

7/01/2019

**SOLAR ENERGY TECHNICIAN COURSE – PCP (THEORY & PRACTICAL) TRAINING SCHEDULE**

<b>Total course duration (320 hrs)</b>	
<b>PCP (120 hrs)</b>	<b>Self learning (200 hrs)</b>
<b>Practical ( 80 hrs)</b>	<b>Theory ( 40 hrs)</b>

Schedule		PCP- Topic			Learning outcomes	
Week	Topic	Day	Duration (hr)	Theory	Practical	Learning outcomes
Week 1	Solar energy technology	Day 1	2	<ul style="list-style-type: none"> <li>Introduction to Conventional &amp; Non-conventional sources of energy</li> <li>Difference between conventional &amp; Nonconventional energy &amp; their limitations.</li> <li>Advantages &amp; Disadvantages of Non-conventional energy</li> <li>Solar radiations.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration of Conventional &amp; Non-conventional energy sources by using charts or audio/video aid.</li> </ul>	<ul style="list-style-type: none"> <li>Learner would be able to :-</li> <li>Distinguish between the conventional and non-conventional sources of energy.</li> <li>Identify the devices that use these resources.</li> <li>Observes the limitations and advantages of the non-conventional sources of energy.</li> <li>Identify the use of solar radiation.</li> </ul>

		Day 2	2	<ul style="list-style-type: none"> <li>Principles of conversion of solar energy to thermal energy.</li> <li>Modes of conversion of solar energy.</li> <li>Different type of solar energy devices.</li> </ul>	2	<ul style="list-style-type: none"> <li>Measuring temperature difference by using glass bucket (full of water) with glass lid &amp; without glass lid.</li> <li>List out the forms of solar energy storage with example of devices using it.</li> </ul>	<ul style="list-style-type: none"> <li>State the principle of solar energy conversion to thermal energy.</li> <li>Identify different solar energy devices.</li> </ul>
Week 2	Solar collector systems	Day 1	2	<ul style="list-style-type: none"> <li>Collection and storage of thermal energy.</li> <li>Solar energy collector.</li> <li>Radiation absorbing medium.</li> </ul>	3	<ul style="list-style-type: none"> <li>Demonstration of solar flat plate collector system.</li> <li>Calculation of temperature achieved in the collector system.</li> </ul>	<ul style="list-style-type: none"> <li>Learner would be able to:-</li> <li>Categories different solar energy collector system.</li> <li>Demonstrate the parts of the collector system.</li> <li>Assemble the components of collector system.</li> <li>Identify the components of the PV cell.</li> <li>State the working principle of a PV cell.</li> <li>Identify the material used for the construction of a PV cell.</li> </ul>
		Day 2	2	<ul style="list-style-type: none"> <li>Principles of photovoltaic cells</li> </ul>	2	<ul style="list-style-type: none"> <li>Demonstration of a photovoltaic cell.</li> </ul>	<ul style="list-style-type: none"> <li>Learner would be able to:-</li> <li>State the working principle of solar cooker.</li> <li>Identify the important components of the solar cooker system.</li> <li>Purchase the different material required for constructing a solar cooker.</li> </ul>
Week 3	Solar cookers	Day 1	2	<ul style="list-style-type: none"> <li>-Basic working principle –</li> <li>Designs available in the market</li> <li>Information on solar cookers manufacturers in India.</li> <li>Introduction to solar cookers for house hold &amp; community applications.</li> </ul>	4	<ul style="list-style-type: none"> <li>Demonstration of box type solar cooker and its components</li> <li>Assembling of solar cookers</li> </ul>	<ul style="list-style-type: none"> <li>Learner would be able to:-</li> <li>State the working principle of solar cooker.</li> <li>Identify the important components of the solar cooker system.</li> <li>Purchase the different material required for constructing a solar cooker.</li> </ul>

