

## Rinnai Heat Pumps Accreditation Programme (High Wall Split)

### Module 5a: Installation & Handover

#### Self Check # 1 answers

#	Question	Your score
1	<p>When creating a notch in the top plate and studs for timber that is 90 x 45 mm, what is the maximum depth allowed?</p> <p>15 mm 20 mm <b>25 mm</b> 40 mm</p>	
2	<p>There are three (3) types of pipe joining used when installing a Heat pump. They are Brazed, Compression and Flared. It is <b>vital</b> that each type of joint is used in the <b>correct part of the piping</b></p> <p><b>True</b> False</p>	
3	<p>Which joint connection method is to be used to connect to a Rinnai <u>outdoor</u> unit to the Pair Coil?</p> <p>Brazed Compression <b>Flared</b></p>	
4	<p>Which type of joining provides the <u>best resistance to pressure, temperature and stress vibrations</u> and is recommended as best practice when joints will be concealed.</p> <p><b>Brazed</b> Compression Flared</p>	
5	<p>It is vital that when preparing, cutting or connecting pipework that it is kept clean inside.</p> <p>Brazing causes carbon build up and this is mitigated by:</p> <ul style="list-style-type: none"> <li>• Keeping the pipework on a slope down towards the cut end</li> <li>• <b>Purging with dry nitrogen</b></li> <li>• Purging with EOS</li> </ul>	

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6	<p>When making a flare fitting on a pipe the edges of the cut end must have the both the inside and outside burrs removed. When is de-burring done?</p> <ul style="list-style-type: none"> <li>• After the pipe is cut and before the flaring is done</li> <li>• After the flare is created.</li> </ul>	
7	<p>What are the two (2) reasons why condensate should not be discharged onto a concrete footpath</p> <ul style="list-style-type: none"> <li>• It can become slippery</li> <li>• It can harm bird life</li> <li>• After several years it can cause the concrete to crack</li> <li>• In winter it can freeze causing a hazard</li> </ul>	
8	<p>When taping the refrigerant pipes, electric cable(s) and drain hose together, where must the drain hose be?</p> <ul style="list-style-type: none"> <li>• On top of the Pair Coil</li> <li>• Below the Pair Coil</li> <li>• Taped to the side with the electrical cables</li> <li>• Always put the drain line out the left-hand side of the IDU</li> </ul>	
9	<p>The maximum Pair Coil run between the IDU and ODU for the 7 kW model is:</p> <ul style="list-style-type: none"> <li>• 10 m</li> <li>• 20 m</li> <li>• 25 m</li> <li>• 30 m</li> <li>• 40 m</li> </ul>	
10	<p>Pipe benders must be used for bending all pipes over 9.5 mm or 3/8". This is because bending by hand can cause a kink which creates a reduced internal dimension and can effect performance and void the warranty.</p> <p>True False</p>	
11	<p>Which type of oil must be applied to the back of the flared pipe and the flare joint?</p> <ul style="list-style-type: none"> <li>• POE (Polyolester oil)</li> <li>• OEP (Polyethylene extract)</li> <li>• Tardus 101</li> </ul>	

#	Question	Your score
12	<p>Units containing R32 refrigerant require a specific flaring tool to cope with the pressure of the refrigerant and the pipe thickness.</p> <p><b>True</b> False</p>	
13	<p>Some tools and materials are specific to a refrigerant type. In relation to Rinnai Heat Pumps which is correct?</p> <ul style="list-style-type: none"> <li>• Both Q Series and Ducted HP's use R32</li> <li>• Both Q Series and Ducted HP's use R410A</li> <li>• <b>Q Series uses R32 and Ducted systems R410A</b></li> </ul>	
14	<p>Pipework pre-installed into buildings must have the ends brazed closed with a Schrader valve in one end and pressurised with dry nitrogen.</p> <p>Why is the pre-installed pipework pressurised with Nitrogen? (select all that apply)</p> <ul style="list-style-type: none"> <li>• <b>If the pipes get damaged, the gas escapes, alerting other tradespeople to the fact that they have damaged the pipe.</b></li> <li>• <b>Dry Nitrogen is moisture free and safe.</b></li> <li>• Pressurised pipework over time provides a much safer installation test in accordance with the Building Act</li> <li>• <b>When you return and find the gas is gone, then you know the pipes have a leak.</b></li> </ul>	