

Knowledge Assessment Resource: UEPOPS430B– Control Permit To Work Operations

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PARTICIPANT CONFIRMATION:

By signing below, I confirm that:

- I have enrolled to undertake the assessments indicated above; and
- The assessment criteria has been explained to me and I am aware that I will be assessed against the criteria outlined within the attached assessment documents.
- I have been given fair notice of the date, time & venue for this assessment, and I am aware of my rights and obligations in relation to the assessment process
- I am satisfied that the assessment was fair and valid.

STUDENT NAME (PLEASE PRINT):

STUDENT SIGNATURE:

DATE: / /

STUDENT IDENTIFICATION
PLEASE PROVIDE PHOTO ID FOR
VERIFICATION BY THE ASSESSOR

DRIVERS LICENCE STATE OF ISSUE:

NUMBER:

HIGH RISK LICENCE STATE OF ISSUE:

NUMBER:

ESI Network Authorisations:



AUSGRID



ENDEAVOUR ENERGY



ESSENTIAL ENERGY

UETTREL16A WORK SAFELY NEAR LIVE ELECTRICAL APPARATUS OUTCOMES: (ASSESSOR USE ONLY)

ASSESSMENT COMPONENT

ASSESSMENT OUTCOME

UEPOPS403B - THEORY/KNOWLEDGE ASSESSMENT



SATISFACTORY



NOT SATISFACTORY

UEPOPS403B - PRACTICAL/ORAL ASSESSMENT



SATISFACTORY



NOT SATISFACTORY

OVERALL ASSESSMENT OUTCOME – UEPOPS403B



COMPETENT



NOT COMPETENT

TRAINER/ASSESSOR NAME (PLEASE PRINT):

TRAINER/ASSESSOR SIGNATURE:

DATE OF ASSESSMENT:

1. ASSESSMENT RESOURCE - VERSION AND PUBLICATION:

Title	UEPOPS430B– Control Permit To Work Operations		
Publication Authorised By	Nicholas Blanch	Issued Version Number	V1.0
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2. ASSESSMENT RESOURCE - PUBLICATION HISTORY:

Previous Versions	Current Version	Date	Author	Description of change
	V1.0	23/09/2016	Nicholas Blanch	Initial Version

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Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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ASSESSMENT INSTRUCTIONS:

TO SUCCESSFULLY COMPLETE THIS ASSESSMENT AND BE "DEEMED" COMPETENT PARTICIPANTS MUST:

- ANSWER ALL KNOWLEDGE ASSESSMENT QUESTIONS CONTAINED WITHIN THE WRITTEN ASSESSMENT RESOURCE TO THE SATISFACTION OF THE ASSESSOR.
- ACHIEVE A MINIMUM MARK OF 100% (IE ALL ANSWERS MUST BE CORRECT). EACH UN-ANSWERED QUESTION IS TO BE MARKED AS INCORRECT).

ASSESSMENT PARTICIPANTS MAY NOT ACCESS ANY REFERENCE MATERIAL DURING THIS PART OF THE ASSESSMENT

NOMINAL ASSESSMENT DURATION: 20 MINUTES

QUESTION 1: (Tick the box/boxes next to the most correct answer – 2 Marks)

In the spaces provided below, write down the five (5) different types or categories that WHS hazards can generally be classified into:

..... Electrical Hazards
 Chemical Hazards
 Thermal Hazards
 vibration/mechanical Hazards
 working at Height Hazards

QUESTION 2: (Tick the box/boxes next to the most correct answer – 2 Marks)

From the table below identify those voltages which would be considered to be "Low Voltage" according to your organisations electrical safety rules.

Voltage Levels	Considered to be Low Voltage under the Electrical Safety Rules (Yes/No)	
Any voltage 12 volts and 40 volts AC	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any voltage between 12 volts and 110 volts DC	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any voltage between 50 volts and 1000 volts AC	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Any voltage between 120 volts and 1500 volts DC	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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QUESTION 3: (Tick the box/boxes next to the most correct answer – 2 Marks)

From the table below identify those voltages which would be considered to be "High Voltage" according to your organisations electrical safety rules.

Voltage Levels (AC – Alternating Current/DC – Direct Current)	Considered to be Low Voltage under the Electrical Safety Rules (Yes/No)	
Any voltage exceeding 1 000 volts AC	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Any voltage between 1 500 volts and 11 000 Volts AC	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any voltage exceeding 1 500 volts DC	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any voltage between 1000 volts and 1500 volts DC	<input type="checkbox"/> Yes	<input type="checkbox"/> No

QUESTION 4: (Tick the box/boxes next to the most correct answer – 8 Marks)

In the spaces provided below write down the definition for each of the terms

- A) De-energised To deprive of electrical energy or exhaust the electrical energy from
- B) Isolated Function intended to cut off supply from the whole installation or discrete section of it from every source of electrical energy for safety.
- C) High Voltage Above 1000 V AC (AS 3000 1.4.92)

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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QUESTION 5: (Tick the box/boxes next to the most correct answer – 2 Marks)

From the items listed below select the most appropriate definition for "authorised person"

- a) A person who has acquired through training, qualification, experience, or a combination of them, the knowledge and skills to carry out the task. ☐
- b) A person who has attained a relevant nationally recognized qualification, and who has been licensed by the NSW Department of Fair Trading ☐
- c) A person with technical knowledge or sufficient experience who has been approved, or has the delegated authority to act on behalf of the Network Operator, to perform the duty concerned. ☒
- d) LV or HV overhead conductors which are protected by physical barriers to prevent persons encroaching within the relevant Safe Approach Distances (SAD's) ☐

QUESTION 6: (Tick the box/boxes next to the most correct answer – 4 Marks)

In the spaces provided below write down the definition for each of the terms

A) Electrical Apparatus

The equipment which are operated with electricity

B) Earthed

connected to both the supply neutral and the general mass of earth in accordance with the appropriate requirements of AS3000

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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PART B – Principles of Electricity

QUESTION 7: (Tick the box/boxes next to the most correct answer – 6 Marks)

In the spaces provided below write down the six (6) main mechanisms/processes that can produce an electromotive force (EMF).

- a) Chemical
- b) Electromagnetic Induction
- c) Photovoltaic
- d) Wind Power
- e) Steam Power
- f) _____

QUESTION 8: (Tick the box/boxes next to the most correct answer – 2 Marks)

Given that resistance is proportional to the length and the diameter of the conductor being used in a circuit, identify the correct statements from the items listed below

- a) Long conductors have a greater resistance than short conductors ☐
- b) Short conductors have a greater resistance than long conductors ☐
- c) If the cross sectional area or diameter of a conductor is halved its resistance becomes doubled ☒
- d) Conductors with smaller cross sectional area or diameter have lower resistance values compared to conductors with larger smaller cross sectional area or diameter ☐

QUESTION 9: (Tick the box/boxes next to the most correct answer – 2 Marks)

Given that resistance is proportional to the length and the diameter of the conductor being used in a circuit, identify the correct statements from the items listed below

- a) Long conductors have a greater resistance than short conductors ☒
- b) Short conductors have a greater resistance than long conductors ☐
- c) If the cross sectional area or diameter of a conductor is halved its resistance becomes doubled ☒
- d) Conductors with smaller cross sectional area or diameter have lower resistance values compared to conductors with larger smaller cross sectional area or diameter ☐

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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QUESTION 10: (Tick the box/boxes next to the most correct answer – 6 Marks)

In the table below identify those items which you would consider to be conductive/conductors and those you would consider to be insulators

Material	Conductive	Insulator
Porcelain,	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Free Air	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Copper	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fiberglass /Epoxy	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hair/Clothing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dry Wood/timber	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Reinforced concrete	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ground/Earth	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Damp or wet wood/timber	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The human body	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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PART C – WORKPLACE HEALTH & SAFETY PRINCIPLES

QUESTION 11: (Tick the box/boxes next to the most correct answer – 2 Marks)

Which statutory requirement states that it is the employer's responsibility to provide such information, instruction, training and supervision necessary to ensure the health and safety at work of all employees?

- a) NSW Occupational Health and Safety Regulation 2001
- b) NSW workers compensation act 2011
- c) NSW Workplace Health and Safety Act 2011
- d) NSW Occupational Health and Safety Regulation 2010

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QUESTION 12: (Tick the box/boxes next to the most correct answer – 2 Marks)

From the items listed below, choose the most correct definition for the term "Hazard":

- a) Anything or action that could cause harm or injury to persons at the work site.
- b) The likely hood of an accident happening
- c) The potential for harm or injury to occur

☒
☐
☐

QUESTION 13: (Tick the box/boxes next to the most correct answer – 2 Marks)

From the items listed below, choose the most correct definition for the term "Risk":

- a) The likely hood of any harm or Injury happening
- b) The potential for harm or injury to occur at the worksite
- c) Anything that could cause harm or injury to persons at the work site.

☐
☐
☒

QUESTION 14: (Tick the box/boxes next to the most correct answer – 2 Marks)

Which statutory requirement states that it is the employer's responsibility to provide such information, instruction, training and supervision necessary to ensure the health and safety at work of all employees?

- a) NSW Occupational Health and Safety Regulation 2001
- b) NSW workers compensation act 2011
- c) NSW Workplace Health and Safety Act 2011
- d) NSW Occupational Health and Safety Regulation 2010

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Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

HUNTER
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QUESTION 15: (Tick the box/boxes next to the most correct answer – 6 Marks)

In the spaces provided below write down the five (5) general classifications of workplace health and safety hazards:

- a) Physical Hazards
- b) Ergonomic Hazards
- c) Chemical Hazards
- d) Biological Hazards
- e) Electrical Hazards
- f)

QUESTION 16: (Tick the box/boxes next to the most correct answer – 2 Marks)

Under your organisations HV electrical safety rules, what is the safe approach distance/minimum safe working distance (in mm) that an Authorised PERSON must maintain from any uninsulated part of their body to any exposed conductor with voltage of between 1 000 volts and 11 000 volts ac.

..... 700 mm

QUESTION 17: (Tick the box/boxes next to the correct answers – 3 Marks) – All Sections of This Question MUST be Answered Correctly

Under your organisations HV electrical safety rules, what is the safe approach distance/minimum safe working distance (in mm) that an HV Aware (Instructed) PERSON must maintain from any uninsulated part of their body to any exposed conductor with voltage of up to 1 000 volts ac.

..... 500 mm

QUESTION 18: (Insert the missing words in the spaces provided – 3 Marks)

Under your organisations HV electrical safety rules, what is the safe approach distance/minimum safe working distance (in mm) that an HV Aware (Instructed) PERSON must maintain from any uninsulated part of their body to any exposed conductor with voltage of up to 1 000 volts dc.

..... 150 mm

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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QUESTION 19: (Select the most correct answer– 1 Marks)

The basic safety rule for work on or near High Voltage exposed electrical apparatus states that:

- a) The exposed HV conductors or electrical apparatus must be regarded as alive until advised to the contrary by an Authorised Person ☐
- b) The exposed HV conductors or electrical apparatus must be regarded as alive until isolated, proved de-energised and earthed ☒
- c) The exposed HV conductors or electrical apparatus must be regarded as alive until a clear and visible break, signifying isolation, has been established ☐
- d) The exposed HV conductors or electrical apparatus must be regarded as alive until isolated, proved de-energised, earthed and short-circuited by an approved means ☐

QUESTION 20: (Select the most correct answer– 1 Marks)

Complete the table below by inserting the correct Safe Approach Distances

Safe Approach Distance to exposed conductor (MAD) *	Authorised Persons APC, PIC, CP, Safety Observer	HV aware (instructed) persons
Nominal phase to phase voltage	Safe Approach Distance (mm)	Safe Approach Distance (mm)
LV, below 1 kV ac	500	500
LV, below 1 kV dc	500	500
HV, up to 11kV ac	700	700
Safe Approach Distance to insulated conductor		
LV, below 1 kV ac and dc	contact allowed	500
HV, up to 11kV ac	500mm	500mm
Safe Approach Distance to enclosed conductor (HV and LV)	Arc Flash Protection Boundary	Arc Flash Protection Boundary

Knowledge Assessment Resource:
UEPOPS430B – Control Permit To Work Operations

HUNTER
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QUESTION 21: (Select the most correct answers– 2 Marks)

In the spaces provided below, list the four (4) situations when an Access Permit/Access Authority is required.

1

~~Dis~~ To perform disconnection & reconnection

2

To do system alteration

3

To perform commissioning and phasing

4

To do site specific tasks

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QUESTION 22: (Tick the box/boxes next to the most correct answers – 3 Marks)

From the list below, select the item/s which the Access Permit/Access Authority issuer must advise the Access Permit/Access Authority Recipient (and preferably all persons working on equipment or job for which the Authority is being issued):

- a) a confirmation of the description of the work to be carried out; ☐
- b) the time and date of issue of the access permit/access authority. ☐
- c) the locations where electrical apparatus has been earthed and short-circuited ☐
- d) warnings of adjacent live exposed conductors or electrical apparatus (if applicable) ☒
- e) any screens, tapes / barriers that are erected to define the Work Area ☐

QUESTION 23: (Tick the box/boxes next to the most correct answer – 2 Marks)

From the list below, select the circumstances where an access permit/access authority would be required to perform the work

- a) Electrical maintenance work upon electrical apparatus which will require those performing the work to be within the safe approach distances for the voltage concerned. ☒
- b) General maintenance work being conducted where uninsulated tools/equipment being used may encroach the safe approach distances for the voltage concerned. ☐

QUESTION 24: (Tick the box/boxes next to the most correct answer – 2 Marks)

From the list below, select the item/s that the Access Permit/Access Authority Issuer has a responsibility to confirm prior to issuing the access permit/access authority:

- a) Personally check over the precautions that have been taken to ensure that the high voltage has been de energised & totally Isolated from any supply; ☐
- b) Confirm the high voltage access permit detail to ensure that the electrical apparatus descriptions are correct and in accordance with established labels. ☐
- c) Erect appropriate and adequate warning signs and barriers. ☐
- d) Discuss with the access permit recipient/holder, the work to be done to ensure that the high voltage access permit covers sufficient electrical apparatus to enable the intended work to be performed safely. ☐
- f) Ensure that the access permit recipient/holder understands the location and labelling of any earths to be applied by the work party, which are to be listed on the high voltage access permit and that this understanding agrees with the operator's understanding. ☒

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

HUNTER
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QUESTION 25: (Tick the box/boxes next to the most correct answer – 3 Marks) – All Sections of This Question MUST be Answered Correctly

Under your organisations HV electrical safety rules, persons signing onto an Access Permit/Access Authority must:

- | | | |
|--|--|---|
| a) Understand the instructions given on the work to be undertaken | <input type="checkbox"/> True | <input checked="" type="checkbox"/> False |
| b) Understand the limits of the Access Authority and are aware of any relevant warnings | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| c) Follow any safety directions given by the authorised person in charge of the work | <input type="checkbox"/> True | <input checked="" type="checkbox"/> False |
| d) When leaving or returning to the worksite which is subject to access permit/access authority, do so, in accordance with approved procedures and by any specified barrier entrance | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| e) On completion of their work, sign off the Access Authority in 'Sign off' column | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| f) After an access permit/access authority has been cancelled, the electrical apparatus they have been previously working on must be treated as live. | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |

QUESTION 26: (Tick the box/boxes next to the most correct answer – 3 Marks) – All Sections of This Question MUST be Answered Correctly

The complete the Minimum Safe Working Distance table below for ORDINARY PERSONS:

Personnel	MINIMUM SAFE WORKING DISTANCE FOR ORDINARY PERSONS		
	LV (<1kV ac)	LV (<1kV dc)	HV (up to 11kV ac)
Authorised Persons	500	500	760
HV Aware Instructed Persons)	500	500	700

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

HUNTER
TAFE

QUESTION 27: (Select the most correct answers– 2 Marks)

In the spaces provided below, describe the circumstances under which the Permit To Work/Access Permit/Access Authority recipient can refuse to accept an Permit To Work/Access Permit/Access Authority

If a member of the work party cannot or does not
sign off an access permit before leaving the
work.

QUESTION 28: (Select the most correct answers– 2 Marks)

In the spaces provided below, briefly describe when an Permit To Work/Access Permit/Access Authority is required under your organisations HV electrical safety rules.

- ☒ I Be satisfied that access permit provides the access for the work as requested
- ☒ II Understand the limit of access permit
- ☒ III Ensure control measure,
- ☒ IV Endorsed access permit having been received
- ☒ V Ensure limit of access permit
- ☒ VI Ensure working early, L.V short circuit personal protective devices.

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

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QUESTION 29: (Tick the box/boxes next to the most correct answer – 3 Marks) – All Sections of This Question MUST be Answered Correctly

From the list below, select the items that the Access Permit/Access Authority recipient/holder has a responsibility to confirm after receiving an access permit/access authority:

- | | | | |
|----|--|--|---|
| a) | <i>The recipient must ensure that every person signing on to the access permit is aware of the mains and apparatus which are covered by the access permit, the work to be done and the precautions in place.</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| b) | <i>The recipient must instruct and give face-to-face demonstration to all people who will sign on the permit of the safety requirements of the access permit.</i> | <input type="checkbox"/> True | <input checked="" type="checkbox"/> False |
| c) | <i>The recipient must ensure that all those required to sign on the access permit do so before they start work.</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| d) | <i>The recipient must ensure that every person signing on the permit is aware of their obligations to notify the recipient when leaving and returning to the worksite</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| e) | <i>Access permit recipients can only be responsible for their own workgroup and must not allow any other person to sign on to the access permit. Individual workgroups must sign on to separate access permits.</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| f) | <i>The recipient can only allow people carrying out work that directly relates to the purpose of the access permit to sign on to the permit as members of the workgroup</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| a) | <i>Before allowing employees with other work classifications to sign on to the permit, the recipient must know these tasks are covered by the access permit and the employees will work in accordance with the access permit conditions. If in any doubt, these employees are not to sign on to the access permit.</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| g) | <i>The recipient is responsible for safeguarding the access permit. The recipient must return the permit to the folder at the end of each day and at the completion of work.</i> | <input type="checkbox"/> True | <input type="checkbox"/> False |
| h) | <i>The recipient must remain at the worksite or be travelling between locations within the worksite during the course of the work, except when following the procedure for leaving the worksite.</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| i) | <i>The recipient must ensure that everyone who signed on to the permit has signed off before the access permit is cancelled..</i> | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |

Knowledge Assessment Resource: UEPOPS430B – Control Permit To Work Operations

HUNTER
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QUESTION 30: (Tick the box/boxes next to the most correct answer – 3 Marks) – All Sections of This Question MUST be Answered Correctly

From the list below, select the items that the Access Permit/Access Authority recipient/holder has a responsibility to confirm after receiving an access permit/access authority:

- | | | |
|--|--|---|
| a) The recipient must ensure that every person signing on to the access permit is aware of the mains and apparatus which are covered by the access permit, the work to be done and the precautions in place. | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| b) The recipient must instruct and give face-to-face demonstration to all people who will sign on the permit of the safety requirements of the access permit. | <input type="checkbox"/> True | <input checked="" type="checkbox"/> False |
| c) The recipient must ensure that all those required to sign on the access permit do so before they start work. | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |
| d) The recipient must ensure that every person signing on the permit is aware of their obligations to notify the recipient when leaving and returning to the worksite | <input checked="" type="checkbox"/> True | <input type="checkbox"/> False |

QUESTION 31: (Select the most correct answers– 2 Marks)

In the spaces provided below, briefly describe who can issue an Permit To Work/Access Permit/Access Authority under the requirements of your organisations HV electrical safety rules

The access permit can only issued by an authorized person who takes the responsibility in isolation, access permit containing is completed barriers and signage required are arranged. Enclose warning or instructions. Satisfied with access for work as requested

QUESTION 32: (Select the most correct answers– 2 Marks)

In the spaces provided below, briefly describe who can receive an Permit To Work/Access Permit/Access Authority under the requirements of your organisations HV electrical safety rules

only authorized person shall receive access permit who can produce current authorisation card.

Knowledge Assessment Resource:
UEPOPS430B – Control Permit To Work Operations



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