetic appearance of the panels will not affect the energy output.

Refer to content page 6.2 for more information.

The correct answers are:
Orientation,

Tilt angle,

Cloud cover,

Shading

Question 8

Not answered

Marked out of 5.00

The solar radiation arriving at the surface of a particular fixed PV panel can vary throughout the year as a result of:

- [ ] Seasonal change
- [ ] The PV panel power rating
- [ ] Voltage drop in the d.c. cabling
- [ ] Shading
- [ ] Soiling
- [ ] Cloud cover
- [ ] The time of day
- [ ] Latitudinal variations

Your answer is incorrect.

Seasonal changes will result in variations in the angle of incident solar radiation on the panel.

Shading and soiling will act as a barrier to solar radiation arriving at the surface of the panel.

Cloud cover will reduce the amount of direct solar radiation arriving at the panel.

The quantity and angle of incidence of solar radiation will vary throughout each day as the sun moves through the solar window.

Refer to content page 6.2 for more information.

The correct answers are: Seasonal change, Shading, Soiling, Cloud cover, The time of day

Question 9

Not answered

Marked out of 5.00

Solar tracking [ ] ✖ array performance, thereby [ ] ✖ energy production. However solar tracking systems also:

- Cost [ ] ✖ than fixed systems.
- Require [ ] ✖ maintenance.
- Consumes [ ] ✖ to operate.

Refer to content page 6.2

Started on	Saturday, 15 February 2025, 1:32 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:32 AM
Time taken	11 secs
Grade	**0.00** out of 32.00 (**0**%)

Question 1

Not answered

Marked out of 5.00

When surveying a site to determine suitability for a grid-connected PV array:

- The longitude, latitude and irradiance should be confirmed by ✖ .
- The ✖ the array may be exposed to should be checked reviewing climate data for the location.
- The roof should be checked for ✖ , available space, pitch and orientation, and type of ✖ .
- Potential locations for inverters and balance of system (BoS) equipment should be identified by ✖ .

Refer to content page 6.1

Question 2

Not answered

Marked out of 7.00

When surveying a site to determine suitability for a grid-connected battery storage system:

- The energy usage patterns and [ ] ✖ for the site should be identified by reviewing [ ] ✖ or similar data.
- Potential [ ] ✖ for batteries and balance of system (BoS) equipment should be identified by walking through and [ ] ✖ the site.
- Consideration should be given to the ease of [ ] ✖ to equipment to enable safe operation and [ ] ✖ .
- Any local [ ] ✖ should be determined by consulting the relevant authorities.

Refer to content page 6.1

Question 3

Not answered

Marked out of 6.00

Which of the following are economic factors that should be considered as part of a site survey?

- [ ] The client's budget
- [ ] Government incentives and rebates
- [ ] Import and export tariffs
- [ ] Projected lifespan of the PV or battery system
- [ ] Upfront costs
- [ ] Payback period
- [ ] Proximity of the site to a main road
- [ ] Energy usage patterns
- [ ] Average wind speed
- [ ] Local wildlife and biodiversity

Your answer is incorrect.

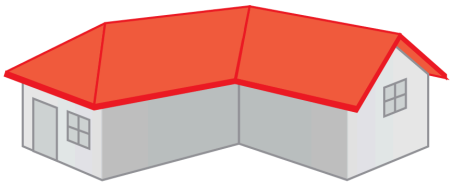
The correct answers are: The client's budget, Government incentives and rebates, Import and export tariffs, Projected lifespan of the PV or battery system, Upfront costs, Payback period

Question 4

Not answered

Marked out of 4.00

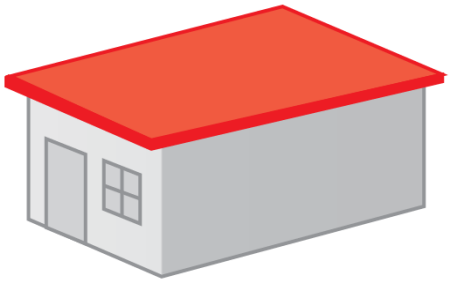
Identify the common roof types pictured below.



Choose...

Choose...

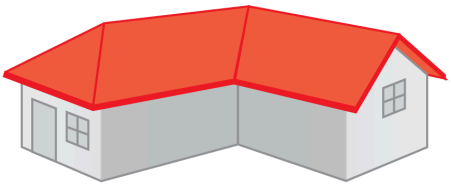
Choose...



Choose...

Your answer is incorrect.

The correct answer is:



→ Hip and valley roof,

→ Hip roof,

→ Gable roof,

→ Flat roof

Question 5

Not answered

Marked out of 3.00

Identify whether the following statements are true or false in relation to rooftop safety practices in the solar industry.

Weak points and deteriorated roof structures increase the risk of falling.	✖
Prior to commencing work it's important to check the physical layout and condition of the roof.	✖
A suitable clearance to maintain between workers and a live low voltage service is 300 mm.	✖

Refer to content page 6.1 and/or Industry Codes of Practice for further guidance.

Question 6

Not answered

Marked out of 3.00

Identify whether the following are active of passive fall protection.

Safety netting	✖
Safety harness, lanyard and anchor points	✖
Guard rails and safety gates	✖

Refer to content page 6.1 and/or Industry Codes of Practice for further guidance.

Question 7

Not answered

Marked out of 4.00

Identify the low voltage safe approach distances recommended by Safe Work Australia.

Handling lengths of HDPVC conduits	Choose...
Handling metal scaffolding components	Choose...
Hand-held tools	Choose...
Operating an EWP	Choose...

Your answer is incorrect.

Refer to content page 6.1 for further guidance.

The correct answer is:
Handling lengths of HDPVC conduits → 1.5 m,

Handling metal scaffolding components → 4.0 m,

Hand-held tools → 0.5 m,

Operating an EWP → 3.0 m

Started on	Saturday, 15 February 2025, 1:32 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:32 AM
Time taken	11 secs
Grade	**0.00** out of 26.00 (**0**%)

Question 1

Not answered

Marked out of 4.00

Identify the purpose of the energy consumed by each of the following devices.

Televisions and media players	Choose...
Reverse cycle air conditioners	Choose...
Ovens, stoves and cooktops	Choose...
Dishwashers	Choose...

Your answer is incorrect.

Refer to content page 5.2

The correct answer is:
Televisions and media players → Entertainment,

Reverse cycle air conditioners → Climate control,

Ovens, stoves and cooktops → Cooking,

Dishwashers → Cleaning

Question 2

Not answered

Marked out of 4.00

There are a number of general techniques for improving the energy efficiency of a given premises, including:

- ✖ the use or need for energy consuming equipment.
- ✖ the amount of energy needed to operate equipment.
- ✖ energy losses and wastage.
- ✖ reliance on the Electricity Network, e.g. through the use of PV power systems.

Refer to content page 5.2

Question 3

Not answered

Marked out of 6.00

The three key methods for undertaking an energy usage assessment at a given site include:

- ✖ the client about their energy usage ✖ .
- ✖ energy usage data, such as previous ✖ , to identify peak demands and usage across different ✖ .
- If you are unable to access existing data, it may be necessary to ✖ over a period of time.

Refer to content page 5.2

Question 4

Not answered

Marked out of 5.00

Which of the following factors will affect the amount of energy consumed at a given premises?

- The normal use of the premises
- The local climate
- The building design
- The efficiency of the appliances used within the premises
- The practices and awareness of the consumers

Your answer is incorrect.

Refer to content page 5.2

The correct answers are:
The normal use of the premises,

The local climate,

The building design,

The efficiency of the appliances used within the premises,

The practices and awareness of the consumers

Question 5

Not answered

Marked out of 3.00

Identify how each of the following techniques will improve the overall energy efficiency of a customer's lighting circuit.

- Installing skylights to improve natural lighting will reduce ✖ .
- Installing sensors and timers to automatically control the circuit will reduce ✖ .
- Replacing the incandescent lamps with LED lamps will reduce ✖ .

Refer to content page 5.2

Question 6

Not answered

Marked out of 2.00

Identify how each of the following techniques can improve the overall energy efficiency of a customer's reverse cycle air conditioning system.

- Replacing the air conditioner with a more energy efficient model will reduce ✖ .
- Installing thermal insulation will reduce ✖ .

Refer to content page 5.2

Question 7

Not answered

Marked out of 2.00

Identify how each of the following techniques will improve the overall energy efficiency of a customer's conventional water heating circuit.

- Having shorter showers will reduce ✖ .
- Replacing the conventional water heater with a solar water heater will reduce ✖ .

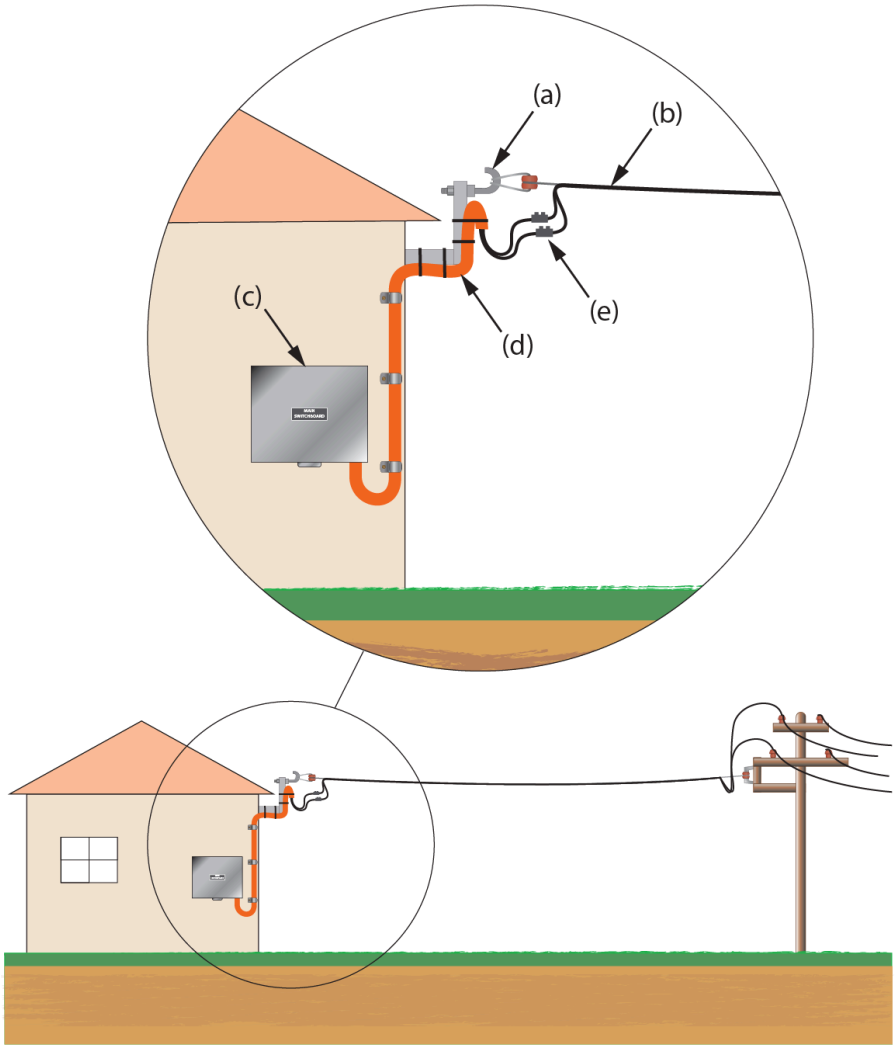
Refer to content page 5.2

Started on	Saturday, 15 February 2025, 1:31 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:31 AM
Time taken	14 secs
Grade	**0.00** out of 36.00 (**0**%)

Question 1

Not answered

Marked out of 5.00



The diagram above shows the basic arrangement of an overhead mains supply. Identify the different parts indicated on the diagram.

(e) Choose...

(d) Choose...

(b) Choose...

(a) Choose...

(c) Choose...

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:
(e) → Insulation piercing connectors (IPCs),

(d) → Heavy-duty conduit,

(b) → Aerial cables,

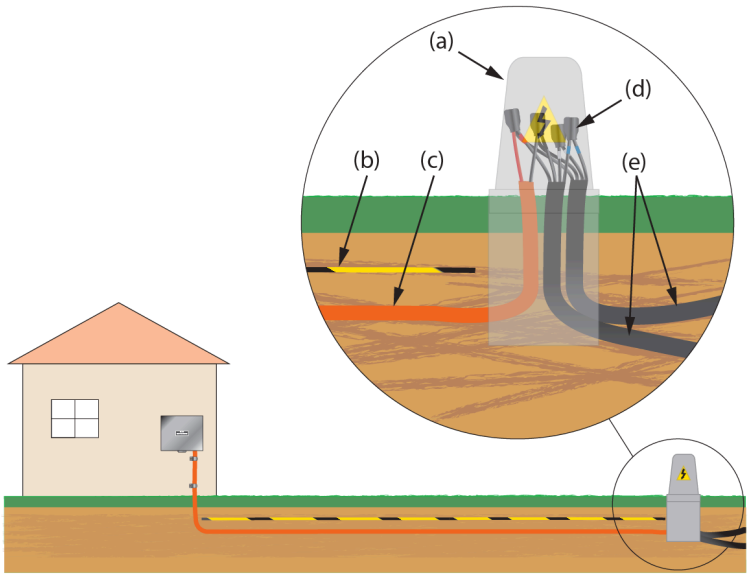
(a) → Anchor point,

(c) → Main switchboard

Question 2

Not answered

Marked out of 5.00



The diagram above shows the basic arrangement of an underground mains supply. Identify the different parts indicated on the diagram.

(c) Choose...

(b) Choose...

(d) Choose...

(e) Choose...

(a) Choose...

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:
(c) → Heavy-duty conduit,

(b) → Marker tape,

(d) → Cable joints,

(e) → Distributor mains cables,

(a) → Service pillar

Question 3

Not answered

Marked out of 2.00

In Australia residential installations are provided with one of the following two electrical services:

- Single phase [ ] ✖ V supply.
- Three phase [ ] ✖ V supply.

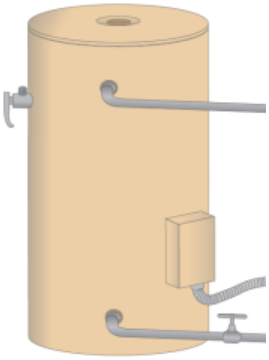
Refer to content page 5.1

Question 4

Not answered

Marked out of 4.00

Identify the purpose of each of the following types of common residential appliances.



Choose...

Choose...

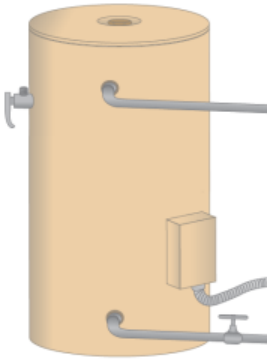
Choose...

Choose...

Your answer is incorrect.

Refer to content page 5.1

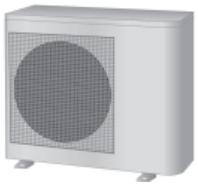
The correct answer is:



→ Water heating,

→ Cooking,

→ Lighting,



→ Air conditioning

Question 5

Not answered

Marked out of 3.00

The three key methods for evaluating the electrical infrastructure at a given site include:

- Consulting ✖ about the infrastructure at the site.
- Checking ✖ and architectural drawings.
- Walking through the site to ✖ infrastructure.

Refer to content page 5.1

Question 6

Not answered

Marked out of 3.00

Which of the following information would you be able to identify from a site plan?

- Location of underground electrical service lines
- Location of switchboards
- Location of metering
- Condition of the roof structure
- Average daily energy usage

Your answer is incorrect.

Refer to content page 5.1

The correct answers are: Location of underground electrical service lines, Location of switchboards, Location of metering

Question 7

Not answered

Marked out of 4.00

Which of the following information should be documented when evaluating the existing electrical infrastructure at a site?

- [ ] Number of supply phases
- [ ] Consumer mains cable size
- [ ] Locations of switchboards
- [ ] Details of existing PV arrays
- [ ] Occupation of the client
- [ ] Average daily energy usage

Your answer is incorrect.

Refer to content page 5.1

The correct answers are:
Number of supply phases,

Consumer mains cable size,

Locations of switchboards,

Details of existing PV arrays

Question 8

Not answered

Marked out of 3.00

From the options provided, identify the typical use for each of the following Australian Standard symbols commonly used on site plans.

Choose...

Choose...

Choose...

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:

→ Switchboard,

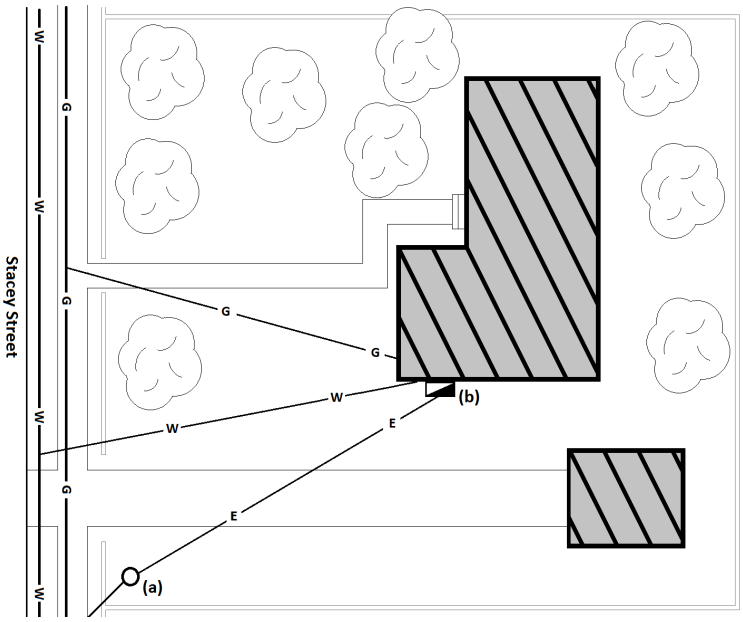
→ Gas service,

→ Electrical service

Question 9

Not answered

Marked out of 4.00



Identify whether the following statements are true or false in relation to the information provided on the site plan above.

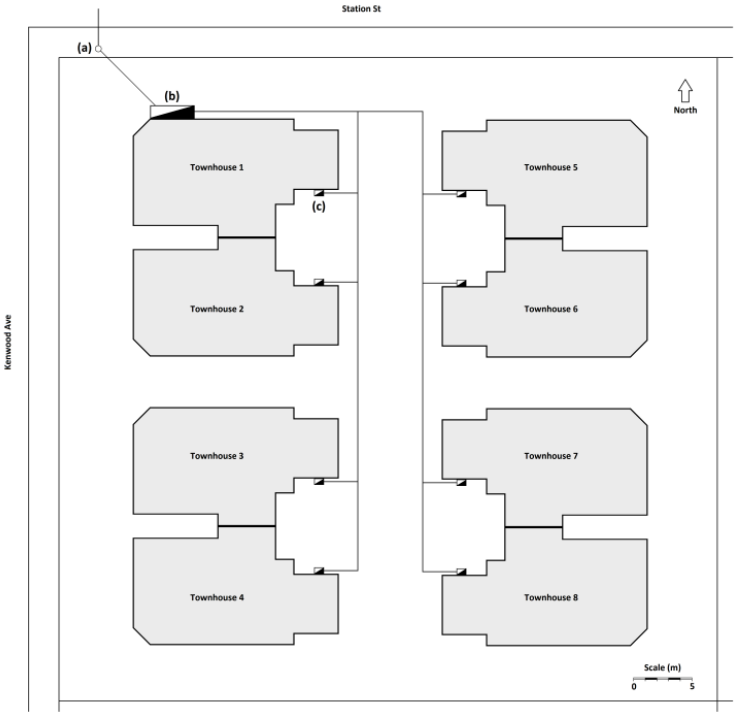
The main switchboard is indicated by the letter (b).	✖
The point of supply is indicated by the letter (a).	✖
The consumer's mains are indicated by the straight line marked intermittently with the letter 'W'.	✖
The installation is provided with a gas service.	✖

Refer to content page 5.1

Question 10

Not answered

Marked out of 3.00



In relation to the site plan shown above:

- (a) represents ✖ .
- (b) represents ✖ .
- (c) represents ✖ .

Refer to content page 5.1

Started on	Saturday, 15 February 2025, 1:30 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:30 AM
Time taken	10 secs
Grade	**0.00** out of 25.00 (**0**%)

Question 1

Not answered

Marked out of 5.00

Which of the following physiological effects can be caused by an electric shock?

- [ ] Burns
- [ ] Poisoning
- [ ] Breathing difficulties
- [ ] Lung cancer
- [ ] Muscular contraction
- [ ] Ventricular fibrillation
- [ ] Asphyxiation

Your answer is incorrect.

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

The correct answers are:
Burns,

Breathing difficulties,

Muscular contraction,

Ventricular fibrillation,

Asphyxiation

Question 2

Not answered

Marked out of 4.00

The main factors that affect the [ ] ✖ of an electric shock are:

- The [ ] ✖ of exposure.
- The magnitude of [ ] ✖ .
- The [ ] ✖ the current takes through the body.

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

Question 3

Not answered

Marked out of 4.00

Identify the values of current that produce the physiological effects described below.

Mild startling and let-go reaction, but no serious physiological effects.	Choose...
Severe burns, ventricular fibrillation, cardiac arrest and asphyxiation.	Choose...
Muscular contraction, difficulty breathing, disturbance to heart rhythms and mild burns	Choose...
Usually below the level of perception.	Choose...

Your answer is incorrect.

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

The correct answer is:
Mild startling and let-go reaction, but no serious physiological effects. → 0.5 mA to 10 mA,

Severe burns, ventricular fibrillation, cardiac arrest and asphyxiation. → 30 mA to 250 mA,

Muscular contraction, difficulty breathing, disturbance to heart rhythms and mild burns → 10 mA to 30 mA,

Usually below the level of perception. → 0 mA to 0.5 mA

Question 4

Not answered

Marked out of 5.00

Electrical accidents are commonly caused by:

- inadequate understanding of ✖ .
- overconfidence and ✖ .
- being in a ✖ .
- damaged ✖ .
- ✖ electrical installations.

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

Question 5

Not answered

Marked out of 7.00

Put the following steps in the correct order to identify a suitable procedure for the safe isolation of a circuit.

Step 1	✖
Step 2	✖
Step 3	✖
Step 4	✖
Step 5	✖
Step 6	✖
Step 7	✖

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

Started on	Saturday, 15 February 2025, 1:30 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:30 AM
Time taken	10 secs
Grade	**0.00** out of 12.00 (**0**%)

Question 1

Not answered

Marked out of 6.00

Match the risks posed by each of the following six hazards, commonly found in an electrical workplace.

Working at heights	Choose...
Asbestos	Choose...
Manual handling	Choose...
Industrial noise	Choose...
UV radiation	Choose...
Electricity	Choose...

Your answer is incorrect.

Refer to content page 4.3 and State/Territory health and safety regulations for further guidance.

The correct answer is:
Working at heights → Falls resulting in serious injuries or death,

Asbestos → Respiratory diseases,

Manual handling → Sprains and strains,

Industrial noise → Hearing loss and tinnitus,

UV radiation → Sunburn, sunstroke, skin cancer,

Electricity → Electric shock and burns

Question 2

Not answered

Marked out of 6.00

Identify the most suitable control measure, from the options provided, to reduce the level of risk associated with each hazard.

UV radiation	Choose...
Working at heights	Choose...
Manual handling	Choose...
Electricity	Choose...
Industrial noise	Choose...
Asbestos	Choose...

Your answer is incorrect.

Refer to content page 4.3 and State/Territory health and safety regulations for further guidance.

The correct answer is:
UV radiation → Sunscreen, hat, sunglasses, protective clothing,

Working at heights → Specific training and using safety harnesses,

Manual handling → Correct lifting techniques,

Electricity → Safe isolation of the supply,

Industrial noise → Wearing ear plugs and/or ear muffs,

Asbestos → Safe removal

Started on	Saturday, 15 February 2025, 1:29 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:29 AM
Time taken	9 secs
Grade	**0.00** out of 16.00 (**0**%)

Question 1

Not answered

Marked out of 4.00

Place the steps into the correct order to correctly identify the process of risk management.

Step 1 Choose...

Step 2 Choose...

Step 3 Choose...

Step 4 Choose...

Your answer is incorrect.

Refer to content page 4.2 and State/Territory health and safety regulations for further guidance.

The correct answer is:
Step 1 → Identify the hazards,

Step 2 → Assess the risks,

Step 3 → Control the risks,

Step 4 → Review the risk management plan

Question 2

Not answered

Marked out of 6.00

Place the hierarchy of controls into the correct order, so that number 1 is the most preferred method and number 6 is the least preferred method of dealing with risks and hazards in the workplace.

1 Choose...

2 Choose...

3 Choose...

4 Choose...

5 Choose...

6 Choose...

Your answer is incorrect.

The correct answer is:
1 → Elimination,

2 → Substitution,

3 → Isolation,

4 → Engineering Controls,

5 → Administrative Controls,

6 → Personal Protective Equipment

Question 3

Not answered

Marked out of 6.00

The process of risk assessment must be documented to clearly indicate:

- The location and ✖ .
- Who ✖ the risk assessment.
- The ✖ that were identified.
- The ✖ posed by each hazard.
- How each risk is to be ✖ .
- Who is ✖ for implementing risk controls.

Refer to content page 4.2 and State/Territory health and safety regulations for further guidance.

Started on	Saturday, 15 February 2025, 1:28 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:29 AM
Time taken	11 secs
Grade	**0.00** out of 21.00 (**0**%)

Question 1

Not answered

Marked out of 3.00

The underlying principles of workplace health and safety are to:

- Ensure that ✖ are safe.
- Ensure that workers are able to ✖ .
- Reduce ✖ in the workplace.

Refer to topic content page 4.1 and State/Territory health and safety regulations for further guidance.

Question 2

Not answered

Marked out of 4.00

The primary ✖ of workplace health and safety ✖ and regulations, is to provide a ✖ for safeguarding the health and safety of ✖ within a workplace.

The primary objective of workplace health and safety legislation and regulations is to safeguard the health and safety of all persons within a workplace. This includes employers, workers, volunteers, and any other person who may enter the worksite.

Refer to topic content page 4.1 and State/Territory health and safety regulations for further guidance.

Question 3

Not answered

Marked out of 5.00

Under workplace health and safety legislation and regulations, employers have a duty of care to:

- consult the workers about health and safety matters
- provide workers with safe systems of work
- take care that their acts or omissions don't put the health and safety of others at risk
- remove all hazards from the working environment
- prevent workers from working unsafely
- provide workers with information, training, instruction, and supervision to enable them to work safely
- provide a safe working environment

Your answer is incorrect.

Refer to the WHS Act 2011 Section 19 (in applicable jurisdictions).

Refer to content page 4.1 and State/Territory health and safety regulations for further guidance.

The correct answers are: consult the workers about health and safety matters, provide workers with safe systems of work, take care that their acts or omissions don't put the health and safety of others at risk, provide workers with information, training, instruction, and supervision to enable them to work safely, provide a safe working environment

Question 4

Not answered

Marked out of 3.00

Under workplace health and safety legislation and regulations, workers have a duty of care to:

- [ ] take care of their own health and safety in the workplace
- [ ] follow any reasonable instructions from the employer
- [ ] ensure that the workplace is free from hazards prior to commencing work
- [ ] take care that their acts or omissions don't put the health and safety of others at risk
- [ ] ensure that the employer complies with their health and safety obligations
- [ ] develop and implement safe systems of work

Your answer is incorrect.

Refer to the WHS Act 2011 Section 28 (in applicable jurisdictions).

Refer to content page 4.1 and State/Territory health and safety regulations for further guidance.

The correct answers are: take care of their own health and safety in the workplace, follow any reasonable instructions from the employer, take care that their acts or omissions don't put the health and safety of others at risk

Question 5

Not answered

Marked out of 1.00

Which of the following Australian Standards specifies the requirements for working safely on and near low voltage electrical installations and equipment?

- ( ) AS/NZS 4836
- ( ) AS/NZS 3001
- ( ) AS/NZS 2076
- ( ) AS/NZS 5033

Your answer is incorrect.

Refer to content page 4.1

The correct answer is:
AS/NZS 4836

Question 6

Not answered

Marked out of 5.00

Which of the following Safe Work Australia Model Codes of Practice would be highly relevant to a solar installer?

- [ ] How to manage work health and safety risks
- [ ] Hazardous manual tasks
- [ ] Managing the risk of falls at workplaces
- [ ] How to manage and control asbestos in the workplace
- [ ] Managing electrical risks in the workplace
- [ ] Preparation of safety data sheets for hazardous chemicals
- [ ] Demolition work
- [ ] How to safely remove asbestos

Your answer is incorrect.

Refer to content page 4.1 and Safe Work Australia website for further guidance.

The correct answers are: How to manage work health and safety risks, Hazardous manual tasks, Managing the risk of falls at workplaces, How to manage and control asbestos in the workplace, Managing electrical risks in the workplace

Started on	Saturday, 15 February 2025, 1:28 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:28 AM
Time taken	10 secs
Grade	**0.00** out of 31.00 (**0**%)

Question 1

Not answered

Marked out of 1.00

AS/NZS 5139 states the safety requirements for battery systems to be used with ✖ .

Refer to content page 3.3 and AS/NZS 5139:2019

Question 2

Not answered

Marked out of 3.00

Identify whether the following statements are true or false in relation to AS/NZS 5139:2019.

The term 'BESS' refers to a complete system of batteries, PCE and isolation/protection equipment.	✖
An inverter is one example of 'PCE', as defined in AS/NZS 5139.	✖
The requirements for BESS labelling and safety signage are provided in AS/NZS 5139:2019 Section 2.	✖

Refer to content page 3.3 and AS/NZS 5139:2019

Question 3

Not answered

Marked out of 5.00

Identify the minimum decisive voltage classification (DVC) of a charge controller to be used with the following systems.

96 V d.c. PV array 150 V d.c. battery system	✖
24 V d.c. PV array 24 V d.c. battery system	✖
70 V d.c. PV array 96 V d.c. battery system	✖
96 V d.c. PV array 120 V d.c. battery system	✖
35 V d.c. PV array 48 V d.c. battery system	✖

Refer to content page 3.3 and AS/NZS 5139:2019 Clause 3.2.3.2

Question 4

Not answered

Marked out of 4.00

Select the minimum earthing conductor size for each of the following battery system scenarios based on AS/NZS 5139:2019 and AS/NZS 3000:2018 requirements.

Pre-assembled battery system with 4 mm^2 copper positive and negative conductors.	Minimum size: ✖ mm^2
Pre-assembled battery system with 10 mm^2 copper positive and negative conductors.	Minimum size: ✖ mm^2
Pre-assembled battery system with 6 mm^2 copper positive and negative conductors.	Minimum size: ✖ mm^2
Pre-assembled battery system with 16 mm^2 copper positive and negative conductors.	Minimum size: ✖ mm^2

Refer to AS/NZS 5139:2019 Clauses 5.3.1.6.7 and AS/NZS 3000:2018 Table 5.1

Question 5

Not answered

Marked out of 6.00

Identify the AS/NZS 5139:2019 clauses that relate to each item.

Method of determining battery system prospective fault current	Choose...
Requirements pre-assembled battery system switch disconnectors	Choose...
Definition of a BESS	Choose...
Details to be included in the system manual of a pre-assembled integrated battery system	Choose...
Requirements for overcurrent protection of a pre-assembled battery system	Choose...
Definition of a battery system enclosure	Choose...

Your answer is incorrect.

Refer to the relevant clauses in AS/NZS 5139:2019

The correct answer is:
Method of determining battery system prospective fault current → 3.2.3.3,

Requirements pre-assembled battery system switch disconnectors → 5.3.1.3.3,

Definition of a BESS → 1.3.13,

Details to be included in the system manual of a pre-assembled integrated battery system → 4.4.1.2,

Requirements for overcurrent protection of a pre-assembled battery system → 5.3.1.2,

Definition of a battery system enclosure → 1.3.21

Question 6

Not answered

Marked out of 5.00

Identify the AS/NZS 4777.1:2024 clauses that relate to each item.

Requirements for the installation of an inverter	Choose...
Requirements for the changeover switching from a grid supply to an alternative supply provided by a multiple mode inverter	Choose...
Signage required for indicating the IES emergency shutdown procedure	Choose...
Requirements for the installation of an inverter power sharing device (IPSD)	Choose...
Definition of an independent supply inverter	Choose...

Refer to the relevant clauses in AS/NZS 4777.1:2024

The correct answer is: Requirements for the installation of an inverter → 2.4.1, Requirements for the changeover switching from a grid supply to an alternative supply provided by a multiple mode inverter → 5.3.2.2, Signage required for indicating the IES emergency shutdown procedure → 6.2, Requirements for the installation of an inverter power sharing device (IPSD) → 3.6.3, Definition of an independent supply inverter → 1.3.10

Question 7

Not answered

Marked out of 3.00

Identify whether the following statements are true or false in relation to PV power system batteries.

PV power system batteries should be installed in direct sunlight.	✖
PV power system batteries should be installed in a cool, dry and well-ventilated area.	✖
Battery chargers and d.c. switchgear should be installed as close to the battery bank as possible.	✖

Refer to content page 3.3

Question 8

Not answered

Marked out of 4.00

Which of the following additional requirements apply to grid-connected multiple mode inverters capable of providing an independent supply?

- a. Circuits supplied by the inverter must be RCD protected in accordance with AS/NZS 3000
- b. The independent supply port of the inverter must be provided with a main isolator
- c. The grid protection device shall operate in the active, neutral and protective earthing conductors
- d. Arrangements must be made to ensure the continuity of the neutral conductor in the event that the inverter grid protection operates
- e. Circuits supplied from the standalone supply must not be RCD protected
- f. The grid protection device shall be a semiconductor device

Refer to AS/NZS 4777.1:2024 Clauses 5.4.2.1, 5.4.3, 5.4.6.4, and AS/NZS 4777.2:2020 Clause 3.4

The correct answers are: The independent supply port of the inverter must be provided with a main isolator, Arrangements must be made to ensure the continuity of the neutral conductor in the event that the inverter grid protection operates, Circuits supplied by the inverter must be RCD protected in accordance with AS/NZS 3000

Started on	Saturday, 15 February 2025, 1:27 AM
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Completed on	Saturday, 15 February 2025, 1:27 AM
Time taken	13 secs
Grade	**0.00** out of 33.00 (**0**%)

Question 1

Not answered

Marked out of 7.00

Identify each of the following battery parameters from the descriptions provided.

The average voltage that will be available at the terminals of a battery	Choose...
The amount of current a battery can supply for a given duration	Choose...
The amount of power a battery can supply for a given duration	Choose...
The voltage and current characteristics of a battery when being charged and discharged	Choose...
How much energy is left in a battery at a given time	Choose...
How far a battery can be safely discharged without negatively affecting battery life	Choose...
The number of charge/discharge cycles the battery can undergo before it's capacity degrades	Choose...

Your answer is incorrect.

Refer to content page 3.2

The correct answer is:
The average voltage that will be available at the terminals of a battery → Nominal voltage,

The amount of current a battery can supply for a given duration → Ampere-hour capacity,

The amount of power a battery can supply for a given duration → Watt-hour capacity,

The voltage and current characteristics of a battery when being charged and discharged → Charge/discharge rate,

How much energy is left in a battery at a given time → State of charge,

How far a battery can be safely discharged without negatively affecting battery life → Depth of discharge,

The number of charge/discharge cycles the battery can undergo before it's capacity degrades → Cycle life

Question 2

Not answered

Marked out of 4.00

A 60 Ah battery with a DoD of 100% has a useable capacity of [ ] ✖ Ah.

A 60 Ah battery with a DoD of 90% has a useable capacity of [ ] ✖ Ah.

A 60 Ah battery with a DoD of 80% has a useable capacity of [ ] ✖ Ah.

Therefore it can be seen that for any given battery capacity, the lower the DoD the [ ] ✖ the useable capacity.

60 x 1 = 60 Ah

60 x 0.90 = 54 Ah

60 x 0.80 = 48 Ah

Refer to content page 3.2 for further guidance

Question 3

Not answered

Marked out of 4.00

Which of the following types of batteries are commonly used in grid-connected PV battery storage systems?

- [ ] Valve regulated lead-acid (VRLA)
- [ ] Lithium-polymer (LiPo)
- [ ] Lithium iron phosphate (LiFePO4)
- [ ] Lithium-ion (Li-ion)
- [ ] Nickel-cadmium (NiCad)
- [ ] Nickel-metal hydride (NiMH)
- [ ] Alkaline
- [ ] Zinc-air

Your answer is incorrect.

The correct answers are: Valve regulated lead-acid (VRLA), Lithium-polymer (LiPo), Lithium iron phosphate (LiFePO4), Lithium-ion (Li-ion)

Question 4

Not answered

Marked out of 4.00

When comparing lead-acid and lithium-ion batteries:

- Lead acid cells have an OCV of ✖ whilst lithium-ion cells have an OCV of approximately ✖ .
- Lithium-ion batteries have ✖ energy density and ✖ service life.

Refer to content page 3.2

Question 5

Not answered

Marked out of 4.00

Identify each of the following charging modes based on the descriptions provided.

The charger applies a constant voltage across the batteries until the SoC reaches the maximum charge voltage	Choose...
The charger applies a constant current across the batteries until the SoC reaches the maximum charge voltage	Choose...
The charger monitors various battery parameters and automatically adjusts the charging voltage and current for optimal performance	Choose...
Used to compensate for self-discharge, to maintain a fully charged battery at its nominal voltage	Choose...

Your answer is incorrect.

Refer to content page 3.2

The correct answer is:
The charger applies a constant voltage across the batteries until the SoC reaches the maximum charge voltage → Constant voltage (CV) charging,

The charger applies a constant current across the batteries until the SoC reaches the maximum charge voltage → Constant current (CC) charging,

The charger monitors various battery parameters and automatically adjusts the charging voltage and current for optimal performance → Smart/adaptive charging,

Used to compensate for self-discharge, to maintain a fully charged battery at its nominal voltage → Trickle charging

Question 6

Not answered

Marked out of 5.00

Which of the following factors can reduce the service life of a battery?

- [ ] High temperatures
- [ ] High humidity and moisture
- [ ] Dust and contaminants
- [ ] High discharge rate
- [ ] Exceeding battery DoD
- [ ] Cool and dry conditions
- [ ] Ventilation
- [ ] Recharging a battery before it has reached its DoD

Your answer is incorrect.

Refer to content page 3.2

The correct answers are: High temperatures, High humidity and moisture, Dust and contaminants, High discharge rate, Exceeding battery DoD

Question 7

Not answered

Marked out of 3.00

Identify the ways to reduce the impact of the following potentially detrimental effects on PV storage system batteries.

High temperatures and humidity	Choose...
Build-up of dust and other contaminants	Choose...
Ensure system is suitably sized for the conditions and correct set-up of charger/monitoring systems	Choose...

Your answer is incorrect.

Refer to content page 3.2

The correct answer is:
High temperatures and humidity → Install batteries in a cool, dry and well-ventilated location,

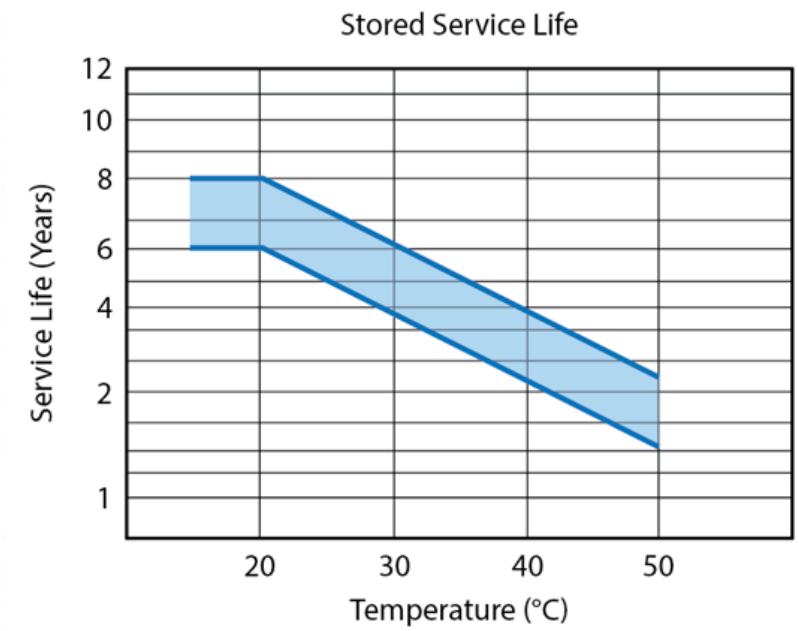
Build-up of dust and other contaminants → Clean batteries periodically as part of routine maintenance,

Ensure system is suitably sized for the conditions and correct set-up of charger/monitoring systems → High discharge rate and excessive DoD

Question 8

Not answered

Marked out of 2.00



Based on the manufacturer's data above:

- When stored at a temperature of 20°C the maximum expected service life for the battery is ✖ years.
- When stored at a temperature of 40°C the maximum expected service life for the battery is ✖ years.

Refer to content page 3.2

Started on	Saturday, 15 February 2025, 1:26 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:27 AM
Time taken	11 secs
Grade	**0.00** out of 24.00 (**0**%)

Question 1

Not answered

Marked out of 5.00

Identify each of the battery system components based on the description provided.

Stores energy for use when needed	Choose...
Converts a d.c. input to an a.c. output	Choose...
Controls the charging parameters applied to a battery bank	Choose...
Monitors and logs system parameters for analysis	Choose...
Protects equipment against overcurrent and/or provides points of isolation	Choose...

Your answer is incorrect.

Refer to content page 3.1

The correct answer is:
Stores energy for use when needed → Batteries,

Converts a d.c. input to an a.c. output → Inverter,

Controls the charging parameters applied to a battery bank → Charge controller,

Monitors and logs system parameters for analysis → Metering/Monitoring system,

Protects equipment against overcurrent and/or provides points of isolation → Control and protection devices

Question 2

Not answered

Marked out of 5.00

Due to the potential impact on the grid, network providers have various requirements for grid-connected battery systems, such as:

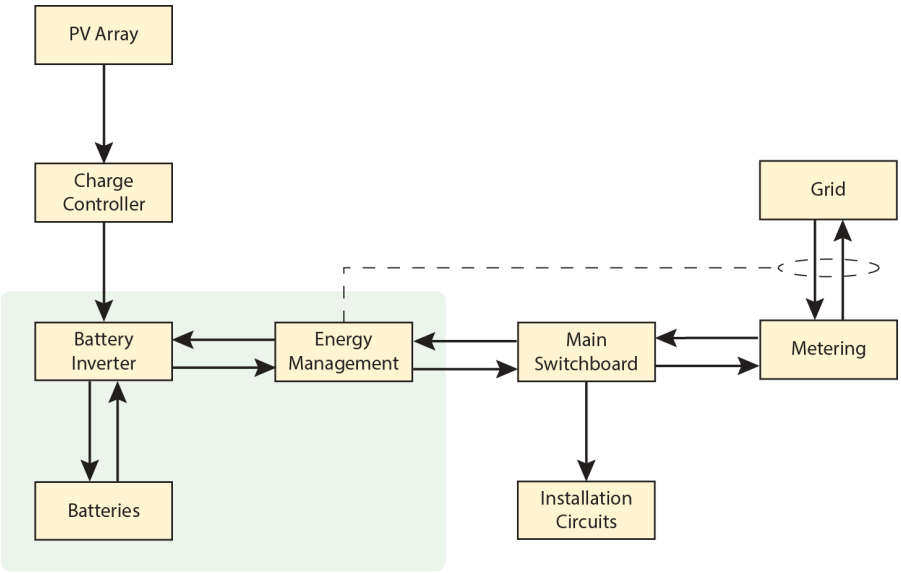
- Minimum quality standards for output ✖ .
- Access to remote ✖ .
- Acceptable types of batteries and ✖ .
- Limitations on the ✖ of the system.
- Minimum ✖ requirements.

Refer to content page 3.1

Question 3

Not answered

Marked out of 3.00



Battery Energy Storage System (BESS)

In relation to the PV battery storage system pictured above:

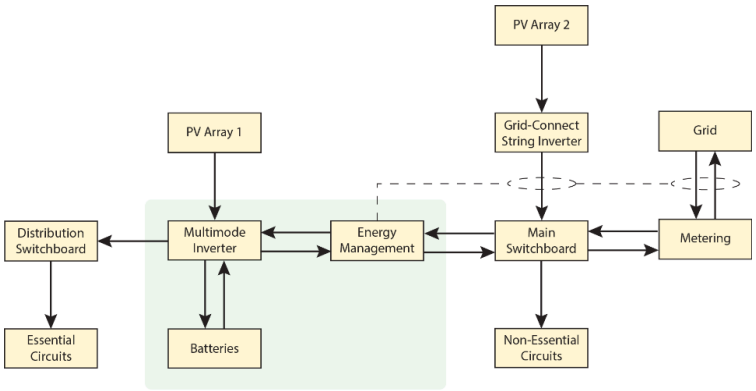
- The PV array is [ ] ✖ coupled to the BESS.
- The system [ ] ✖ of supplying circuits in standalone mode.
- Grid protection is provided in the [ ] ✖ .

Refer to content page 3.1

Question 4

Not answered

Marked out of 3.00



Battery Energy Storage System (BESS)

In relation to the PV battery storage system pictured above:

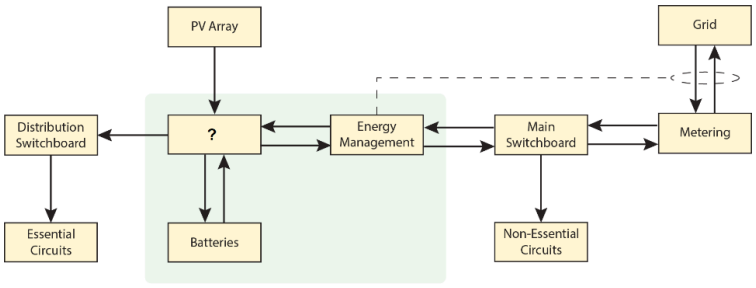
- PV array 1 is [ ] ✖ to the BESS.
- PV array 2 is [ ] ✖ to the BESS.
- In the event of a grid outage, [ ] ✖ .

Refer to content page 3.1

Question 5

Not answered

Marked out of 1.00



Battery Energy Storage System (BESS)

What is the missing BESS component in the PV battery storage system pictured above?

- Multimode inverter
- String inverter
- Micro-inverter
- Rectifier
- Router
- Current transformer

Your answer is incorrect.

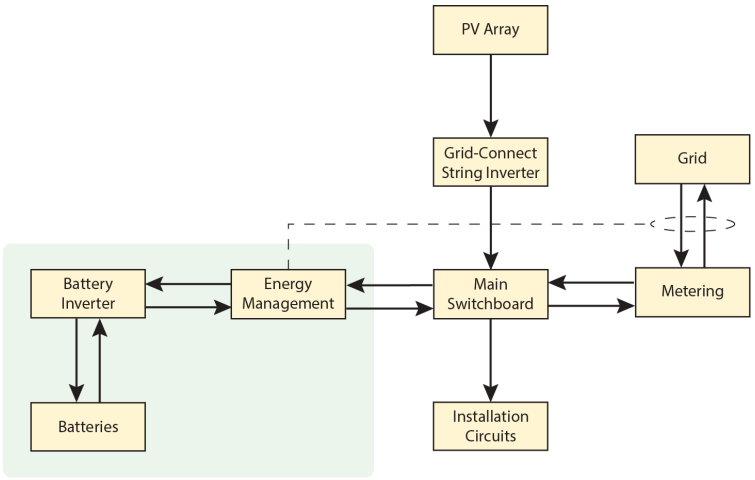
Refer to content page 3.1

The correct answer is:
Multimode inverter

Question 6

Not answered

Marked out of 2.00



Battery Energy Storage System (BESS)

In relation to the PV battery storage system pictured above:

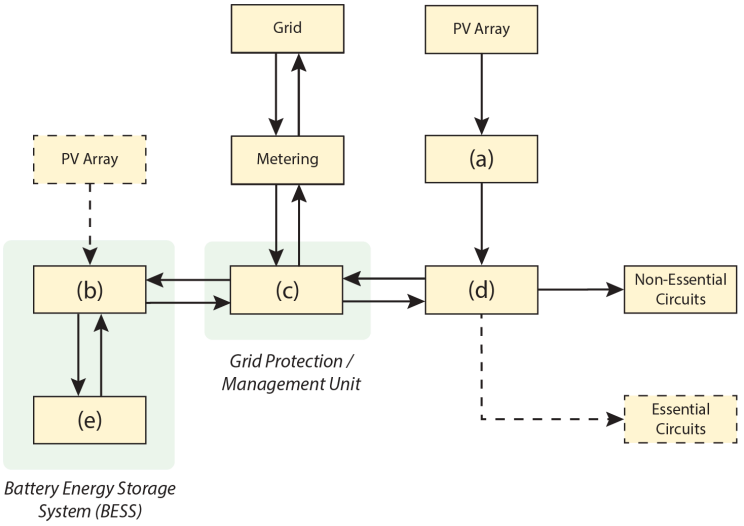
- The PV array is [ ] ✖ coupled to the BESS.
- The system is [ ] ✖ of supplying circuits in standalone mode.

Refer to content page 3.1

Question 7

Not answered

Marked out of 5.00



Identify the missing components in the PV battery storage system arrangement pictured above.

(a) Choose...

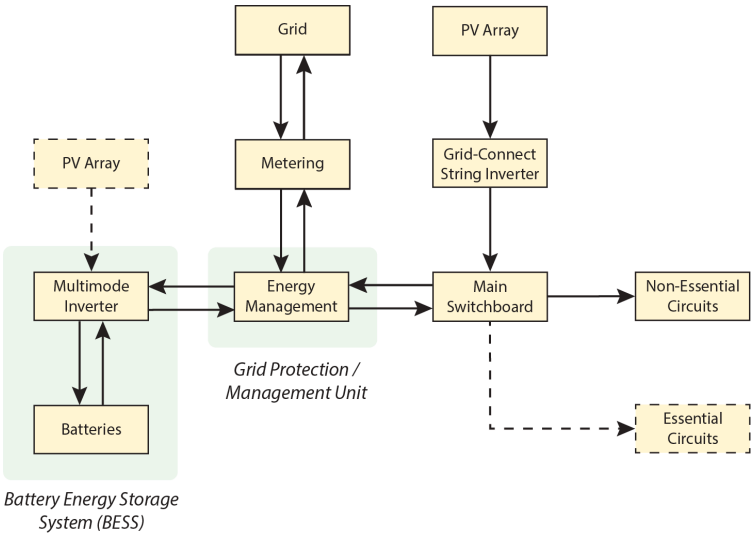
(b) Choose...

(c) Choose...

(d) Choose...

(e) Choose...

Your answer is incorrect.



The correct answer is:

(a) → Grid-Connect String Inverter,

(b) → Multimode Inverter,

(c) → Energy Management,

(d) → Main Switchboard,

(e) → Batteries

Started on	Saturday, 15 February 2025, 1:26 AM
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Completed on	Saturday, 15 February 2025, 1:26 AM
Time taken	9 secs
Grade	**0.00** out of 15.00 (**0**%)

Question 1

Not answered

Marked out of 6.00

Identify the AS/NZS 5033:2021 clauses that relate to each item.

Maximum voltage limits for PV installations	Choose...
Installation of PV system cables	Choose...
Labelling of a PV disconnection device	Choose...
Installation of PV array earthing conductors	Choose...
Periodic maintenance recommendations	Choose...
Requirements for overcurrent protection	Choose...

Your answer is incorrect.

Refer to the relevant clauses in AS/NZS 5033:2021

The correct answer is:
Maximum voltage limits for PV installations → 3.1,

Installation of PV system cables → 4.4.3,

Labelling of a PV disconnection device → 5.5.2,

Installation of PV array earthing conductors → 4.6.6,

Periodic maintenance recommendations → D.2,

Requirements for overcurrent protection → 3.3.4

Question 2

Not answered

Marked out of 2.00

Complete the following statements regarding AS/NZS 5033:2021 requirements:

a) The calculated maximum d.c. voltage of a domestic PV array is not permitted to exceed [ ] ✖ V d.c.

b) The calculated maximum d.c. voltage of a non-domestic PV array is not permitted to exceed [ ] ✖ V d.c.

Refer to AS/NZS 5033:2021 Clause 3.1

Question 3

Not answered

Marked out of 1.00

AS/NZS 5033:2021 Clause 4.4.1 requires that all PV system wiring is installed in accordance with [ ] ✖ .

Refer to AS/NZS 5033:2021 Clause 4.4.1

Question 4

Not answered

Marked out of 5.00

Identify the AS/NZS 4777.1:2024 clauses that relate to each item.

Additional verification requirements for an IES alternative supply	Choose...
Connection of an EV to a grid-connected IES	Choose...
Acceptable installation methods for grid-connected inverter wiring systems	Choose...
Maximum phase imbalance for a multiphase IES with a capacity greater than 50 kVA	Choose...
Requirements for overcurrent protection of an independent supply	Choose...

Refer to the relevant clauses in AS/NZS 4777.1:2024

The correct answer is: Additional verification requirements for an IES alternative supply → 8.3.3, Connection of an EV to a grid-connected IES → 4.2, Acceptable installation methods for grid-connected inverter wiring systems → 3.3.2, Maximum phase imbalance for a multiphase IES with a capacity greater than 50 kVA → C.3.3, Requirements for overcurrent protection of an independent supply → 5.4.3

Question 5

Not answered

Marked out of 1.00

AS/NZS 4777.1:2024 Section 3 states that grid connected IES must be installed in accordance with ✖ , except where modified by AS/NZS 4777.1.

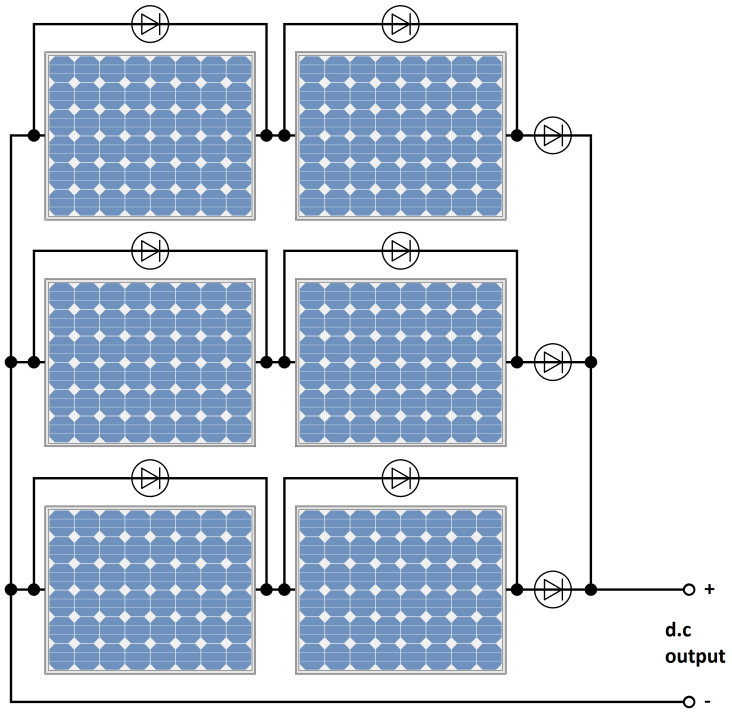
Refer to AS/NZS 4777.1:2024 Clause 3.1

Started on	Saturday, 15 February 2025, 1:25 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:25 AM
Time taken	12 secs
Grade	**0.00** out of 31.00 (**0**%)

Question 1

Not answered

Marked out of 6.00



The PV array pictured above has [ ] ✖ strings, each consisting of [ ] ✖ modules.

A bypass diode is connected in [ ] ✖ with each [ ] ✖ , and a blocking diode is connected in [ ] ✖ with each [ ] ✖ .

Refer to content page 2.2

Question 2

Not answered

Marked out of 3.00

Module Specifications			
P_{MPP}	175 W		
V_{MPP}	36.5 V	V_{oc}	44.3 V
I_{MPP}	4.8 A	I_{sc}	5.6 A

A commercial customer has specified the use of the modules detailed above to produce a 7 kW PV array.

The maximum array voltage must not exceed 400 V, and the maximum current must not exceed 30 A.

Identify the minimum number of modules, and the arrangement required to produce the array.

Number of Modules: ✖

Number of Strings: ✖

Modules in each String: ✖

7000 / 175 = 40 modules

400 / 44.3 = 9 max modules per string

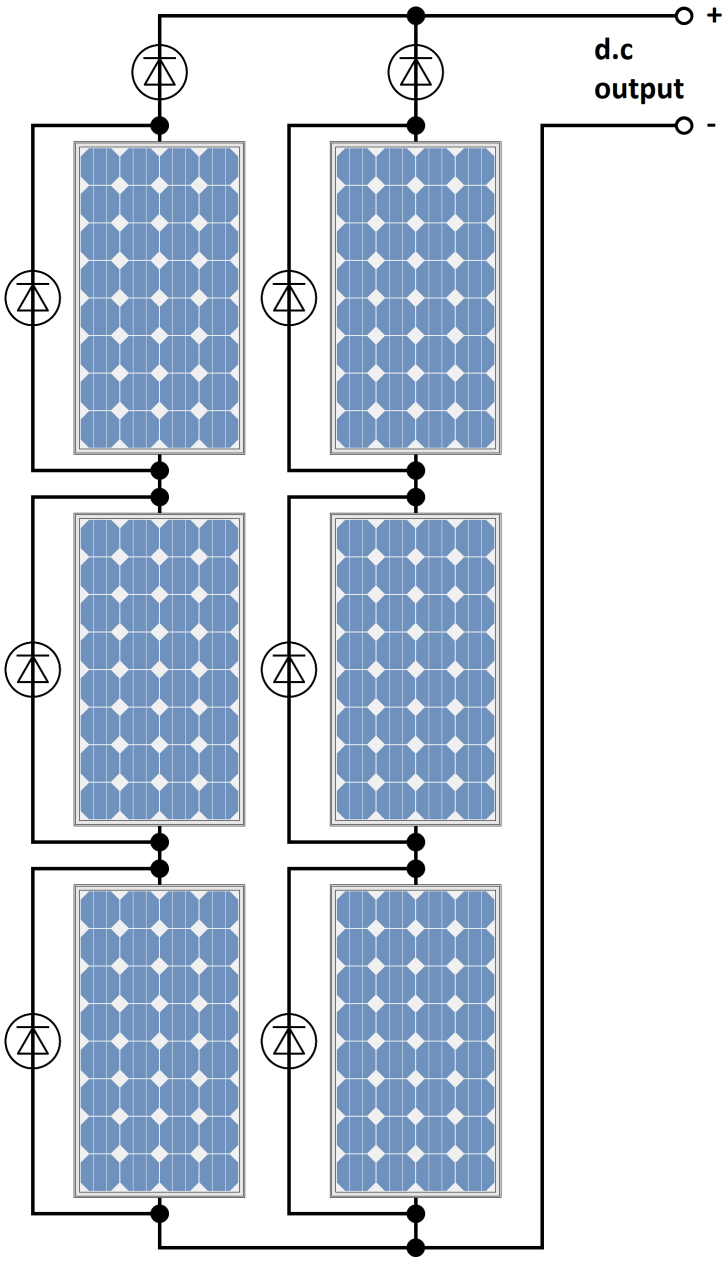
30 / 5.6 = 5.4 max number of strings

Therefore the only acceptable arrangement is to have 5 strings, each consisting of 8 modules. Refer to content page 2.2 for further guidance.

Question 3

Not answered

Marked out of 4.00



Each module in array pictured above has the following ratings:

V_{MPP}	24 V
I_{MPP}	5 A
V_{oc}	29.1 V
I_{sc}	5.8 A

Operating Parameters

What are the rated MPP voltage, current and power values for the array (neglecting de-rating)?

- Array MPP Output Voltage: ✖ V

- Array MPP Output Current: ✖ A
- Array MPP Output Power: ✖ W

If one module becomes shaded, the output voltage of the associated string will drop to ✖ volts.

Three modules per string:

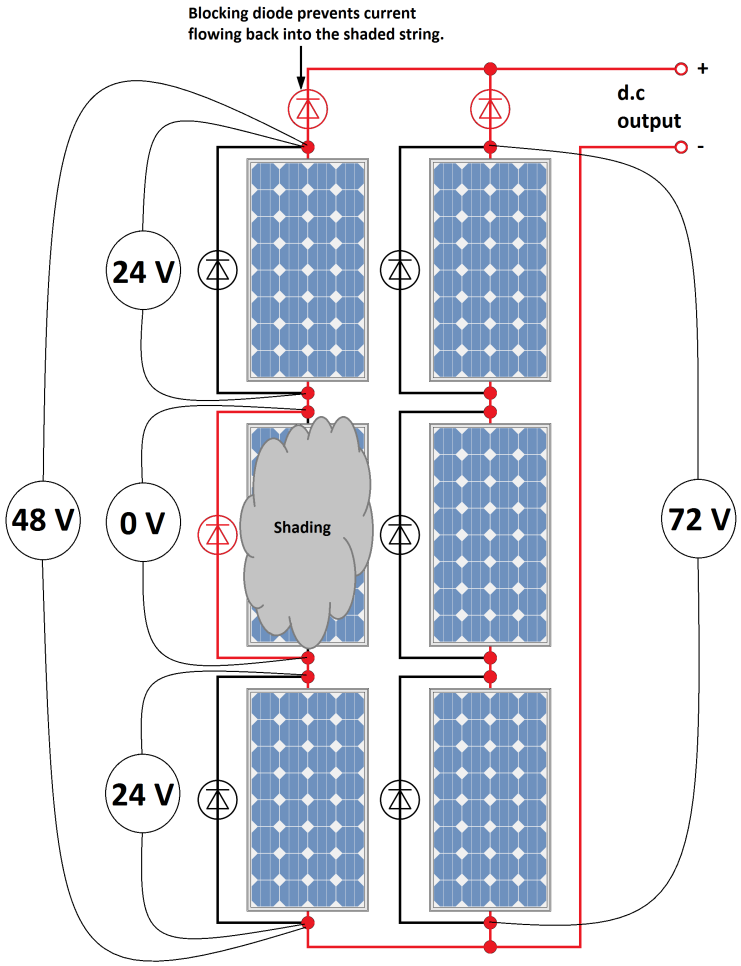
24 x 3 = 72 V

Two strings connected in parallel:

5 x 2 = 10 A

Maximum power = V_{MP} x I_{MP}

72 x 10 = 720 W

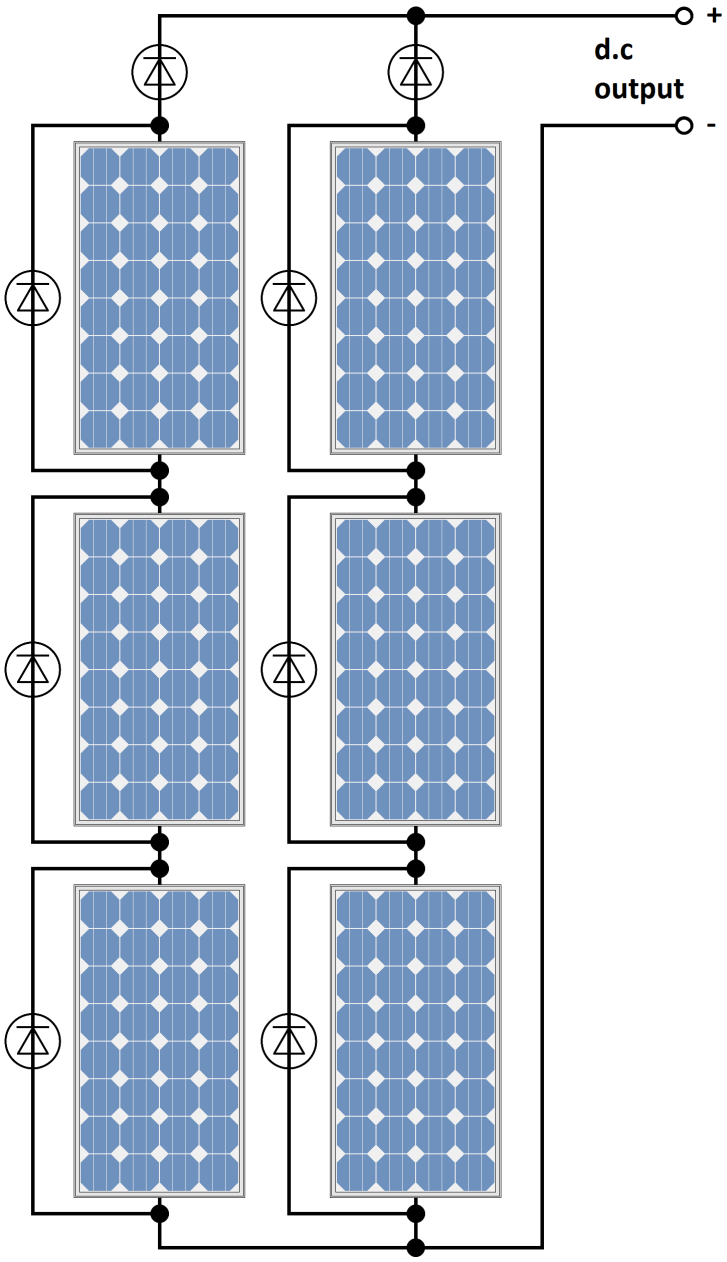


Refer to content page 2.2 for further guidance.

Question 4

Not answered

Marked out of 4.00



Each module in the array pictured above has the following ratings:

- Power: 192 W
- Voltage: 32 V d.c.
- Current: 6 A d.c.

Determine the following PV array operating parameters, correct to three significant figures:

- Total Power: ✖ kW
- Total Voltage: ✖ V
- Total Current: ✖ A

If one module becomes shaded, the output voltage of the associated string will drop to ✖ volts.

Three modules per string:

32 x 3 = 96 V

Two strings connected in parallel:

6 x 2 = 12 A

P = VI

96 x 12 = 1152 W = 1.15 kW

Or

Total power equals the sum of the power ratings of each module:

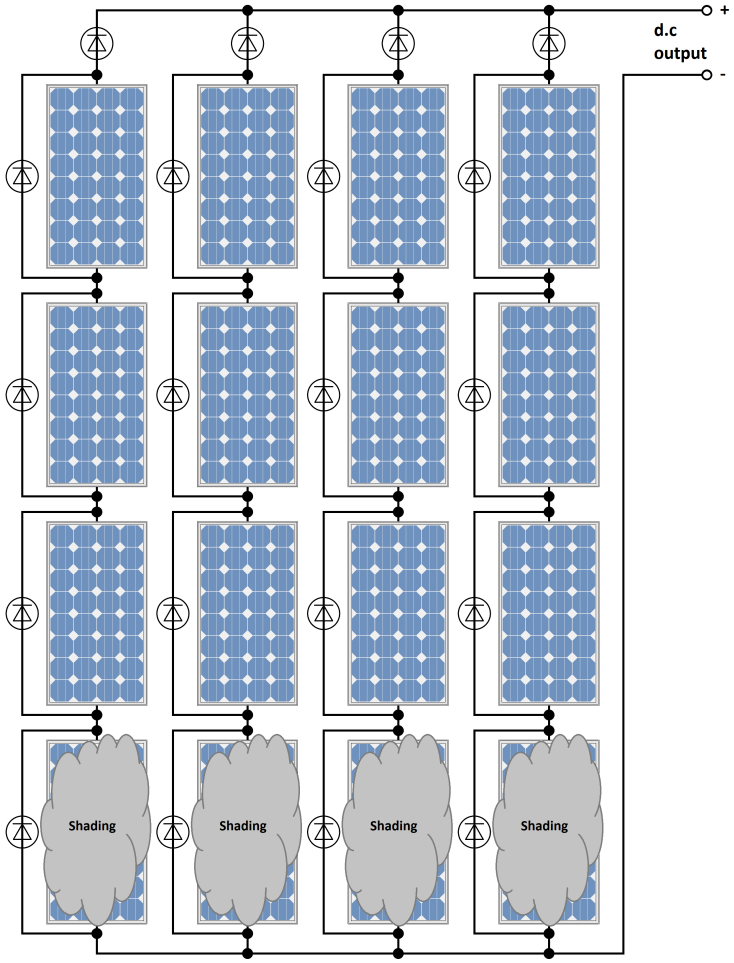
192 + 192 + 192 + 192 + 192 + 192 = 1152 W = 1.15 kW

Refer to content page 2.2 for further guidance.

Question 5

Not answered

Marked out of 3.00



Each module in the array pictured above has the following ratings:

V_{MPP}	16.1 V
I_{MPP}	5.2 A
V_{oc}	19.7 V
I_{sc}	5.9 A

Determine the output values of the array when it becomes shaded as indicated above.

Provide your answers to three significant figures.

- MPP Output Voltage: ✖ V
- MPP Output Current: ✖ A
- MPP Output Power: ✖ W

Shading results in each of the shaded modules being bypassed.

V_{MPP} = 16.1 x 3 = 48.3 V

I_{MPP} = 5.2 x 4 = 20.8 A

P_{MPP} = 48.3 x 20.8 = 1004.6 W

Refer to content page 2.2 for further guidance.

Question 6

Not answered

Marked out of 3.00

Which of the following factors will affect the size of a PV array for a given installation?

- [ ] The latitude of the installation
- [ ] The desired energy yield
- [ ] The available roof space
- [ ] The type of mounting system
- [ ] The initial cost and payback period

Your answer is incorrect.

Refer to content page 2.2

The correct answers are:
The desired energy yield,

The available roof space,

The initial cost and payback period

Question 7

Not answered

Marked out of 5.00

When conducting a site survey to determine suitability for a grid-connect system, the following environmental factors should be considered:

- Potential for negative effects on nearby [ ] ✖ .
- Potential for [ ] ✖ or other land degradation.
- The carbon [ ] ✖ associated with the work.
- End-of-life [ ] ✖ .
- Visual impact ([ ] ✖).

Refer to content page 2.2

Question 8

Not answered

Marked out of 3.00

Local ✖ rules can also affect the permissible designs and locations of PV systems within that local area.

You should always check with the local ✖ regarding any rules and permits that may be required, ✖ providing advice to the customer.

Refer to content page 2.2

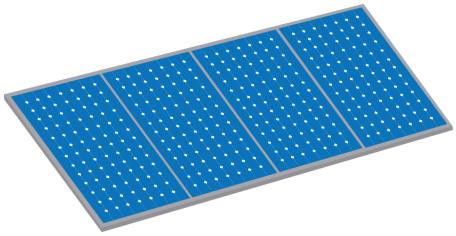
Started on	Saturday, 15 February 2025, 1:24 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:25 AM
Time taken	10 secs
Grade	**0.00** out of 25.00 (**0**%)

Question 1

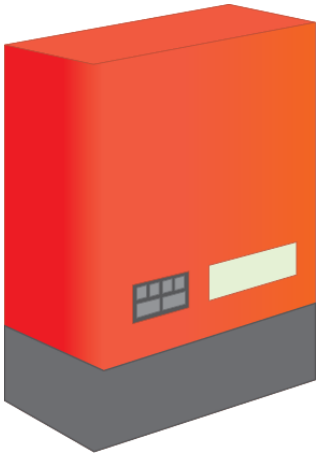
Not answered

Marked out of 6.00

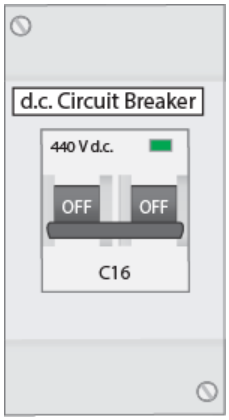
Identify each of the PV power system components pictured below.



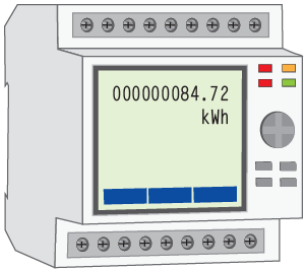
Choose...



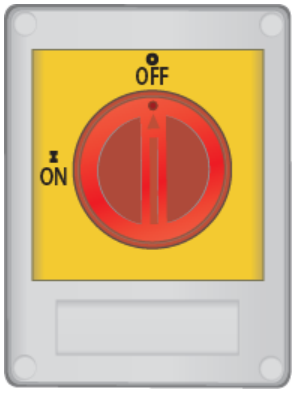
Choose...



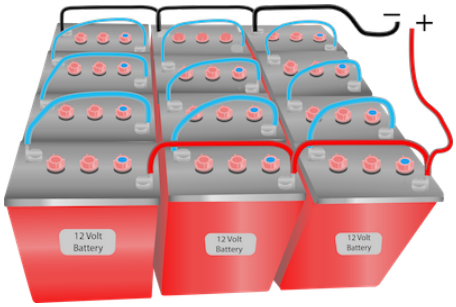
Choose...



Choose...



Choose...

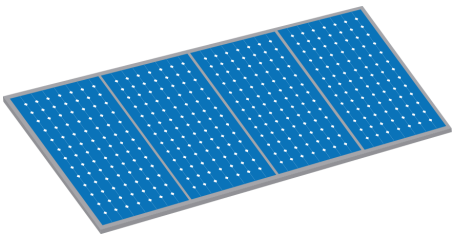


Choose...

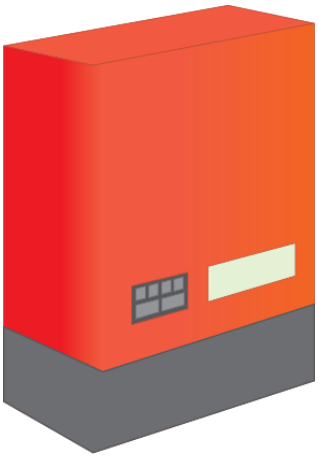
Your answer is incorrect.

Refer to content page 2.1

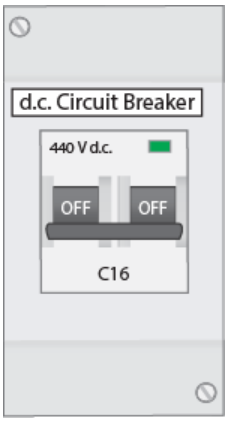
The correct answer is:



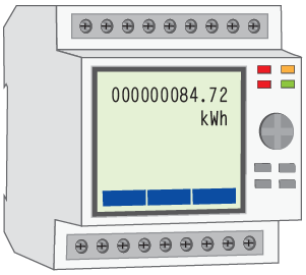
→ PV array,



→ Inverter,

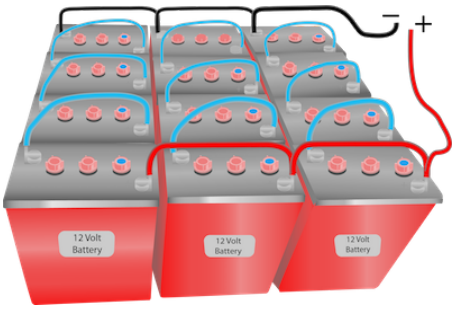


→ d.c. circuit breaker,



→ Energy meter,

→ Isolator,



→ Battery bank

Question 2

Not answered

Marked out of 4.00

Identify each of the PV system components from the description.

Converts radiant energy into electrical energy	Choose...
Converts direct current into alternating current	Choose...
Maintains the d.c. voltage within a set tolerance	Choose...
Stores electrical energy	Choose...

Your answer is incorrect.

The correct answer is:
Converts radiant energy into electrical energy → PV array,

Converts direct current into alternating current → Inverter,

Maintains the d.c. voltage within a set tolerance → Regulator,

Stores electrical energy → Batteries

Question 3

Not answered

Marked out of 5.00

Match each of the components to its function within a grid-connected PV power system.

Disconnects the PV system from the grid in the event of abnormal grid parameters	Choose...
Measures the imported and exported electrical energy	Choose...
d.c. circuit breaker	Choose...
a.c. circuit breaker	Choose...
Provides points from which to shut down the PV power system	Choose...

Your answer is incorrect.

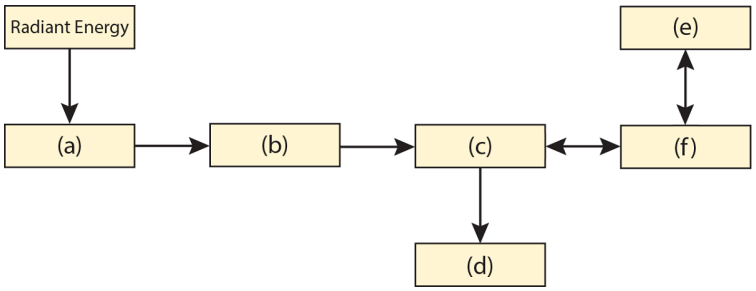
Refer to content page 2.1

The correct answer is: Disconnects the PV system from the grid in the event of abnormal grid parameters → Anti-islanding protection, Measures the imported and exported electrical energy → Energy meter, d.c. circuit breaker → Protects installation equipment against overcurrent, a.c. circuit breaker → Protects installation equipment against overcurrent, Provides points from which to shut down the PV power system → Isolators

Question 4

Not answered

Marked out of 6.00



Identify the missing components, to produce a simple block diagram of a grid connected PV power system.

(a) Choose...

(b) Choose...

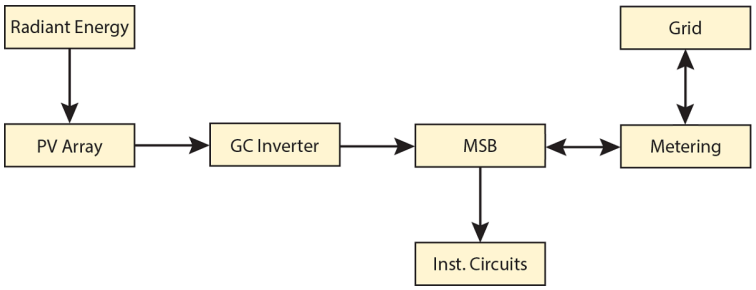
(c) Choose...

(d) Choose...

(e) Choose...

(f) Choose...

Your answer is incorrect.



The correct answer is:
(a) → PV Array,

(b) → Grid Connect Inverter,

(c) → Main Switchboard,

(d) → Installation Circuits,

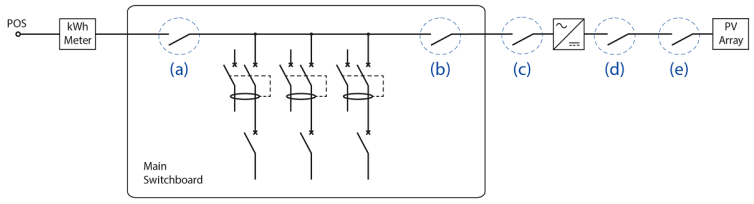
(e) → Electricity Grid,

(f) → Metering

Question 5

Not answered

Marked out of 4.00



Identify each type of control/protection device used in a typical PV installation.

(a) Choose...

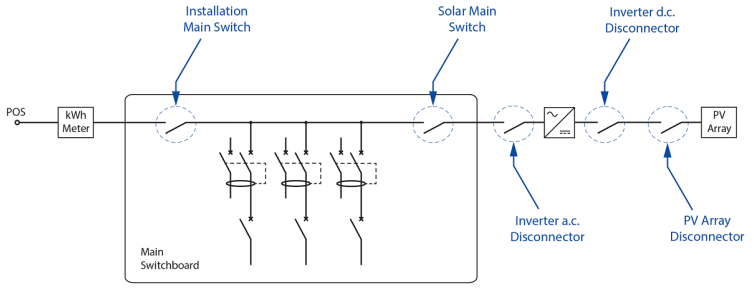
(b) Choose...

(c) Choose...

(d) Choose...

(e) Choose...

Your answer is incorrect.



The correct answer is:

(a) → Grid supply main switch,

(b) → Solar main switch,

(c) → Inverter a.c. disconnector,

(d) → Inverter d.c. disconnector,

(e) → PV array d.c. disconnector

Started on	Saturday, 15 February 2025, 1:24 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:24 AM
Time taken	10 secs
Grade	**0.00** out of 37.00 (**0**%)

Question 1

Not answered

Marked out of 2.00

Energy is a measure of ✖ .

Power is a measure of ✖ .

Refer to content page 1.2

Question 2

Not answered

Marked out of 7.00

Identify each of the following forms of energy from the descriptions provided.

Energy associated with the movement or buildup of electrons	Choose...
Energy stored in an object when it is suspended above the ground.	Choose...
Energy associated with the bonds between atoms that make up molecules.	Choose...
Energy associated with the bonds between sub-atomic particles in the nucleus of an atom.	Choose...
Energy associated with the movement of a physical object, such as the rotating arm of a motor.	Choose...
Energy associated with the vibration of atomic particles.	Choose...
Energy of electromagnetic radiation, such as radio waves, microwaves and visible light.	Choose...

Your answer is incorrect.

Refer to content page 1.2

The correct answer is: Energy associated with the movement or buildup of electrons → Electrical, Energy stored in an object when it is suspended above the ground. → Gravitational, Energy associated with the bonds between atoms that make up molecules. → Chemical, Energy associated with the bonds between sub-atomic particles in the nucleus of an atom. → Nuclear, Energy associated with the movement of a physical object, such as the rotating arm of a motor. → Mechanical, Energy associated with the vibration of atomic particles. → Thermal, Energy of electromagnetic radiation, such as radio waves, microwaves and visible light. → Electromagnetic

Question 3

Not answered

Marked out of 4.00

Identify the meaning of the following terms.

The original energy contained in the natural resource used in the initial stage of energy production (e.g. coal). Choose...

The energy that is utilised for a particular purpose by the end user (i.e. by an appliance). Choose...

The total energy needed for a particular purpose, including all stages of conversion and transportation. Choose...

The ratio of how much useable output energy you get for the energy you put in. Choose...

Your answer is incorrect.

Refer to content page 1.2

The correct answer is:
The original energy contained in the natural resource used in the initial stage of energy production (e.g. coal). → Primary Energy,

The energy that is utilised for a particular purpose by the end user (i.e. by an appliance). → End-Use Energy,

The total energy needed for a particular purpose, including all stages of conversion and transportation. → Embodied Energy,

The ratio of how much useable output energy you get for the energy you put in. → Efficiency

Question 4

Not answered

Marked out of 8.00

Identify the correct SI unit of measure for each of the following quantities.

Quantity	SI Unit	Unit Symbol
Energy	✖	✖
Power	✖	✖
Time	✖	✖
Temperature	✖	✖

Refer to content page 1.2

Question 5

Not answered

Marked out of 2.00

Calculate the energy used when a 2 kW electric kettle operates for 43 seconds.

Provide your answer in the units indicated correctly rounded to three significant figures.

Answer: ✖ kJ

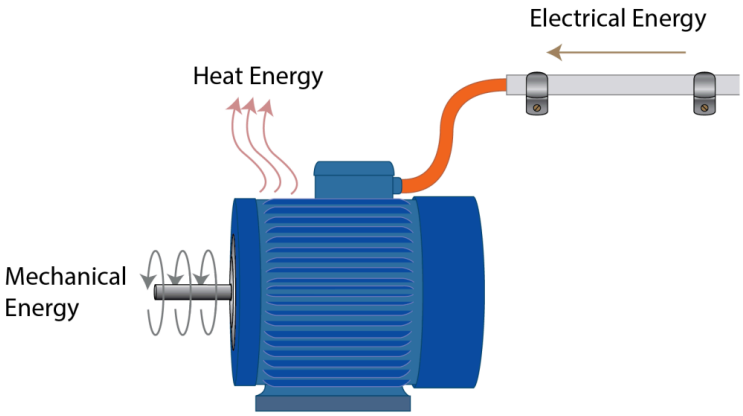
E = Pt

2000 x 43 = 86,000 = 86.0 kJ

Question 6

Not answered

Marked out of 4.00



The losses in an electrical system mean that the energy you put in is always ✖ the useable output energy.

For the electric motor illustrated above:

- The electrical energy represents ✖ .
- The heat energy represents ✖ .
- The mechanical energy represents ✖ .

Refer to content page 1.2

Question 7

Not answered

Marked out of 3.00

Identify each of the following types of energy from the descriptions provided below.

Kinetic energy contained within atoms Choose...

Radiant energy emitted from the sun Choose...

Potential energy stored within molecular bonds Choose...

Your answer is incorrect.

Refer to content page 1.2

The correct answer is:
Kinetic energy contained within atoms → Electrical energy,

Radiant energy emitted from the sun → Solar energy,

Potential energy stored within molecular bonds → Chemical energy

Question 8

Not answered

Marked out of 2.00

Determine the efficiency and losses of an electrical component with an output power of 6 kW for an input power of 7.2 kW.

Provide your answers in the units indicated, correctly rounded to three significant figures.

Efficiency: ✖ %

Losses: ✖ kW

$n = (P_{in} / P_{out}) \times 100$

$(6000 / 7200) \times 100 = 83.3\%$

Losses = input – output

7.2 – 6 = 1.2 kW

Question 9

Not answered

Marked out of 5.00

Adding a PV array to an existing installation ____ the amount of energy that needs to be imported from the grid.

If battery storage is then added to the installation:

- More of the PV energy can be ____ rather than being ____ .
- The amount of energy the installation will need to ____ can be reduced further.
- ____ can be provided to essential circuits during a grid outage.

Refer to content page 1.2

Started on	Saturday, 15 February 2025, 1:23 AM
State	Finished
Completed on	Saturday, 15 February 2025, 1:23 AM
Time taken	13 secs
Grade	**0.00** out of 18.00 (**0**%)

Question 1

Not answered

Marked out of 5.00

Identify the stakeholders that have the following roles/responsibilities in relation to the installation of a grid-connected alternative energy system.

Provides access to the site	Choose...
Prepares site survey report	Choose...
Prepares system design brief	Choose...
Installs and commissions the system	Choose...
Perform periodic cleaning, repairs and vegetation control	Choose...

Your answer is incorrect.

Refer to content page 1.1

The correct answer is:
Provides access to the site → Client,

Prepares site survey report → Site Surveyor,

Prepares system design brief → System Designer,

Installs and commissions the system → System Installer,

Perform periodic cleaning, repairs and vegetation control → Maintenance Personnel

Question 2

Not answered

Marked out of 2.00

Who will you need to consult (as a minimum) before, during and after surveying a site to determine suitability for a grid-connected alternative energy system?

- [ ] Client
- [ ] System Designer
- [ ] System Installer
- [ ] Maintenance Personnel

Your answer is incorrect.

Refer to content page 1.1

The correct answers are:
Client,

System Designer

Question 3

Not answered

Marked out of 5.00

Identify each of the following general principles for effective communication.

Consider the key information you need to communicate and arrange it into a logical order.	Choose...
Be specific and use as few words as necessary to convey all the required information.	Choose...
Ask the other person if they have understood, or if they would like anything explained further.	Choose...
Look at the person when they are speaking to you and concentrate on what they are saying.	Choose...
If anything is unclear, seek clarification.	Choose...

Your answer is incorrect.

The correct answer is:
Consider the key information you need to communicate and arrange it into a logical order. → Think before you speak,

Be specific and use as few words as necessary to convey all the required information. → Get to the point,

Ask the other person if they have understood, or if they would like anything explained further. → Seek confirmation,

Look at the person when they are speaking to you and concentrate on what they are saying. → Listen carefully,

If anything is unclear, seek clarification. → Ask questions

Question 4

Not answered

Marked out of 6.00

Identify the general procedure for undertaking a site survey.

Step 1 Choose...

Step 2 Choose...

Step 3 Choose...

Step 4 Choose...

Step 5 Choose...

Step 6 Choose...

Your answer is incorrect.

Refer to content page 1.1

The correct answer is:
Step 1 → Consult the customer,

Step 2 → Evaluate existing electrical infrastructure,

Step 3 → Evaluate energy usage/needs,

Step 4 → Evaluate site and structures,

Step 5 → Evaluate the solar resource,

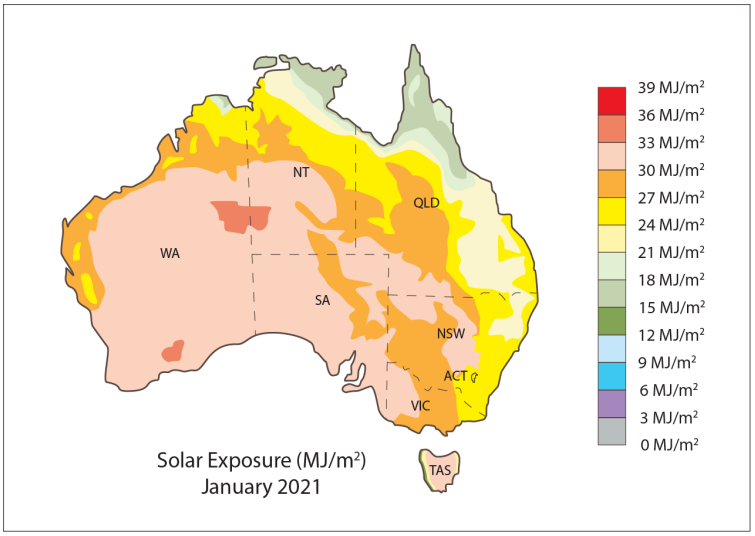
Step 6 → Produce a final report

Started on	Thursday, 31 October 2024, 4:38 PM
State	Finished
Completed on	Thursday, 31 October 2024, 4:38 PM
Time taken	14 secs
Grade	**0.00** out of 22.00 (**0**%)

Question 1

Not answered

Marked out of 1.00



What type of solar data is pictured above?

- A solar contour map
- A sun path diagram
- None of these
- An irradiation chart

Your answer is incorrect.

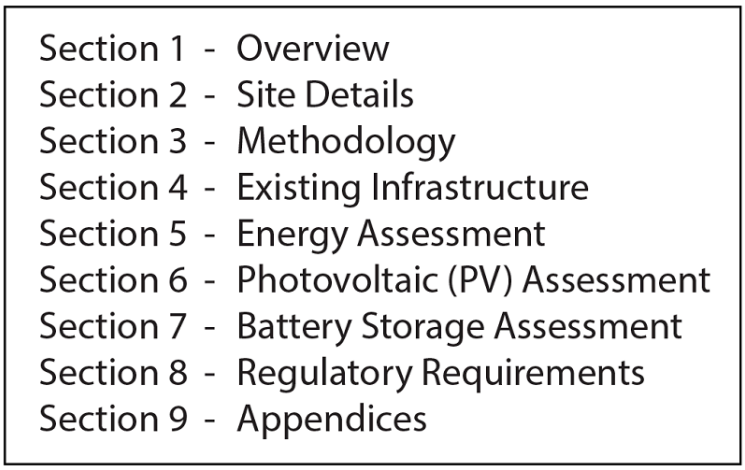
Refer to content page 6.2

The correct answer is:
A solar contour map

Question 2

Not answered

Marked out of 1.00



In a final site survey report having the sections pictured above, which section would describe the energy usage patterns at the site?

- Section 5 – Energy Assessment
- Section 6 – Photovoltaic (PV) Assessment
- Section 7 – Battery Storage Assessment
- Section 4 – Existing Infrastructure
- Section 9 – Appendices
- Section 2 – Site Details
- Section 8 – Regulatory Requirements
- Section 1 – Overview
- Section 3 – Methodology

Your answer is incorrect.

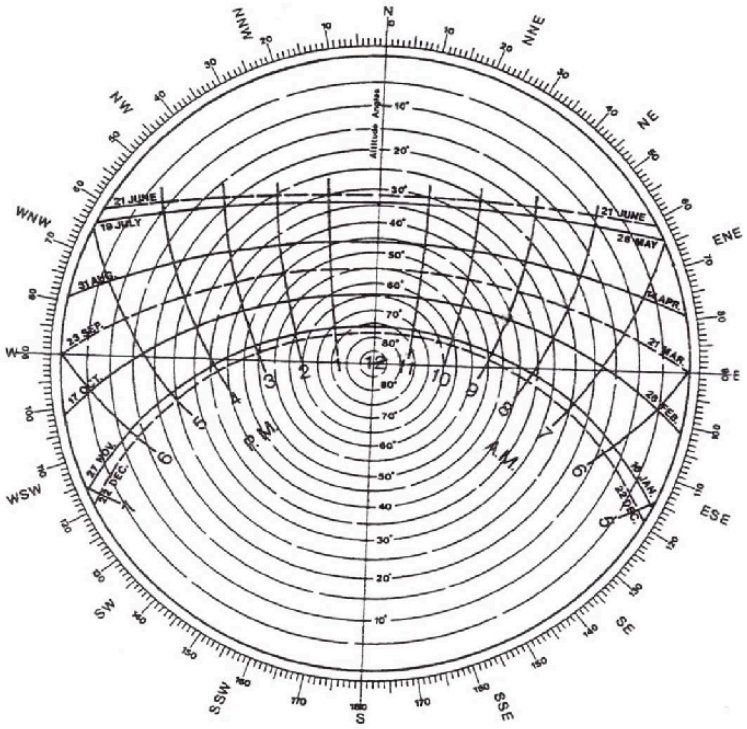
Refer to content page 6.3

The correct answer is: Section 5 – Energy Assessment

Question 3

Not answered

Marked out of 1.00



What type of solar data is pictured above?

- A solar contour map
- None of these
- An irradiation chart
- A sun path diagram

Your answer is incorrect.

Refer to content page 6.2

The correct answer is:
A sun path diagram

Question 4

Not answered

Marked out of 1.00

According to Safe Work Australia, what is the minimum clearance that should be maintained to live low voltage services whilst operating an EWP?

- 0.3 m
- 30 m
- 3 m
- 0 m

Your answer is incorrect.

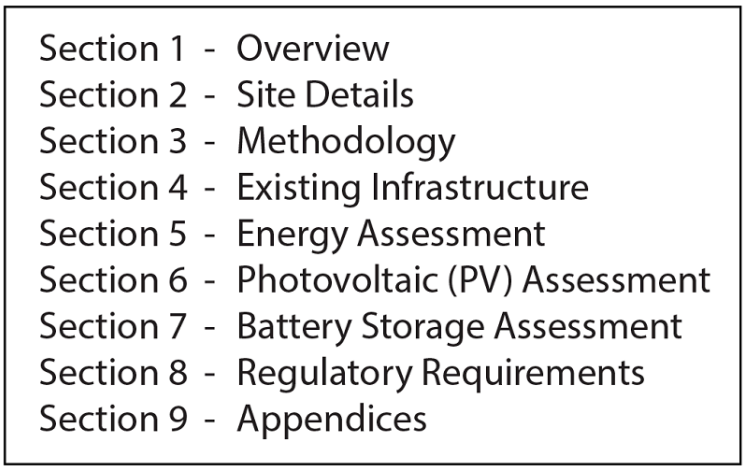
Refer to content page 6.1 and/or Industry Codes of Practice for further guidance.

The correct answer is:
3 m

Question 5

Not answered

Marked out of 1.00



In a final site survey report having the sections pictured above, which section would the scope and objectives of the survey be described?

- Section 7 – Battery Storage Assessment
- Section 6 – Photovoltaic (PV) Assessment
- Section 2 – Site Details
- Section 8 – Regulatory Requirements
- Section 9 – Appendices
- Section 4 – Existing Infrastructure
- Section 3 – Methodology
- Section 1 – Overview
- Section 5 – Energy Assessment

Your answer is incorrect.

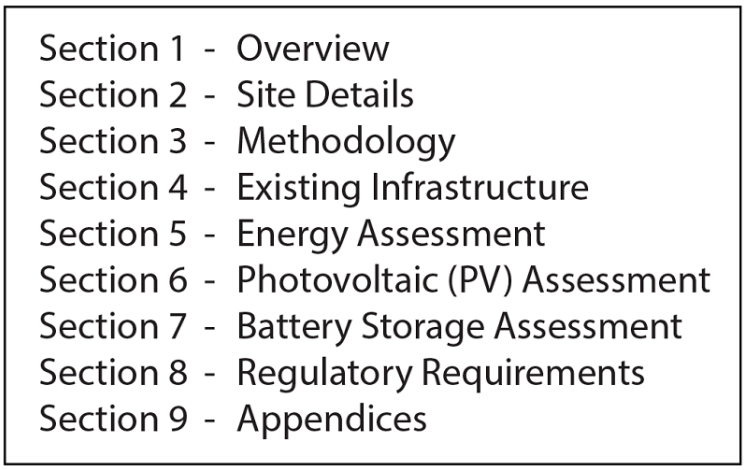
Refer to content page 6.3

The correct answer is:
Section 1 – Overview

Question 6

Not answered

Marked out of 1.00



In a final site survey report having the sections pictured above, which section would the details of required permits and council approvals be listed?

- Section 6 – Photovoltaic (PV) Assessment
- Section 5 – Energy Assessment
- Section 3 – Methodology
- Section 8 – Regulatory Requirements
- Section 1 – Overview
- Section 4 – Existing Infrastructure
- Section 2 – Site Details
- Section 9 – Appendices
- Section 7 – Battery Storage Assessment

Your answer is incorrect.

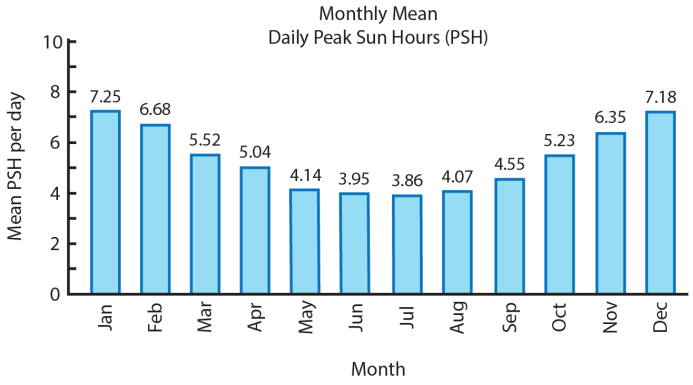
Refer to content page 6.3

The correct answer is:
Section 8 – Regulatory Requirements

Question 7

Not answered

Marked out of 1.00



Interpret the irradiation chart to identify the average yearly irradiation for that location.
Provide your answer in PSH, correctly rounded to three significant figures.

Answer: ✖ PSH

7.25 + 6.68 + 5.52 + 5.04 + 4.14 + 3.95 + 3.86 + 4.07 + 4.55 + 5.23 + 6.35 + 7.18 = 63.82

63.82/12 = 5.318 = 5.32 PSH

Question 8

Not answered

Marked out of 1.00

The daily irradiation of a fixed PV array can vary due to:

- the time of year
- inverter efficiency
- the time of day
- voltage drop

Your answer is incorrect.

The irradiation of a fixed PV array will not be affected by voltage drop or inverter efficiency, but will vary based on the solar window.

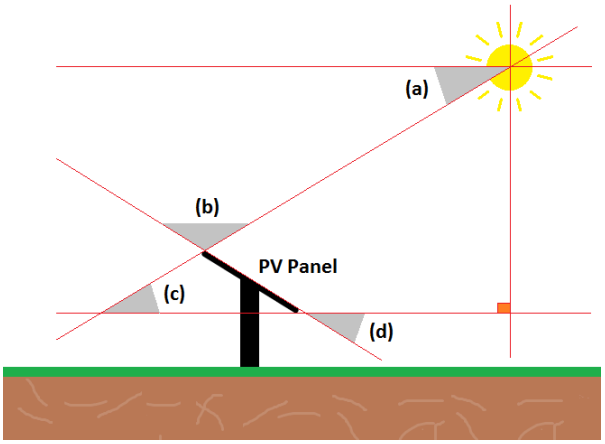
Refer to content page 6.2 for further guidance.

The correct answer is:
the time of year

Question 9

Not answered

Marked out of 1.00



In the diagram above. Which letter indicates the tilt angle of the PV panel?

- (b)
- (d)
- (a)
- (c)

Your answer is incorrect.

The tilt angle is the angle between the horizontal plane and the plane of a photovoltaic module. Refer to content page 6.2 for further guidance.

The correct answer is:
(d)

Question 10

Not answered

Marked out of 1.00

When installing PV arrays, a typical control measure used to reduce the risk of falling from a roof top is:

- conducting work from an EWP
- the use of a safety harness
- the use of non-slip sandshoes
- the use of a safety observer

Your answer is incorrect.

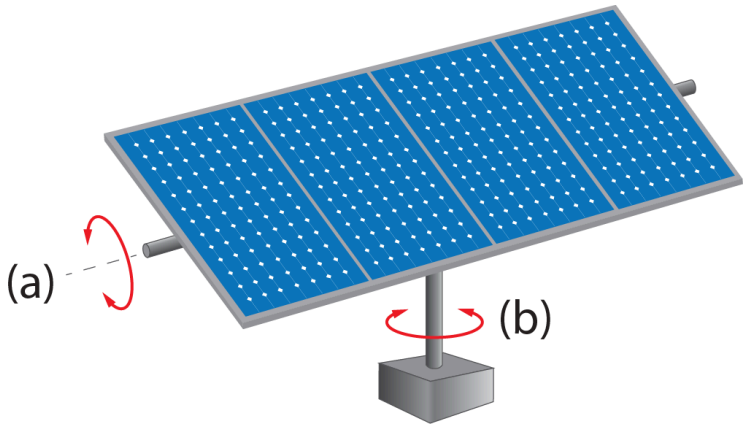
Refer to content page 6.1 for further guidance.

The correct answer is:
the use of a safety harness

Question 11

Not answered

Marked out of 1.00



For the solar tracking system illustrated above, what does (a) indicate?

- Longitude adjustment
- Zenith adjustment
- Orientation adjustment
- Tilt angle adjustment

Your answer is incorrect.

Refer to content page 6.2

The correct answer is:
Tilt angle adjustment

Question 12

Not answered

Marked out of 1.00

Which of the following is a type of passive fall protection?

- Safety gates
- Guardrails
- Safety netting
- All of these

Your answer is incorrect.

Refer to content page 6.1 and/or Industry Codes of Practice for further guidance.

The correct answer is:
All of these

Question 13

Not answered

Marked out of 1.00

Which of the following are economic factors that should be considered as part of a site survey?

- Upfront costs
- Government incentives
- All of these are correct
- Payback period

Your answer is incorrect.

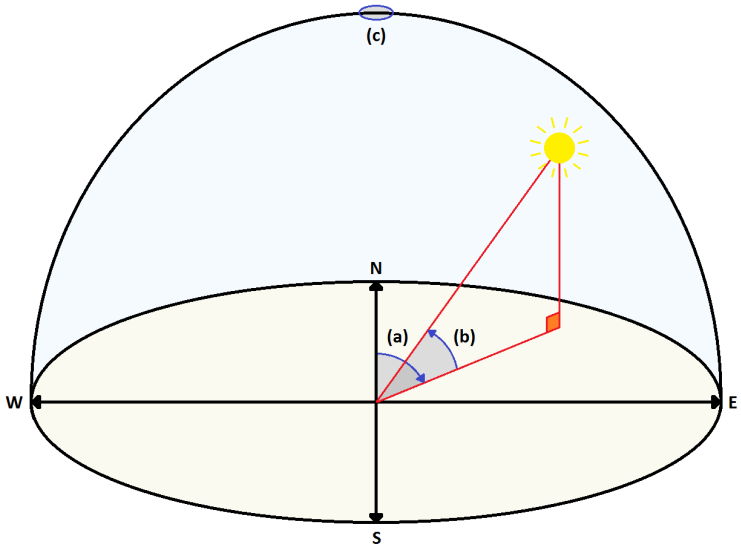
Refer to content page 6.1

The correct answer is:
All of these are correct

Question 14

Not answered

Marked out of 1.00



In relation to the diagram above, what does (b) represent?

- The azimuth angle
- The zenith
- The tilt angle
- The altitude angle

Your answer is incorrect.

The altitude angle is the angle between the horizon and the sun. Refer to content page 6.2 for further guidance.

The correct answer is: The altitude angle

Question 15

Not answered

Marked out of 1.00

To achieve optimal irradiation in Australia, PV panels should be oriented to face true:

- north
- east
- west
- south

Your answer is incorrect.

Refer to content page 6.2

The correct answer is:
north

Question 16

Not answered

Marked out of 1.00

When surveying a roof for a proposed PV array, the available roof space will determine:

- the ongoing shading and soiling of the array
- All of these are correct
- the maximum number of panels for the array
- the ease of access for maintenance purposes

Your answer is incorrect.

Refer to content page 6.1.

The correct answer is: the maximum number of panels for the array

Question 17

Not answered

Marked out of 1.00

Which of the following is the best method to identify potential locations for a PV array at a given site?

- Consult the local council
- Walk-through site inspection
- Review climate data
- Consult the network provider

Your answer is incorrect.

Refer to content page 6.1.

The correct answer is:
Walk-through site inspection

Question 18

Not answered

Marked out of 1.00

What is the purpose of solar tracking systems in PV installations?

- To maximise the irradiation of the array
- To reduce the operating temperature of the array
- To mitigate the effect of shading and cloud cover
- To protect the array from harsh weather conditions

Your answer is incorrect.

Refer to content page 6.2

The correct answer is: To maximise the irradiation of the array

Question 19

Not answered

Marked out of 1.00

What is the advantage of using solar tracking systems in PV installations?

- Increased durability
- Reduced installation costs
- Less maintenance required
- Increased energy production

Your answer is incorrect.

Refer to content page 6.2

The correct answer is:
Increased energy production

Question 20

Not answered

Marked out of 1.00

How can you determine irradiance at a particular site?

- Walk-through site inspection
- Consult the client
- Consult the network provider
- Review relevant solar data

Your answer is incorrect.

Refer to content page 6.1.

The correct answer is:
Review relevant solar data

Question 21

Not answered

Marked out of 1.00

Which of the following factors will cause variations in the irradiance at the surface of a fixed PV array?

- Time of day
- Cloud cover
- Shading
- All of these

Your answer is incorrect.

The irradiance arriving at the surface of a fixed PV array will not be affected by voltage drop or cell efficiency, but will vary due to seasonal changes.

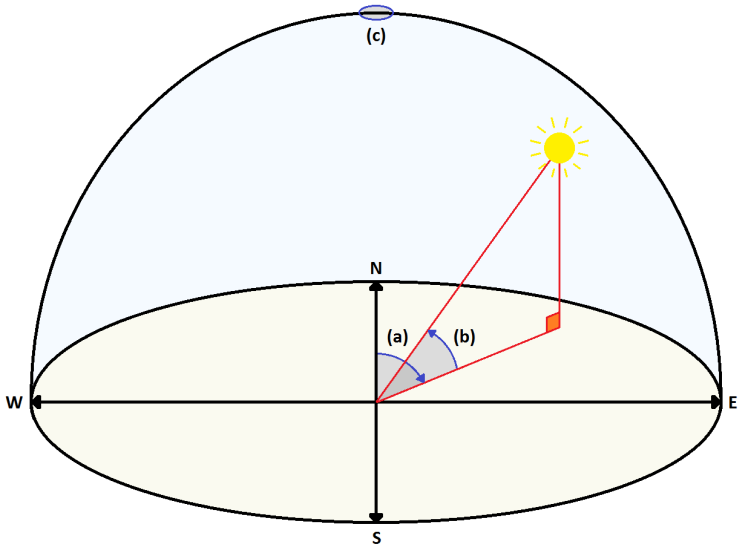
Refer to content page 6.2 for further guidance.

The correct answer is:
All of these

Question 22

Not answered

Marked out of 1.00



In relation to the diagram above, what does (a) represent?

- The zenith
- The altitude angle
- The tilt angle
- The azimuth angle

Your answer is incorrect.

The azimuth angle is the angle between the sun and true north in a clockwise direction. Refer to content page 6.2 for further guidance.

The correct answer is: The azimuth angle

Started on	Thursday, 31 October 2024, 4:37 PM
State	Finished
Completed on	Thursday, 31 October 2024, 4:37 PM
Time taken	14 secs
Grade	**0.00** out of 14.00 (**0**%)

Question 1

Not answered

Marked out of 1.00

Which of the following methods should be used to evaluate the energy usage at a site?

- Conduct a 'walk through' inspection of the site
- Review site plans and architectural drawings
- Review a selection of energy bills
- All of the these are correct

Your answer is incorrect.

Refer to content page 5.2

The correct answer is:
Review a selection of energy bills

Question 2

Not answered

Marked out of 1.00

Which of the following measures will improve the energy efficiency of an existing building?

- Installing air conditioning
- Replacing the main switchboard
- Installing thermal insulation
- Replacing the electrical wiring

Your answer is incorrect.

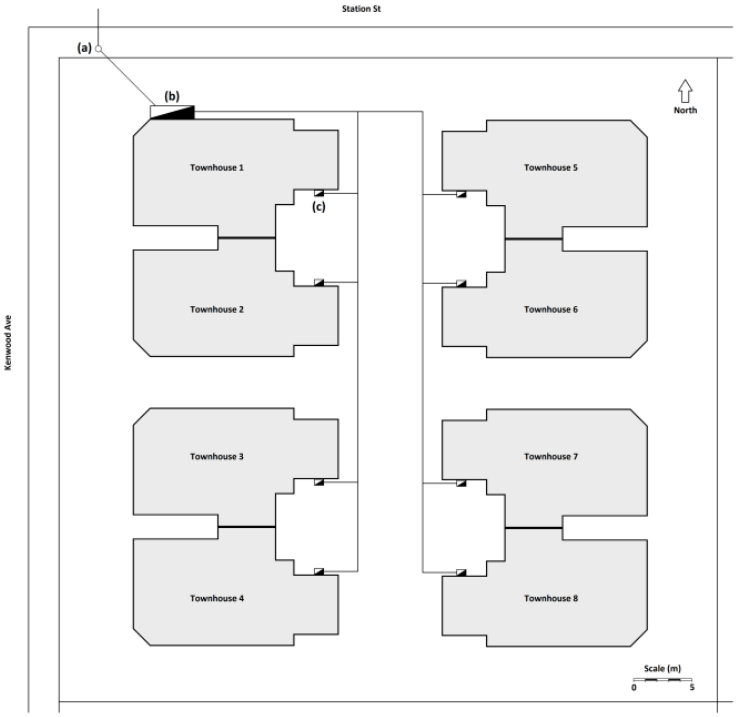
Refer to content page 5.2

The correct answer is:
Installing thermal insulation

Question 3

Not answered

Marked out of 1.00



What type of electrical infrastructure is indicated by the letter (c) on the site plan pictured above?

- A distribution switchboard
- The point of supply
- The main switchboard
- A final subcircuit

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:
A distribution switchboard

Question 4

Not answered

Marked out of 1.00

Which of the following factors will affect the amount of energy consumed in a building?

- The practices and awareness of the inhabitants
- The efficiency of the appliances used in the building
- The construction and design of the building
- All of these

Your answer is incorrect.

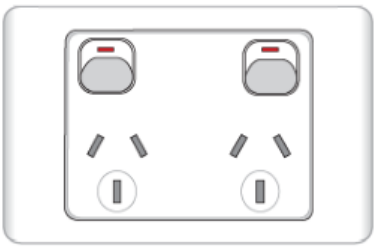
Refer to content page 5.2

The correct answer is:
All of these

Question 5

Not answered

Marked out of 1.00



What is the purpose of the item above in residential installations?

- Provides residents with access to hot water
- Converts electrical energy into mechanical energy
- Converts electrical energy into electromagnetic energy
- Allows residents to use portable appliances

Your answer is incorrect.

The correct answer is:
Allows residents to use portable appliances

Question 6

Not answered

Marked out of 1.00

Which of the following information should be documented when evaluating the existing electrical infrastructure at a site?

- Number of supply phases
- Consumer mains cable size
- Locations of switchboards
- All of the these are correct

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:
All of the these are correct

Question 7

Not answered

Marked out of 1.00

In Australia, what is the standard voltage of a single-phase residential supply?

- 230 V
- 440 V
- 110 V
- 400 V

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:
230 V

Question 8

Not answered

Marked out of 1.00

In Australia, what is the standard voltage of a three-phase residential supply?

- 400 V
- 440 V
- 110 V
- 230 V

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:
400 V

Question 9

Not answered

Marked out of 1.00

Which of the following techniques could be used to reduce the total energy consumed by a lighting circuit?

- Replacing the incandescent lamps with LEDs
- Installing shades and screens to prevent direct sunlight coming through windows
- All of these
- Installing thermal insulation in walls and ceilings

Your answer is incorrect.

Refer to content page 5.2

The correct answer is:
Replacing the incandescent lamps with LEDs

Question 10

Not answered

Marked out of 1.00

Along with electricity, another common energy service supplied to domestic residences in Australia is:

- hydrothermal
- nuclear
- diesel
- gas

Your answer is incorrect.

Refer to content page 5.1

The correct answer is:
gas

Question 11

Not answered

Marked out of 1.00

Motion sensors and timers can be retrofitted into existing buildings to improve energy efficiency by reducing:

- the quantity of waste products being produced
- unnecessary usage of equipment
- the amount of energy needed to operate equipment
- reliance on fossil-fuels

Your answer is incorrect.

Refer to content page 5.2

The correct answer is:
unnecessary usage of equipment

Question 12

Not answered

Marked out of 1.00

Which of the following methods should be used to evaluate the electrical infrastructure at a site?

- Conduct a 'walk through' inspection of the site
- Review site plans and architectural drawings
- All of the these are correct
- Consult the client

Your answer is incorrect.

Refer to content page 5.1

The correct answer is: All of the these are correct

Question 13

Not answered

Marked out of 1.00

Which of the following methods would be most effective at reducing the reliance of an electrical installation on non-sustainable energy sources?

- Installing thermal insulation
- Installing motion sensors and timers to control equipment
- Installing a PV power system
- Installing ultra-low flow shower heads

Your answer is incorrect.

Refer to content page 5.2

The correct answer is:
Installing a PV power system

Question 14

Not answered

Marked out of 1.00

Which of the following techniques can be used to reduce the need to use artificial lighting?

- Installing a timer to control the lighting circuit
- Replacing incandescent lamps with LEDs
- Installing thermal insulation in ceilings
- Installing additional windows and skylights

Your answer is incorrect.

Refer to content page 5.2

The correct answer is:
Installing additional windows and skylights

Started on	Thursday, 31 October 2024, 4:36 PM
State	Finished
Completed on	Thursday, 31 October 2024, 4:37 PM
Time taken	13 secs
Grade	**0.00** out of 18.00 (**0**%)

Question 1

Not answered

Marked out of 1.00

The main objective of workplace health and safety legislation and regulations is to provide a framework for:

- prosecuting those persons responsible for workplace accidents
- safeguarding the health and safety of persons at home and in the workplace
- safeguarding the health and safety of workers and workplaces
- eliminating all hazards and risks from a workplace

Your answer is incorrect.

Refer to content page 4.1 and State/Territory health and safety regulations for further guidance.

The correct answer is: safeguarding the health and safety of workers and workplaces

Question 2

Not answered

Marked out of 1.00

Who is permitted to remove a personal danger tag from an electrical isolator?

- The site surveyor
- The person who applied the tag
- Any of these people
- Any licensed electrician

Your answer is incorrect.

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

The correct answer is: The person who applied the tag

Question 3

Not answered

Marked out of 1.00

Who is responsible for providing a worker with personal protective equipment (PPE)?

- The health and safety committee
- The employer
- The workplace health and safety authority
- The worker

Your answer is incorrect.

Refer to content page 4.1 and State/Territory health and safety regulations for further guidance.

The correct answer is:
The employer

Question 4

Not answered

Marked out of 1.00

The main factors affecting the severity of an electric shock are the magnitude of current, the path the current takes through the body, and the:

- ambient temperature
- resistance of the earth
- relative humidity
- duration of exposure

Your answer is incorrect.

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

The correct answer is:
duration of exposure

Question 5

Not answered

Marked out of 1.00

When carrying out a risk assessment, the first step is to:

- assess the risks
- determine suitable risk control measures
- eliminate the hazards
- identify the hazards

Your answer is incorrect.

Refer to content page 4.2 and State/Territory health and safety regulations for further guidance.

The correct answer is:
identify the hazards

Question 6

Not answered

Marked out of 1.00

Which of the following hazards would likely be present on the rooftop of a residential grid-connect worksite?

- Manual handling
- UV radiation
- All of these
- Working at heights

Your answer is incorrect.

Refer to content page 4.3 and State/Territory health and safety regulations for further guidance.

The correct answer is:
All of these

Question 7

Not answered

Marked out of 1.00

Which of the following Australian Standards specifies the requirements for working safely on and near low voltage electrical installations and equipment?

- AS/NZS 5033
- AS/NZS 2076
- AS/NZS 3001
- AS/NZS 4836

Your answer is incorrect.

Refer to content page 4.1

The correct answer is:
AS/NZS 4836

Question 8

Not answered

Marked out of 1.00

Under workplace health and safety legislation and regulations, workers are:

- required to follow every instruction given by the employer
- solely responsible for their own safety in the workplace
- required to take reasonable care of their own safety in the workplace
- not responsible for their own safety in the workplace

Your answer is incorrect.

Refer to the WHS Act 2011 Section 28 (in applicable jurisdictions).

Refer to content page 4.2 and State/Territory health and safety regulations for further guidance.

The correct answer is: required to take reasonable care of their own safety in the workplace

Question 9

Not answered

Marked out of 1.00

Which of the following Safe Work Australia Model Codes of Practice would be highly relevant to a solar installer?

- All of these are correct
- Managing electrical risks in the workplace
- How to manage and control asbestos in the workplace
- Managing the risk of falls at workplaces

Your answer is incorrect.

Refer to content page 4.1 and Safe Work Australia website for further guidance.

The correct answer is:
All of these are correct

Question 10

Not answered

Marked out of 1.00

One of the underlying principles of workplace health and safety is to:

- prevent workers from working unsafely
- all of these
- reduce workplace accidents and injuries
- remove all hazards from workplaces

Your answer is incorrect.

Refer to content page 4.1 and State/Territory health and safety regulations for further guidance.

The correct answer is:
reduce workplace accidents and injuries

Question 11

Not answered

Marked out of 1.00

Which of the following types of workplace health and safety documents would be most suitable for determining a practical, industry-approved method of dealing with a specific hazard?

- A regulation
- An Act
- A code of practice
- An Australian Standard

Your answer is incorrect.

Refer to content page 4.1 and State/Territory health and safety regulations for further guidance.

The correct answer is:
A code of practice

Question 12

Not answered

Marked out of 1.00

According to the hierarchy of controls, which of the following is the most preferred method of dealing with a workplace hazard?

- Personal protective equipment (PPE)
- Elimination
- Substitution
- Engineering controls

Your answer is incorrect.

Refer to content page 4.2 and State/Territory health and safety regulations for further guidance.

The correct answer is:
Elimination

Question 13

Not answered

Marked out of 1.00

Which of the following factors are likely to increase the chance of an electrical accident?

- [ ] Tiredness
- [ ] Stress
- [ ] All of these
- [ ] Distraction

Your answer is incorrect.

Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

The correct answer is:
All of these

Question 14

Not answered

Marked out of 1.00

Which of the following hazards would typically be present whilst carrying out electrical maintenance on a residential rooftop PV array?

- ( ) Working at heights
- ( ) All of these
- ( ) Live electrical parts
- ( ) UV radiation

Your answer is incorrect.

Refer to content page 4.3 and State/Territory health and safety regulations for further guidance.

The correct answer is:
All of these

Question 15

Not answered

Marked out of 1.00

A risk management plan should:

- be specific to the work environment
- be generic and transferrable to any worksite
- eliminate all risks from a workplace
- not be changed once it is implemented

Your answer is incorrect.

Refer to content page 4.2 and State/Territory health and safety regulations for further guidance.

The correct answer is:
be specific to the work environment

Question 16

Not answered

Marked out of 1.00

Instructing workers in how to safely operate a power tool is an example of:

- using engineering controls to reduce risk
- isolating workers from the risk
- eliminating the risk
- using administrative controls to reduce risk

Your answer is incorrect.

Refer to content page 4.2 and State/Territory health and safety regulations for further guidance.

The correct answer is:
using administrative controls to reduce risk

Question 17

Not answered

Marked out of 1.00

Which of the following characteristics are likely to increase the chance of an electrical accident?

- Concentration
- Confidence
- Attention to detail
- Impatience

Your answer is incorrect.

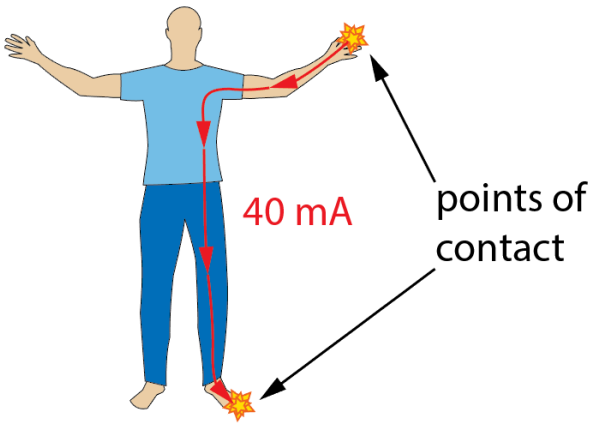
Refer to content page 4.4 and/or Industry Codes of Practice for further guidance.

The correct answer is:
Impatience

Question 18

Not answered

Marked out of 1.00



If the duration of the electric shock, illustrated above, was 3 seconds, what would be the likely physiological effects on the victim?

- Severe burns, ventricular fibrillation and cardiac arrest
- No effects, the shock would be most likely below the level of perception
- Muscular contraction, shortness of breath, and possibly some mild burns
- Mild startling, but no serious effects

Your answer is incorrect.

Refer to content page 5.1 and/or Industry Codes of Practice for further guidance.

The correct answer is:
Severe burns, ventricular fibrillation and cardiac arrest