

# Safe Working Practice Assessment (SWP)

## Teachers Guide

May be distributed to candidates

**Assessment Time: 50 minutes**  
**Meter check and JSA completion is to be included in this time limit.**  
**Administrative tasks, such as checking photo ID, is not included.**

The candidate must supply their own Insulation Resistance and Continuity tester and gloves. All other tools and equipment shall be supplied by the assessment centre. Candidates must provide photo ID.

The assessor will check the candidate's IR tester meets the following requirements:

- Analogue
- No indication for PASS/FAIL
- Minimum of 250V/500V scale
- Minimum 2 x continuity scales
- True moving coil meter

The IR tester will be checked that it is within tolerance, and both the assessor and candidate must initial that this has been checked, and the requirements have been met.

If the candidate has provided a meter in good faith, and the meter fails to meet the above requirements, the assessment venue **may** provide a meter for the candidate's use.

The candidate must provide their own gloves:

1. Insulating gloves rated to 650V, marked with Australian Standard AS2225
2. Flame resistant outers that also provide mechanical protection.
3. Inners are preferred for hygiene, but are optional for candidate supplied gloves
4. Spare gloves **may** be provided by the assessment venue if the candidate has provided gloves in good faith, and they fail to meet the required checks.

## Marking:

Candidates must not accumulate more than 25 demerit points. The assessor will add up all the demerit points lost and subtract this number from 100 to calculate the final result. Candidates who lose more than 100 demerit points will be given a mark of 0%.

Actual demerit points lost at each section are not detailed in this guide, however the following key may be used as an indication:

- A = 6 points or less
- B = 7-20 points
- C = 35 points (instant fail)

## Appliance Disconnection

Nature of Test	Test Activity	Demerit Points Category	Comments
<b>1. Completing the JSA</b>	1.1 Correct JSA selected, reviewed and signed	<b>A</b>	<ul style="list-style-type: none"> <li>• Choose the correct JSA for the equipment allocated for the assessment, from a selection provided by the assessment centre.</li> <li>• Add any relevant observations; there will not be any intentional issues</li> <li>• Sign and date the JSA</li> <li>• The JSA is not written for live work, so disconnecting live with gloves on is unacceptable.</li> </ul>
	1.2 Eye protection	<b>A</b>	<ul style="list-style-type: none"> <li>• Assess if eye protection is required, and note it on the JSA. If it is decided that eye protection is required, it must be used.</li> </ul>
<b>2. Identifying the electrical appliance</b>	2.1 Did the candidate correctly note the appliance specifications, terminal connections and circuit breaker details?	<b>A</b>	<ul style="list-style-type: none"> <li>• Record electrical specifications, terminal connections, and circuit breaker details either by diagram, written notes, or photo taken with a device provided by the assessment venue.</li> </ul>
	2.2 Did the candidate note the direction of rotation of appliance? (if applicable)	<b>A</b>	<ul style="list-style-type: none"> <li>• The motor is deemed safe to start</li> </ul>
<b>3. Ensuring the appliance frame is not energised</b>	3.1 Did the candidate inspect, check and test their gloves prior to use?	<b>C</b>	<ul style="list-style-type: none"> <li>• Do a visual check/inspection of all the gloves immediately prior to putting them on, every time they are put on.</li> <li>• The check shall visual inspection of the insulating gloves to check for holes and cracks, cuts, and/or deterioration, and a roll test. Outer gloves must have a visual check for deterioration and damage.</li> <li>• Gloves <b>must</b> be worn from this point until the isolation has been proven. Gloves are not required once isolation is proven.</li> </ul>
	3.2 Did the candidate test the voltage tester <b>BEFORE</b> use?	<b>A</b>	<ul style="list-style-type: none"> <li>• Voltage tester must be tested prior to each use.</li> </ul>
	3.3 Did the candidate test the appliance frame for "LIVE" between frame and known earth?	<b>C</b>	<ul style="list-style-type: none"> <li>• The test must be between the known earth point and frame. The test may be carried out with the switches/isolators in any position.</li> </ul>
	3.4 Did the candidate test the voltage tester for correct operation <b>AFTER</b> use?	<b>C</b>	<ul style="list-style-type: none"> <li>• Voltage tester must be tested after use.</li> </ul>

<b>4. Testing the earth continuity of the circuit</b>	4.1 Did the candidate test the continuity tester for correct operation?	<b>A</b>	<ul style="list-style-type: none"> <li>Test the battery, zero the meter, and test the continuity scale with open and shorted leads.</li> </ul>
	4.2 Did the candidate correctly carry out an earth continuity test from the known earth to the appliance frame <b>AFTER</b> the frame was checked for live and the meter retested, and before checking for voltage at the appliance terminals or operating any switches or isolators?	<b>B</b>	<ul style="list-style-type: none"> <li>The earth continuity (EC) test must be between the known earth and appliance frame. Testing to one point is sufficient for this assessment.</li> <li>The EC test must be carried out after the frame has been checked and proven to be not live, and prior to checking for voltage at the appliance terminals or operating any switches or isolators.</li> <li>Tell the assessor the reading obtained, the permissible value, and if the test result is a pass or fail. If the candidate does not volunteer this information, the assessor will ask for it.</li> </ul>
<b>5. Testing the appliance for live supply and placing danger tags</b>	5.1 Did the candidate test the voltage tester <b>BEFORE</b> use?	<b>A</b>	<ul style="list-style-type: none"> <li>Voltage tester must be tested prior to each use.</li> </ul>
	5.2 Did the candidate test that supply existed at appliance terminals prior to isolating the appliance?	<b>C</b>	<ul style="list-style-type: none"> <li>The supply at the appliance must be established. If a motor is used for this assessment then checking D.O.R. is satisfactory for this test.</li> </ul>
	5.3 Did the candidate close the appliance while locating circuit breaker?	<b>C</b>	<ul style="list-style-type: none"> <li>Live terminals must not be left exposed when the candidate leaves the appliance to go to the switchboard. The switchboard is deemed to be out of sight of the appliance</li> </ul>
	5.4 Did the candidate place the appropriate danger tags at the switchboard AND the appliance AND the circuit breaker/s AND the isolator (if installed) during the isolation process?	<b>A</b>	<ul style="list-style-type: none"> <li>Danger tags must be used at the switchboard, the appliance, and isolation switches (if installed), at the circuit breakers during the location process, and on the correct circuit breaker once located.</li> <li>Danger tags must be affixed with string, cable ties, or a lock. Tape may be used to secure the tag only during the circuit breaker location process, and must be replaced with string etc. once the correct circuit breaker is located.</li> </ul>
	5.5 Did the candidate legibly write their name, date, and phone number, and sign the tag?	<b>A</b>	<ul style="list-style-type: none"> <li>Details written on danger tags need to be legible, and shall include name and signature, date, and phone number. Only one tag needs to be completed.</li> </ul>
<b>6. Isolating the appliance</b>	6.1 Did the candidate test the voltage tester <b>BEFORE</b> it was used to test for live supply?	<b>A</b>	<ul style="list-style-type: none"> <li>Voltage tester must be tested prior to each use.</li> </ul>
	6.2 Did the candidate leave the motor rotating whilst locating the circuit breaker? (only applies if the equipment being used is a motor)	<b>A</b>	<ul style="list-style-type: none"> <li>Leaving the motor rotating whilst locating the circuit breaker is unacceptable.</li> </ul>
	6.3 Did the candidate test for voltage between <b>ALL</b> conductors and the known earth?	<b>C</b>	<ul style="list-style-type: none"> <li>Test between: Known Earth to earth Known Earth to neutral Known Earth to active/s</li> </ul>
	6.4 Did the candidate test for voltage between <b>ALL</b> circuit conductors?	<b>B</b>	<ul style="list-style-type: none"> <li>Test between: Active to Earth Active to Neutral Earth to Neutral Active to active if 3 phase</li> </ul>
	6.5 Did the candidate test the voltage tester for correct operation <b>AFTER</b> it was used to prove there was no live supply detected?	<b>C</b>	<ul style="list-style-type: none"> <li>During the c/b identification phase it is permissible to test active to known earth only, but once the correct c/b is located and after the lock dog applied, all tests must be carried out.</li> <li>The voltage tester must be tested for correct operation after use when no live supply has been detected.</li> <li>Gloves <b>may</b> be removed at the completion of this section.</li> </ul>

<b>7. Locking off the circuit</b>	7.1 After locating the correct c/b and prior to disconnection, did the candidate lock off the correct circuit breaker? (Key secured i.e. not left in lock or on bench).	<b>C</b>	<ul style="list-style-type: none"> <li>The circuit breaker must be lock dogged and padlocked, and the key kept under the secure control of the candidate.</li> </ul>
<b>8. Disconnecting / terminating circuit conductors</b>	8.1 Did the candidate suitably place all disconnected conductors in a junction box?	<b>A</b>	<ul style="list-style-type: none"> <li>Conductors must be placed inside a junction box with no uninsulated cables exposed. The cables should not be able to be easily pulled out, and fingers cannot be put into the box.</li> </ul>
	8.2 Did the candidate place a danger tag on the junction box?	<b>A</b>	<ul style="list-style-type: none"> <li>A danger tag must be attached to the junction box, or to conduit or hose supplying the junction box, with string or cable tie.</li> <li>Notes/drawings may be placed in the junction box, or kept by the candidate on their person, or in their tool box.</li> </ul>

## Appliance Reconnection

Nature of Test	Test Activity	Mark	Comments
<b>9. Testing the Appliance – Insulation Resistance</b>	9.1 Did the candidate test the insulation resistance tester for correct operation?	<b>A</b>	<ul style="list-style-type: none"> <li>Test the battery, and test the insulation resistance scale with open and shorted leads.</li> </ul>
	9.2 Did the candidate correctly carry out the insulation resistance test of the appliance	<b>B</b>	<ul style="list-style-type: none"> <li>The insulation resistance (IR) test must be from the live terminals to the earth terminal or frame of the appliance.</li> <li>Tell the assessor the reading obtained, the permissible value, and if the test result is a pass or fail. If the candidate does not volunteer this information, the assessor will ask for it. The candidate must be able to identify which type of element they have (if applicable), and give a single, correct answer.</li> <li>Any appliance switch must be ON (when applicable) for this test to be valid</li> <li>Retest tester for correct operation</li> <li>Note: it is good practice to check the earth continuity of the appliance from the earth terminal to the frame at this point, to validate the IR test, however it is also acceptable to carry out this test as part of the testing in Section 12.2</li> </ul>
<b>10. Testing conductors for live supply</b>	10.1 Did the candidate inspect, check and test their gloves prior to use?	<b>C</b>	<ul style="list-style-type: none"> <li>The cover of the junction box may be removed with no gloves, but gloves <b>must</b> be put on prior to touching the cables/ connectors, or commencing testing.</li> <li>Gloves shall be checked using the same process as in section 3.1. Gloves are required to be rechecked at this point only if they have been removed at some stage. If the gloves have not been removed at any point since checking them at section 3.1, then the glove check here is not required.</li> <li>Gloves <b>must</b> be worn from this point until the conductors are proven to be de-energised.</li> </ul>
	10.2 Did the candidate test the voltage tester <b>BEFORE</b> it was used to test for no live supply on the <b>circuit conductors</b> ?	<b>A</b>	<ul style="list-style-type: none"> <li>Voltage tester must be tested prior to each use.</li> </ul>
	10.3 Did the candidate test for no live supply between <b>ALL</b> circuit conductors and the known earth?	<b>C</b>	<ul style="list-style-type: none"> <li>Test between: Known Earth to earth Known Earth to neutral Known Earth to active/s</li> </ul>

	10.4 Did the candidate test for no live supply between <b>ALL</b> circuit conductors?	<b>B</b>	<ul style="list-style-type: none"> <li>• Test between: Active to Earth Active to Neutral Earth to Neutral Active to active if 3 phase</li> </ul>
	10.5 Did the candidate test the voltage tester for correct operation <b>AFTER</b> it was used to prove when there was no live supply detected on the circuit conductors	<b>C</b>	<ul style="list-style-type: none"> <li>• The voltage tester must be tested for correct operation after use when no live supply has been detected.</li> <li>• Gloves may be removed at the completion of this section</li> </ul>
<b>11. Reconnecting the appliance</b>	11.1 Did the candidate ensure that the appliance that was reconnected to the existing wiring was of the same details?	<b>A</b>	<ul style="list-style-type: none"> <li>• Check to see if the electrical specifications are the same.</li> </ul>
	11.2 Did the candidate correctly reconnect the wiring to the original configuration?	<b>C</b>	<ul style="list-style-type: none"> <li>• Reconnect active/s, neutral and earth to the original configuration.</li> </ul>
<b>12. Testing the earth continuity of the circuit</b>	12.1 Did the candidate test the continuity tester for correct operation?	<b>A</b>	<ul style="list-style-type: none"> <li>• Zero the meter, and test the continuity scale with open and shorted leads. A battery test is not required here if the battery was tested in 9.1.</li> </ul>
	12.2 Did the candidate correctly carry out an earth continuity test from the known earth to the appliance frame <b>AFTER</b> the circuit wiring was reconnected – and <b>BEFORE</b> supply was restored to the appliance?	<b>B</b>	<ul style="list-style-type: none"> <li>• The earth continuity (EC) test must be between the known earth and appliance frame.</li> <li>• Tell the assessor the reading obtained, the permissible value, and if the test result is a pass or fail. If the candidate does not volunteer this information, the assessor will ask for it.</li> </ul>
<b>13. Restoring power to the appliance</b>	13.1 Did the candidate ensure that all relevant personnel were notified <b>prior to</b> reconnection of supply to the appliance?	<b>A</b>	<ul style="list-style-type: none"> <li>• Verbally say that supply is being reconnected</li> </ul>
	13.2 Did the candidate close the appliance while restoring supply at the switchboard?	<b>C</b>	<ul style="list-style-type: none"> <li>• Close the appliance cover prior to vacating the area to go to the switchboard to restore supply. The live terminal connections must not be left exposed.</li> </ul>
	13.3 Did the candidate test the voltage tester <b>BEFORE</b> it was used to test for live supply?	<b>A</b>	<ul style="list-style-type: none"> <li>• Gloves are required to be used at points 13.3 and 13.4 if the appliance terminals are to be exposed to carry out this test. If gloves have been removed, they must be checked as per 3.1 before being used for this test, and marks will be removed as per 3.1 if this is not done. Gloves are not required if using a motor and it can be turned on/off without access to live parts.</li> <li>• The voltage tester must be tested prior to use.</li> </ul>
	13.4 Did the candidate ensure that the direction of rotation of the appliance was correct (where necessary) – or that the correct supply was available at the appliance terminals? <b>By testing between conductors OR to the known earth</b>	<b>A</b>	<ul style="list-style-type: none"> <li>• If a motor is used for this assessment then D.O.R. will satisfy for supply being connected. For any other appliance, test for voltage between conductors or to the known earth (either is acceptable).</li> </ul>