



Pathway 1 Technical Assessment Guide

Electrician (General)
ANZSCO Code: 341111



For more information or to apply,
please visit vetassess.com.au



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Technical Assessment Process

1. What is a Technical Assessment?

Technical assessment is an important part of the skills assessment process. It involves two stages – a technical interview and a practical assessment.

Technical Interview

- » The assessor will ask you questions about the knowledge required to work in your trade in Australia and how you apply that knowledge.
- » The interview will take about two hours. It will be conducted at one of our assessment venues, either over the internet or face-to-face.

Practical Assessment

- » You will complete a series of work-based tasks that demonstrate your trade skills.
- » Practical assessment takes 7-8 hours and is conducted in person at one of our assessment venues. An assessor will direct you through the assessment.

The practical assessment tasks and technical interview questions are based on the units of competency in the relevant Australian trade qualification. These units describe the skills and knowledge required to work in your trade in Australia. You can view the units of competency in the fact sheet for your trade available on [our website](#).

Your assessment will be conducted in English and no interpreter is allowed.

2. Who will assess me?

Your assessor will be:

- » A qualified tradesperson in your occupation. Your assessor has the qualification you are applying for, as well as many years of experience working in Australia in this occupation, and they are:
- » A qualified assessor. Your assessor holds a qualification to perform assessments. They also have experience explaining tasks and questioning and listening to candidates from all types of backgrounds.

3. Where will the Technical Assessment be held?

Your technical assessment will be held at a VETASSESS approved venue. You can select your preferred venue for the technical interview and practical assessment when you lodge your application. We have venues in many countries around the world. You can find the locations of the venues on [our website](#).

Note that technical interview venues are different from practical assessment venues. Please make sure you are able and willing to travel to an approved venue before you apply.

Once you have paid for your technical interview or practical assessment, we will confirm the venue, date and time of the assessment and send you an Admission Voucher with all the details. If you wish to change to a different approved venue, please email us at tradeassess@vetassess.com.au.

4. What do the practical assessment tasks involve?

Here is an overview of the tasks you may be asked to perform during your practical assessment. Please note that this is an example only. Your assessor will provide you with details of the assessment activities on the day of your assessment.

From a given specification design, carry out and complete a functioning light and power installation within a specified time frame using safe working techniques, including:

- » Complete a Job Safety Analysis (JSA).
- » Switchboard design and protection.
- » After completing the installation wiring task, you will be required to carry out the compliance tests and record results to verify compliance or non-compliance using a variety of test equipment.
- » Knowing the maximum allowable value of the Earthing System Resistance by your local standards or codes (for example, Australian standards state the maximum allowable value of the main earth is 2 Ohm).
- » Knowing the minimum allowable value of insulation resistance of the wiring by your local standards or codes (for example, Australian standards state the minimum allowable value is 1 Megaohm).

From circuit components symbols, design, connect and fault find a direct on line (DOL) starter and three phase motor circuit including:

- » Stop/start station, thermal overload, star-delta configuration, overload setting.

Perform a disconnect/reconnect of electrical equipment using safe working procedures in a logical manner and test the disconnected equipment before reconnection. Refer to **Appendix C 'Safe isolation procedure for tagout/lockout'** for detailed information about the steps you should follow during this task.

Provide written and/or verbal answers to questions on a variety of topics, including, but not limited to:

- » Electrical units and symbols
- » Ohm's Law calculations
- » Single and three phase motors
- » Impedance, inductive reactance, capacitive reactance calculations
- » Power factor
- » RMS values
- » Magnetism, electromagnetism and transformer
- » Calculating current, wattage, resistance and voltage in an ELV and LV single and three phases
- » Electric circuit
- » Lighting
- » Batteries
- » Fire and smoke detectors.

5. What do I need to bring?

You must bring the following to your assessment:

- » Your current passport.
- » Your Admission Voucher.
- » Your completed Practical Experience and Elective Summary (PEES) form: You must download the PEES form from [our website](#) and complete it prior to your technical interview.
- » Personal protective equipment (PPE): Please refer to **Appendix A 'Safe working practice'** for more information about the PPE you should bring to your practical assessment.
- » Pen and calculator.

You are also encouraged to bring your own hand tools to the practical assessment. If you are unable to bring your own tools, VETASSESS will ensure tools are made available, but you may have to share these with other candidates. Refer to **Appendix B 'Recommended hand tools'** for more information.

All other equipment and materials necessary to complete the assessment tasks will be provided.

PLEASE NOTE —

- » You must not bring any reference materials such as written notes, textbooks or manuals.
- » You will not be allowed to use a mobile phone or other electronic devices during the assessment.

6. What will happen on the day of my Technical Interview?

- » You will arrive at the venue at the time stated on your Technical Interview Admission Voucher.
- » You will present your Technical Interview Admission Voucher and passport to the venue supervisor for checking.

Online Interview

If you are completing an online Technical Interview:

The venue supervisor will take you to the technical interview room and will seat you in front of the computer. At the computer, you will meet your online host.

Your host will:

- » Ask you to hold your passport up to the computer camera to confirm your identification.
- » Ask you to agree to the interview being recorded (all interviews are recorded).
- » Introduce you to your assessor.
- » Provide assistance if there are any technical difficulties.

You will now be able to see and hear your assessor.

Your assessor will ask questions to check your knowledge and skills. The questions are also shown on the computer screen.

Listen carefully to the questions and, if you do not understand a question, ask your assessor to repeat it.

Answer the questions clearly and as best as you can.

Face to Face Interview

If you are completing a face-to-face Technical Interview:

The venue supervisor will take you to the technical interview room.

Your assessor will ask questions to check your knowledge and skills.

Listen carefully to the questions and, if you do not understand a question, ask your assessor to repeat it.

Answer the questions clearly and as best as you can.

7. What will happen on the day of my Practical Assessment?

This is what will happen on the day of your assessment.

Arrival 10 mins

You will arrive at the time and location stated on your Admission Voucher. You will present your voucher and passport to the venue supervisor for checking.

Introduction 30 mins

Your assessor will explain the tasks you are required to complete and will provide you with the Assessment Workbook.

Practical Tasks Approx. 7 hrs (includes lunch break)

You will complete a number of practical tasks as directed by your assessor (refer to Section 4 on page 5 for examples of tasks that you will be asked to complete).

Some tasks may need to be completed in a certain time period.

You will wear appropriate personal protective equipment (PPE) and follow all Workplace Health and Safety (WHS) requirements.

Note: If WHS requirements are not followed, your assessor will stop your assessment.

Finish 10 mins

You will clean up your work area and submit your Assessment Workbook.

8. What are the rules of the assessment?

To avoid cancellation of your assessment, you must follow these rules:

- » Arrive on time - your interview will be cancelled if you arrive more than 30 minutes late.
- » Follow your assessor's instructions.
- » Follow workplace health and safety precautions.
- » Do not bring any reference materials including written notes, textbooks, manuals or devices with access to the internet.
- » Do not bring any electronic communication or recording devices including mobile phones, laptops or tablets.
- » Do not ask other candidates for assistance or interrupt them.

The venue supervisor or assessor may also cancel your interview if you:

- » Cannot prove your identity
- » Cannot understand instructions and/or answer questions in English
- » Become extremely distressed or disturbed
- » Appear ill or physically unwell
- » Become angry or violent
- » Arrive at the assessment venue in an abnormal state, such as being intoxicated or drugged.

9. How can I prepare for my Technical Assessment?

Use the following checklist to help you prepare for your assessment.

 Checklist	
Action	Completed
Download and read the factsheet for your occupation from our website .	
View each unit of competency in the qualification using the following website: https://training.gov.au/Search This will help you to understand the knowledge and skills requirements for your occupation.	
Think about the required knowledge for each unit of competency and if you could answer questions about this knowledge. For example: <ul style="list-style-type: none"> » What are the main safety hazards at your work – how do you make sure you are safe? » Where do you get information from to help you do tasks at work? » Explain how a tool/piece of equipment you use works. » How do you work out what is wrong with a? » How would you fix a? 	
Read the sample practical tasks provided in Section 4 on page 5. Think about how you would complete these sample tasks by asking yourself: <ul style="list-style-type: none"> » What steps would I follow? » What tools and equipment would I use? » What safety precautions would I observe? 	
If you think there are areas/units where you are not very knowledgeable or skilled, take action to improve. This could include: <ul style="list-style-type: none"> » Searching for information online » Reading information in books » Asking questions of experts » Completing a training course » Asking others to show you how to perform a task » Practising performing practical tasks. 	

10. What if I have a special need?

Candidates with special needs can request a reasonable adjustment to the assessment process.

Reasonable adjustment refers to actions taken to provide a candidate with a special need or disability the same opportunities as every other candidate, while maintaining the integrity of the assessment process and outcome.

If you wish to request a reasonable adjustment, contact us to discuss your individual situation.

PLEASE NOTE —

- » All assessments must be conducted in English. No translator is allowed during the assessment.
- » Reasonable adjustment does not mean that all candidates' requests are granted.

11. How will I get my results?

Your assessor cannot provide you with your result at the end of the assessment as it only forms part of the assessment process.

Your assessment results will be available on our online portal.

You will receive the following, depending on your result:



Successful Candidates

If you successfully complete your practical assessment, you will receive:

- » A Skills Assessment Result Letter to support your visa application
- » An Offshore Technical Skills Record (OTSR) that lists the units of competency in which you have been assessed as having successfully demonstrated the required trade skills and knowledge. This entitles you to a provisional licence to work in your trade in Australia. You can find more information about the OTSR on [our website](#).



Unsuccessful Candidates

If you are unsuccessful, you will receive:

- » A Skills Assessment Result Letter detailing the areas where you were not able to demonstrate the required trade skills and knowledge.

12. What can I do if I receive an unsuccessful result?

If you receive an unsuccessful result, there are two options available to you:

1. Undertake a Reassessment

- » If you undertake a reassessment, you will only be reassessed on the units of competency where you were unsuccessful. Before undertaking a reassessment, you are advised to increase your skills and knowledge in these units. You can do this through formal training and/or gaining practical experience.
- » You must apply for reassessment within 12 months of receiving an unsuccessful result letter and provide evidence of further training and/or work experience completed.
- » Reassessment is not available after this 12-month timeframe – after this time period, you must submit a new application.

2. Request a Review of the assessment decision

- » If you do not agree with the assessment decision and want your assessment decision reviewed, you can request a review.
- » If you choose this option, a VETASSESS assessor who did not participate in your original assessment will review your assessment and confirm if the correct assessment outcome was made.
- » You must request a review within 7 business days of receiving an unsuccessful assessment outcome.
- » All fees are payable directly to Trades Recognition Australia.

PLEASE NOTE —

- » There is only one reassessment or review available for each assessment stage.

For further information on reassessment and review visit [our website](#).

13. What can I do if I am not happy about the process

If you are not happy with your assessment process, please contact us.

- » Email: tradeassess@vetassess.com.au

 - » Phone: +61 3 9655 4801

 - » Submit online at:
<https://www.vetassess.com.au/home/feedback>
-

14. How can I get more information?

If you require more information or have any questions about this guide, please contact us on:

- » Phone: +61 3 9655 4801

 - » Email: tradeassess@vetassess.com.au

 - » Website: www.vetassess.com.au
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Appendix A: Safe Working Practice

A Code of Practice is a document created under the Australian Electrical Safety Act 2002. It gives practical advice on ways to discharge electrical safety obligations. The purpose of this document is to provide basic procedures and guidance concerning proper personal protective equipment (PPE) and the process for working on electrical systems.

This Code of Practice attempts to reduce the number of accidents and losses associated with the operation, maintenance and repair of electrical equipment.

At a place where electrical equipment is located, the Act imposes an obligation on an electrical worker:

To comply with instructions for the electrical safety of persons and property at the place given:

- » to the extent the instructions are consistent with instructions given by the person in control of the electrical equipment.

To use personal protective equipment, if:

- » the equipment is provided by the person in control of the electrical equipment for electrical safety purposes; and
- » the worker is properly instructed in the use of the equipment provided.

Not to wilfully or recklessly interfere with or misuse anything provided for electrical safety at the place; and

Not to wilfully place any person, including yourself, at electrical risk.

Personal Protective Equipment

Any electrical worker who works in or around energised equipment and has the potential to come into contact with “live” exposed parts must be provided with and use Personal Protective Equipment (PPE).

The following are basic guidelines for the proper use of electrical PPE:

- » PPE should be used whenever you could come into contact with exposed electrical parts.
- » Electrical workers are required to wear electrically rated footwear at all times.
- » PPE must be designed for the work being performed. You must make sure that electrical gloves, insulated tools, etc. are rated for the voltage levels they will be used around.
- » Always inspect your electrical tools and PPE before each use to make sure they are in good condition and will work properly. If you find that a tool has been damaged, or that PPE has tears or holes, you need to replace the item before conducting the assigned work.
- » You must wear eye and face PPE, such as face shield and safety glasses, whenever there is a possibility of electrical arcs or explosion.
- » All test instruments and equipment (volt, ammeters, ohm meters) and associated leads, cables, power cords, probes, and connectors must be visually inspected for external defects and damage before the equipment is used.



Appendix B: Recommended Hand Tools

Here is a list of the hand tools you are encouraged to bring to the practical assessment. If you are unable to bring your own tools, VETASSESS will ensure tools are made available, but you may have to share these with other candidates. You may also choose to bring other tools which are not listed below.

HAND TOOLS

- » Pliers
- » Screwdrivers (Phillips head and flat shank)
- » Side cutters
- » Wire strippers or knife
- » Tape measure or ruler
- » Small spirit level
- » Hacksaw or PVC conduit cutters
- » Claw hammer

OPTIONAL TOOLS

- » Long nose pliers
- » Battery operated drill
- » Drill set
- » Screwdriver bits
- » Bending spring for 20mm PVC conduit

METERS AND OTHER EQUIPMENT

- » IR Tester and leads
 - » Approved multi-meter and leads
 - » Tag out/Lock out kit
-

PLEASE NOTE —

The following types of voltage tester are not allowed to be used during your practical assessment:

- » Neon test pencil
- » Non-contact voltage tester
- » Touch voltage tester
- » Voltage stick



Appendix C: Safe Isolation Procedure for Tagout/Lockout

Reading and practising this safe isolation procedure will give you a better understanding of what is required during your Practical Assessment.

The following table outlines the steps required to carry out the Safe Work Practice task on an item of electrical equipment.

Each step has points allocated and, to satisfactorily complete the task, you must not lose more than 25 points. You will satisfactorily complete the task if you achieve 75 or more points.

Some steps are critical and must be carried out in order to satisfactorily complete the task. Testing the voltmeter/voltage tester for correct operation after use is **CRITICAL**. This must be done when the voltmeter/voltage tester indicates a no voltage reading.

If you realise that you have missed a step or made an error while completing this task during your Practical Assessment, please inform the assessor.

WARNING —

All electrical conductors and parts, including neutral and earthing conductors, shall be treated as live until proven dead.

Step	Points
DISCONNECTION/DE-ENERGISATION	
Complete a JSA.	5 points
Check if removal of protective devices will affect essential services.	1 point
Test voltage tester at known LIVE/PROVEN source for correct operation before use.	2 points
Ensure the frame of the equipment is not 'LIVE' by testing between frame/chassis and the known earth/ground point. NOTE: This test must be performed at least two (2) times whilst the motor is stationary and when running.	Critical: If this step is not carried out, you will not satisfactorily complete the task
Test voltage tester at known LIVE/PROVEN source for correct operation after use.	Critical: If this step is not carried out, you will not satisfactorily complete the task

Step	Points
Carry out continuity test between the Known/Proven Earth and equipment mount.	15 points
Record electrical ratings details of appliance (e.g. kW and voltage).	3 points
Note and record direction of rotation (DOR) of motor (if applicable).	3 points
Complete details on danger tags (e.g. Name, Signature, Date, Phone no. on the front of the tag and details of the fault on the back of the tag).	5 points
The equipment must also be tested for LIVE by either testing between all conductors including the protective earthing conductor or if a motor by starting it prior to isolating circuit conductors.	Critical: If this step is not carried out, you will not satisfactorily complete the task
Affix danger tags to isolation points (e.g. appliance, isolating switch, switchboard, etc).	3 points
Determine location of appropriate protective device.	2 points
Do not leave exposed LIVE terminals/conductors at switchboard or equipment.	Critical: If this step is not carried out, you will not satisfactorily complete the task
Test voltage tester at known LIVE/PROVEN source for correct operation before use.	2 points
<p>Before touching equipment conductors, test for LIVE:</p> <ul style="list-style-type: none"> » Test between all conductors and known earth/ground point. (This test also includes testing for LIVE between the protective earthing conductor and the known earth). <p>AND</p> <ul style="list-style-type: none"> » Test between all conductors at the equipment end. 	Critical: If these 2 steps are not carried out, you will not satisfactorily complete the task
Test Voltage Tester for correct operation on known LIVE/PROVEN source after using it. (Fail only occurs when previous test indicated terminals/conductors were de-energised).	Critical: If this step is not carried out, you will not satisfactorily complete the task
Note and record the details of the protective device.	1 point
Isolating the protective device by applying lock-dog, danger tag and lock you (the key must be removed from the lock).	Critical: If this step is not carried out, you will not satisfactorily complete the task
Test voltage tester at known LIVE/PROVEN source for correct operation before use.	2 points
<p>Before touching equipment conductors, test for LIVE:</p> <ul style="list-style-type: none"> » Test between—all conductors and the known earth/ground point <p>AND</p> <ul style="list-style-type: none"> » Test between—all conductors at the equipment end. 	Critical: If this step is not carried out, you will not
Test Voltage Tester for correct operation on known LIVE/PROVEN source after using it.	Critical: If this step is not carried out, you will not satisfactorily complete the task
Note and record the terminal connection details of the equipment.	1 point
Terminate conductors in approved manner and enclose in junction box. Cable ends must be fully insulated.	2 points
Affix Danger Tag to terminated conductors enclosed in Junction box.	3 points
Ensure terminated conductors are protected against mechanical damage.	2 points
Clean-up work area and notify personnel.	1 point

Step	Points
TESTING THE EQUIPMENT FOR COMPLIANCE	
Test Insulation Resistance and Continuity tester on both Megohm and Ohm scales for correct operation.	3 points for each test
Carry out the Earth Continuity test of the equipment. Test the resistance of the equipment frame to its earth facility. Note: Ensure you know MAXIMUM ALLOWABLE VALUE of earthing resistance of the equipment by your LOCAL STANDARDS . (For example, Australian Standards states the maximum allowable value for equipment is 0.5 Ohm).	15 points
Carry out the Insulation Resistance test of the equipment. Test between each live conductor to its earth facility. Note: A neutral conductor is deemed to be a live conductor. Note: Ensure you know the MINIMUM ALLOWABLE VALUE of insulation resistance of the equipment by LOCAL STANDARDS . (For example, Australia Standards states the minimum allowable value is 1 Megohm).	15 points
RECONNECTION/RE-ENERGISATION	
Notify personnel of return to work site.	1 point
Ensure the appliance to be reconnected is of the same electrical ratings details (e.g. kW, amperes, voltage, etc).	2 points
Test voltage tester at known LIVE/PROVEN source for correct operation before use.	2 points
Before touching equipment conductors, test for LIVE: » Test between all conductors and known earth/ground. (This test also includes testing for LIVE between the protective earthing conductor and the known/Proven earth.) AND » Test between all conductors at the equipment end. (Ensure that bare conductors are not touched while testing.)	Critical: If these 2 steps are not carried out, you will not satisfactorily complete the task
Test voltage tester at known LIVE/PROVEN source for correct operation after use.	Critical: If this step is not carried out, you will not satisfactorily complete the task
Reconnect final sub-circuit wiring to appliance terminals.	1 point
Carry out continuity test on final sub-circuit protective earthing conductor from effective earth to frame of appliance. (This test should be carried out after the circuit conductors have been connected to the equipment's terminals and before the power has been restored).	15 points
Notify personnel of restoration of power.	2 points
Do not leave exposed LIVE terminals/conductors at switchboard or appliance.	3 points
Remove lock, lock-dog and switch on circuit breaker or insert correct fuse wedge to restore power.	1 point
Check appliance for correct operation (e.g. DOR (Direction of Rotation)).	3 points
Clean-up work area and notify personnel.	2 points

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