# Topic 1 Lesson 1 Assessment

- 1) To Improve energy management practices, it need to
  - a) Establish an energy baseline and use it to estimate savings from energy-saving measures
  - b) Build better business cases for your efficiency projects
  - c) Measure and verify guaranteed savings for energy performance contracts, building upgrade finance, or similar

Insert question

EditSplit button!

- 2) The meter with advanced metering devices in which current and voltage act on solid-state electronic elements to produce an output proportional to the energy measured. is
  - a) electro-mechanical meters
  - b) Solid-state electric (static) meters
  - c) transformer-operated meters

Insert question

EditSplit button! 1 point

- 3) Measurement parameters are
  - a) active energy
  - b) reactive energy
  - c) active power
  - d) reactive power
  - e) apparent power
  - f) power factor –
  - g) voltage
  - h) current
  - i) harmonic distortions
  - j) all above

Insert question

EditSplit button!
1 point

- 4) The potential users of Automated measurement and verification (M&V) for ESC creation are
  - a) Facilities manager
  - b) Building manager
  - c) Process operator
  - d) External consultant
  - e) Process operator

- f) Accredited certificate provider
- g) Company director
- h) Sustainability officers

Insert question

EditSplit button!

- 5) Energy savings certificates
  - a) Measure and verify guaranteed savings for energy performance contracts, building upgrade finance, or simila
  - b) Support your compliance with the Commercial Building Disclosure regulations, which include obtaining a NABERS rating
  - c) Gain a financial advantage provide data for creation of energy savings certificates under the NSW Energy Savings Scheme

Insert question

EditSplit button!

- 6) The system that Interfaces with any existing control and management systems, e.g. BMS, PLC, SCADA is
  - a) Commercial Building Disclosure Program
  - b) Building management and control systems
  - c) Optimal facility operation

Insert question

EditSplit button!

- 7) the meters which are directly connected to electrical circuits, with a rated capacity up to 100 amps, which is passed through the meter without a CT.
  - a) direct-connected (whole current) meters
  - b) transformer-operated meters
  - c) Solid-state electric (static) meters –

Insert question

EditSplit button!

8)

Instrument transformer accuracy classes are set out in

- a) AS 1284.1
- b) AS 62053.21
- c) AS 60044.1-2007

Insert question

EditSplit button!
1 point

9) The group which provides reports on energy consumption, energy performance, allocation of costs etc is
a) Engineering
b) Maintenance team
c) ICT Support
d) Key person or group
Insert question
EditSplit button!  1 point
10) The poor result causing excessive alerts or alarms, Alerts and alarms ignored or overridden, leading to inefficiencies in operations is caused by application of
a) Engagy matau killing uppouts
a) Energy meter billing reports b) Analytics and diagnostics and fault
b) Analytics and diagnostics and fault detection
c) Corporate sustainability reporting
8AWGLJH
Version 1 (Published 2/15/2024 1:49 AM)
Access Links
Test Link <a href="https://www.classroomclipboard.com/503511/Test/14EEB540-AD88-416A-8776-09EF7ACBAD08">https://www.classroomclipboard.com/503511/Test/14EEB540-AD88-416A-8776-09EF7ACBAD08</a>
Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
1)
Where controlled load functionality is required and Type ( ) metering is installed
a) 3
b) 4
c) 5
d) 6
Insert question
EditSplit button! 1 point
<ul> <li>2) When an E2/E2c meter is used as the control mechanism for the controlled load circuits of a customer's installation, the precautions outlined in this clause must be adhered to.</li> <li>( ) of an E2/E2c meter must be utilised (i.e. primary and controlled load elements)</li> </ul>

a) Both elements	
b) E2 only	
c) E2c only	
Insert question	
	EditSplit button!
3) Any gas meter, fittings, enclosures or other obstructions installed below t	·
metering panel must not project further than	ine service
from the face of the wall on or in which the service metering panel is mo	ounted.
a) 100 mm	
a) 100 mm	
b) 200 mm	
c) 300 mm	
d) 400 mm	
Insert question	EditSplit button!
	1 point
4	
a) 1.5	
b) 3	
c) 5	
d) 7	
Insert question	EditColit buttool
	EditSplit button!
5) Metering equipment can be installed behind locked gates or doors withou	•
) TT	
a) True	
b) False	
Insert question	EditSplit button!
	1 point
6) The maximum current rating of any fuse carrier and fuse base combination	
assembly) used for a meter protection device shall always be equal to or g	greater than the
fuse element rating, but in no case less than ( ) amp.	
a) 100	
b) 150	
c) 200	
d) 250	
Insert question	
•	EditSplit button!
7\	1 point
7) Metering CTs must be:	
Motornia C13 must be.	

b) Mounted near the meters and switchboard equipment.	
c) Installed on the load side of the service protection device.	
d) Installed on the supply side of the service protection device.	
Insert question	EditSplit button!
8) Maximum route length of Current Circuit Wiring (m) for Maximum de	mands in excess of 4
\ 10 A	
a) 10 A	
b) 20 A	
c) 40 A	
d) 55 A	
Insert question	EditSplit button!
<ul><li>(a) The contactor must comply with the requirements of clause titles 'Le Equipment' of the Service and Installation Rules of NSW.</li><li>(b) It must be controlled and protected by a suitably rated ( ) circuit be which have provision for sealing.</li></ul>	reaker, both of
a) 10A	
a) 10A b) 15A	
,	
b) 15A	
b) 15A c) 20A	EditSplit button! 1 point
b) 15A c) 20A d) 25A	
b) 15A c) 20A d) 25A Insert question	
b) 15A c) 20A d) 25A Insert question  10) Cables from bus bars to fuses are ( ) and a minimum. of ( ) SDI:	
b) 15A c) 20A d) 25A Insert question $10) \text{ Cables from bus bars to fuses are ( ) and a minimum. of ( ) SDI:}$ $a) \leq 500 \text{mm}, \ 10 \text{ sqmm}$	
b) 15A c) 20A d) 25A Insert question   10) Cables from bus bars to fuses are ( ) and a minimum. of ( ) SDI: $a) \leq 500 \text{mm}, \ 10 \text{ sqmm}$ $b) \leq 500 \text{mm}, \ 15 \text{ sqmm}$	
b) 15A c) 20A d) 25A Insert question  10) Cables from bus bars to fuses are ( ) and a minimum. of ( ) SDI:  a) $\leq$ 500mm, 10 sqmm b) $\leq$ 500mm, 15 sqmm c) $\leq$ 300mm, 10 sqmm	1 point

## SBD9TGE

Access Links
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Topic 1 Lesson 4 Test
1) The standard Din rail size for installing meters is
a) 20 mm
b) 35 mm
c) 50 mm
Insert question
EditSplit butto 1 po
2) Use three #( ) screws (not supplied) to mount the screw type Energy Meter to the inside of the enclosure.
a) 4
b) 6
c) 8
d) 10
Insert question
EditSplit butto
3) To avoid distortion, use ( ) wires for control power and voltage inputs. in energy meters
a) Series
b) Parallel
Insert question
EditSplit butto 1 poi
4) This circuit diagram shows the

- a) Direct Connect Control Power (Phase to Neutral)
- b) Direct Connect Control Power (Phase to Phase)
- c) Control Power Transformer (CPT) Connection Insert question

EditSplit button! 1 point

5) This connection is

- a) 3-Phase 4-Wire Wye Direct Voltage Input Connection 3 CT
- b) 1-Phase Direct Voltage Connection 2 CT
- c) 3-Phase 3-Wire 3 CT no PT

Insert question

EditSplit button!
1 point

- 6) For selecting fuses and circuit breakers for meter use the following criteria:
  - a) Current interrupt capacity should be selected based on the installation category and fault current capability.
  - b) Over-current protection should be selected with a time delay
  - c) The voltage rating should be sufficient for the input voltage applied.
  - d) Provide over-current protection and disconnecting devices appropriate for the wiring.
  - e) Al above

### 79G7W

Version 1 (Published 2/16/2024 12:45 AM)

#### **Access Links**

Test Link <a href="https://www.classroomclipboard.com/503511/Test/35ED6F7B-6ED0-">https://www.classroomclipboard.com/503511/Test/35ED6F7B-6ED0-</a>

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Topic 1 Lesson 5 assessment

### **BGW3TES**

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## 2B9E7J

Version 1 (Published 2/16/2024 1:48 AM)

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Test Link	https://www.classroomclipboard.com/503511/Test/95D6F139-19A6-4929-A0DE-9769192D01DD
1)	Pre test visual inspection includes
	a) The location is correct • Isolation is correct
	b) Labels are installed • No visible damage to equipment
	c) • Equipment is ready for testing • Wiring is complete with no visible damage
	d) • Connections are correct, complete and mechanically sound • Alternative supplies are identified and managed
	e) • Persons and animals are clear of any object that may become energised during testing • Workers notified of testing in progress
	f) All above
Xxxxxx	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Topic 1	Lesson 7 assessment
per j	culated loads greater than ( ) per phase or measured loads greater than ( ) phase shall hire current transformer metering.
a) 8	80 A ,80 A
,	30 A ,100 A
,	00 A ,80 A
	100A,200A question
	ı

All metering shall be connected with suitable active isolation devices conn side of the metering to allow safe access to the metering equipment	nected to the ( )
a) Line	
b) Consumer	
Insert question	EditSplit button!
2)	1 point
3) Direct connected metering shall be installed on the( ) of the individual switches a	l installation's main
a) Consumer side	
b) line side	
Insert question	
	EditSplit button! 1 point
4)	i point
A minimum clearance of ( )mm is required between any item of meterin equipment and the edge of the panel	ng or control
a) 10	
b) 15	
c) 25	
d) 50	
Insert question	
	EditSplit button! 1 point
5) Current Transformers to be installed in low voltage switchboards that form metering installation, shall be manufactured and type tested to AS60044.1 ) with the availability of a Type Test Certificate	-
a) 0.2S	
b) 0.4S	
c) 0.5S	
d) 0.6S	
Insert question	
	EditSplit button!
6) For Rated Burden of 15 VA, Max Circuit Length 2.5 mm <sup>2</sup> for meter circu	1 point
o, i or raice burden or 15 v.A., was encur Lengur 2.5 min for meter effect	111 1011gul 18

a) 10m	
b) 20m	
c) 30m	
d) 45m	
Insert question	
EditSplit button 1 poir	
7)	
In general, meter panels for current transformer metering shall be installed remote from the switchboard.	3
a) True	
b) False	
Insert question	
EditSplit button	
1 poir 8)	π
The minimum spacing between revenue meters/meter wiring and conductors carrying heavy currents of Conductor Current 400A is	
a) 125	
b) 250	
c) 375	
d) 500	
Insert question	
EditSplit button 1 poir	
9)	
The insulation on all voltage and current meter wiring should be stripped back 15mm (30mm where doubled up 2.5mm2 is used) to ensure terminal screws make positive contact with the bare conductor	
a) True	
b) False	
Insert question  EditSplit button	ı
1 poir	
10)	
Cable tails through meter panels should have a minimum length of ( )to allow for	

connection into the meters.

- a) 100 mm
- b) 150 mm
- c) 200 mm
- d) 250 mm

### **J7LLGN**

### **Access Links**

Test Link

https://www.classroomclipboard.com/503511/Test/963B24DC-D718-4C0D-B2C2-D6D1D0009F0D

### Topic 1 Lesson 8 Test

1

) Always locate your generator in a well ventilated area..Be sure the total electric load is withinthe manufacturers rating.

Use an indoor/outdoor, grounded (three prong) extension cord, properly sized to carry the electric load and keep it out of

the way to prevent someone from tripping on it. Never plug your generator into an indoor or outdoor home or business outlet.

Don't overload your generator. Remember, more power is needed to start appliances, particularly those with a motor inside, than is needed to keep them running. To be sure your generator can handle the load, check the owner's manual.

- a) True
- b) False

## **HSXFF**

Version 1 (Published 2/16/2024 3:04 AM)

### **Access Links**

Test Link <a href="https://www.classroomclipboard.com/503511/Test/945CA1BF-831A-4CC2-9286-C078646FA2F6">https://www.classroomclipboard.com/503511/Test/945CA1BF-831A-4CC2-9286-C078646FA2F6</a>

Topic 1 Lesson 9 Test

## Dead testing (before connection of the supply)

- 1) Site applied insulation
- 2) **b** Main and supplementary bonding continuity
- 3) d Insulation resistance
- 4) **g** Protection by barriers and enclosures
- 5) Insulation of non-conducting floors and walls
- 6) Polarity
- 7) I . Earth electrode resistance if an earth electrode resistance tester is used
- 8) Protection by separation
- 9) a Continuity of protective conductors
- 10) c Continuity of ring final circuit conductors

### 6NPNM8A

Version 1 (Published 2/16/2024 3:24 AM)

### **Access Links**

Test Link https://www.classroomclipboard.com/503511/Test/B473DEBD-4921-4024-A8B1-1CDC13D2766B

Lesson 10 Test

### YYD6H

Version 2 (Published 2/16/2024 7:45 PM)

### **Access Links**

Test Link <a href="https://www.classroomclipboard.com/503511/Test/4806A4A5-F32D-4DCC-A3D6-C77A90C69780">https://www.classroomclipboard.com/503511/Test/4806A4A5-F32D-4DCC-A3D6-C77A90C69780</a>

- 1) The hazards associated with working on or near energised (live) electrical equipment.
  - a) Electric Shock

Ins	b) arc flash explosion c) fire d) slip, trip and fall sert question
2)	The light and heat produced from an arc fault - created by a short circuit between two conductors; phase to phase or phase to earth is
Ins	a) Magnetic radiation b) Electric wave radiation c) Arc flash sert question
3)	The radiant energy released by an electric arc is capable of permanently injuring or killing people. Arc flashes may cause severe burns to the skin and flash burns to the face and eyes. Inhaled hot gases and molten particles can cause serious internal burns to the throat and lungs. Injury can also occur through the impact from flying debris and dislodged components, or by the concussive blast.
Ins	a) True b) False sert question
4)	Working de-energised eliminates significant electrical risks. The following are the key steps for an effective isolation of electrical supply

a) Consulationb) Isolation

d) Tagging
e) Testing
f) All above
Insert question

c) Securing the isolation:

The safe work procedure is ( ) before you touch' must be applied at all time

a) Test for 'dead
b) Live testing

### Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

c) Visual inspection

Lesson 11 Test

In the space provided below, develop a step-by-step procedure for safely shutting down and isolating the alternative supply system. Document as many steps as you feel are required to safely perform the isolation in accordance with AS/NZS 4836.

### LWFA83

Version 1 (Published 2/16/2024 3:37 AM)

### **Access Links**

Test <a href="https://www.classroomclipboard.com/503511/Test/6EB4ADAD-4E98-4A3C-A9F5-Link">https://www.classroomclipboard.com/503511/Test/6EB4ADAD-4E98-4A3C-A9F5-Link</a> <a href="53ADEF0EBD1A">53ADEF0EBD1A</a>

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Topic 1 Lesson 12 Test

### 5SNN6E

Version 1 (Published 2/16/2024 7:34 PM)

### **Access Links**

Test <a href="https://www.classroomclipboard.com/503511/Test/BBEB9797-8525-4783-B6BF-Link">https://www.classroomclipboard.com/503511/Test/BBEB9797-8525-4783-B6BF-Link</a>
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1)

AMS is an accumulation meter suitable for ( ) installations in the Ausgrid network area. I

a) Flat Rate (Type 6 BASIC)
b) Variable Rate

c) Flat Rate (Type 5 BASIC) Insert question	EditSplit button!
2)	. po
The HLA is suitable for ( ) installations in the Ausgrid network ar	rea.
a) Flat Rate (Type 6 BASIC)	
b) Flat Rate (Type 5 BASIC)	
c) variable rate	
Insert question	EditSplit button!
3)	·
The AMT is ( ) accumulation meter.	
<ul> <li>a) Single phase single elements</li> <li>b) Single phase multi element</li> <li>c) a polyphase multi elements</li> <li>d) a polyphase single element</li> <li>Insert question</li> </ul>	
	EditSplit button! 1 point
4) The HLE is suitable for Flat Rate (Type 6 BASIC) installations in the Ausg  ( ) installations.	·
a) Residential	
b) Commercial	
c) Industrial Insert question	
moert question	EditSplit button! 1 point
5) The following points should be used to ensure correct installation of the me	eter:

- a) Meter seals must not be broken.
- b) Once meter is energised the display will become active
- c) Ensure the metrology LED on the front of the meter is pulsing to indicate energy consumption.

- d) Ensure reverse energy indicators are not showing.
- e) The terminal cover (meter scoop) must be sealed following the installation.
- f) All above

Insert question

EditSplit button! 1 point

- 6) This meter connection is
  - a) Direct connected
  - b) CT metering
  - c) PT metering

