

8. Fluid Lab

S.No	Equipment/Apparatus Name	Qty.	Remarks if any
1.	Reynold's Apparatus A glass tube with one end having bell mouth entrance; constant headwater tank of 40 Liters capacity; Sump tank of 60 liters capacity. stainless steel tanks.	01	
2.	Losses due to Friction in pipe lines (with stainless steel tanks) 2 pipes of different diameters to be connected in parallel; water re-circulating unit; sump tank of 50 liters capacity; measuring tank with piezometer of capacity 25 liters; pipe test sections: dia $\frac{1}{2}$ " , length 1m. material G.I., 2 nd pipe dia $\frac{3}{4}$ " , length 1.25m, material G.I., FHP pump.	01	
3.	Bernoulli's theorem apparatus (with stainless steel tanks) Test section of acrylic material with convergent and divergent sections; 7 piezometer tubes of P.U. material; electricity 0.5k W, measuring tank with piezometer of capacity 25 liters; sump tank of capacity 25 liters; inlet tank of 20 liters capacity.	01	
4.	Nozzle meter test ring Nozzle of stainless steel, housing of clear acrylic compatible to 1" dia pipe; measuring tank of 25 liters capacity; sump tank of 55 liters capacity.	01	
5.	Discharge over notches (with stainless steel tanks) Set of 3 notches-V notch (45° and 60°) & rectangular notch; measuring tank with piezometer of capacity 25 liters; sump tank of capacity 50 liters;	01 each	
6.	Darcy's law apparatus Cylindrical test section of stainless steel of dia 120mm filled with a porous material; height 500mm; measuring tank with piezometer of capacity 25 liters; sump tank of capacity 50 liters. Mechanical stopwatch of 0.2sec resolution.	01	
7.	Impact of jet on vanes (with stainless steel tanks) 2 test plates, flat and hemispherical cup; nozzle of brass material; a stainless steel chamber of opposite sides made of glass; measuring tank with piezometer of capacity 25 liters; sump tank of capacity 50 liters.	01	
8.	Losses due to pipe fittings, sudden enlargement & contraction (with stainless steel tanks) $\frac{1}{2}$ " bend & $\frac{1}{2}$ " elbow setup; sudden enlargement from 15mm to 25mm; sudden contraction from 25mm to 15mm; $\frac{1}{2}$ " ball valve; $\frac{1}{2}$ " gate valve; differential manometer with 12 pressure tapings; sump tank of 50 liters capacity; measuring tank with piezometer of capacity 25 liters	One set	
9.	Study of pressure measurement Single well manometer of single tube type; differential manometer of U tube type; sensitive manometer of inclined tube type; bourdon type pressure gauge; sump tank of capacity 60 liters.	One set	
10.	Flow through orifice & mouthpiece (with stainless steel tanks) Varying head arrangement to measure X-Y coordinates of 35 liters capacity; measuring tank with piezomete of capacity of 25 liters;	One set	

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