

Lab requirements for

Plumbing and Solar Water Heating

Sr. #	Item Description
1.	<u>Adjustable wrench</u> ;Set of 5 Pcs Material: High carbon Steel Surface Treatment: Chrome Type: Adjustable set of 5 Pcs 6,8,10,12,15, Inches
2.	<u>Pipe Bender Machine</u> ; Hydraulic, Max working pressure 44 (mpa), Max.Working movement(mm) 250, curvature radius 4D, Hydraulic Oil N15, Pipe External Diameter Series Min 42x3.25 48X3.5 60X3.
3.	<u>Chisel</u> ; Flat Chisel (Min set of two) SDS Shank Min 1 inch width x 12 and 8 inch overall length Material:Made from forged high grade steel
4.	<u>Chisel</u> ; Flat cold Chisel (Min set of two) Min 1 inch width x 12 and 10 inch overall length Material:
5.	<u>Marshal trowel</u> ;Size:10"/250mm Diameter of connecting rod:9.5mm
6.	<u>Electric Drill Machine</u> Voltage:220-240V~50/60Hz Input power:650W No-load speed:0-1700rpm Impact rate:0-5500bpm Impact energy:1.7J Max. drilling capacity: Concrete:22mm Steel:10mm Wood:25mm SDS plus chuck system With 3 SDS-PLUS drills
7.	<u>Die Ratchet Set</u> ;Die Fix 1/2,3/4,1 and 1x1/4 complete set with lever Set of
8.	<u>Extension board</u> ;four ways extension socket maximum current 13 ampere with 5 meter wire
9.	<u>Safety Gloves</u> , Leather Size : Medium Width of Palm: Min 7 cm Length of Palm: Min 18cm
10.	<u>Safety goggles</u> ; Safety goggles Plastic with glass
11.	<u>Angle Grinder</u> ; Voltage:220-240V~50/60Hz Input power:710W No-load speed:11000rpm Disc diameter:100mm Spindle thread:M10 With 1pcs auxiliary handle Guard ,Auxiliary Handle, Inner (Clamping) Flange, Outer (Round Nut) Flange, Spanner Wrench,
12.	<u>Grip plier</u> ;Vice Grip Pliers Size: Min 230mm
13.	<u>Hammer Set</u> ; Iron head with wood handle set of four (250g, 500g, 1000 g and set of 3
14.	<u>Hand bit</u> ;Set of Min eleven vital pieces Sizes required: 2.5 mm, 3mm, 4mm, 5mm, 6mm, 7mm, 8mm, 9mm, 10mm, 11mm & 12mm Material: High speed steel (HSS) Heat and corrosion resistance
15.	<u>Safety Helmet</u> ;PE shell with vents Lining material: Plastic Chin strap included Color as per plumber requirement
16.	<u>Hacksaw</u> ;Min 12" heavy duty hacksaw frame with adjustable aluminum handle Blade Length: Min 300mm Material: Steel
17.	<u>Spirit Level</u> ;Aluminum box frame with milled edges/Plastic end caps 3 solid vials (horizontal,vertical 45 Degree) Length : Min 12"

18.	<u>L-Key Set</u> ;Set of Min 9 pcs 2,3,4,5,6,7 ,8,9 & 10mm Heat Treated, Tempered Alloy Steel
19.	<u>Measuring tape</u> ;Combined measuring and marking edges that quickly and easily measure and mark both external and internal lengths. Tape Length: Min 5 Meter. Tape Width: Min 25mm.
20.	<u>Pipe wrench set</u> ;Adjustable Chrome Finish Spanner Heat Treated Thumb Screw Movement Precision Marked Scale set of four 8", 10", 12" and 14 " (Set of 4)
21.	<u>Pipe Cutter</u> ; Can cut copper pipe & aluminum pipe & steel pipe Cutting diameter:10-42mm
22.	<u>PPRC/GI pipe Cutter</u> ; Length:225mm Cutting diameter:3-42mm Auto-open function
23.	<u>PPRC Heater</u> Main Fuse Value 16 A Stainless Steel made Thermostat Regulation : Min 50-300 C Pins hole : Min 3 Capacity: At least 750W to 1000W
24.	<u>Screw driver set</u> Material: Chrome vanadium Handle Material: Plastic / Rubber Magnetic Screwdriver Tips Min 6" straight screwdriver Set of 8 Pcs, (4 flat-head and 4 Philips head) size 6", 8" 10" and 12"
25.	<u>Screw Driver Set</u> ; Set of 2 star and flat metallic head mechanical screw driver 12" long
26.	<u>Spanner set</u> Double End opened Spanner Vanadium steel made Chrome plated 12 degree offset bi-hex ring for access Sizes 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x27; 25x28; 30x32
27.	<u>Water Pressure Leakage Tester Pump</u> ; Main Material: Brass and iron Max. Pressure: 350 psi minimum Hose Thread: Min 1/2" BSP Water Tank Size: 5 liter Handle Length: Min 12"
28.	<u>Tools box</u> ; Size:495x200x290mm 3 layers Steel thickness : 0.6~0.8mm
29.	<u>Compass</u> ;Spring type Material: Stainless Steel Size: Min 250 mm
30.	Pipe Insulation Material
31.	<u>Sealing Tape</u> , Teflon tape roll
32.	<u>Bench Vice</u> ;Jaw width min 125mm size Maximum jaw opening min 130mm Jaw depth 70mm Made of cast steel , hardened jaws, gunmetal nut, square thread spindle
33.	<u>Oil Can</u> ;Fluid Capacity: Min 150 ml Galvanized plate, reinforced hose, hose nozzle min 10 cm
34.	<u>Metallic checkered plumber laboratory table</u> Dimensions: 6 x 4 x 3 feet with compatible gauge size, with durable SS legs.