



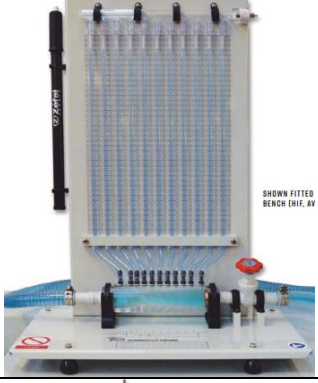








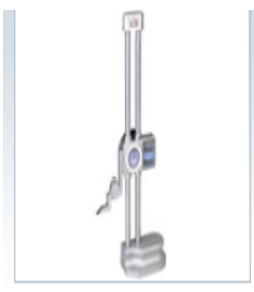


FLUID MECHANICS LAB

S.No.	Item Name	Model	Manufacturer	Usage	status	Picture
1	Notch	H6	TQ Techquiment	A comprehensive study of flow over weirs, including: <ul style="list-style-type: none"> • Investigation of the head against discharge • Coefficient of discharge • Rectangular and different angled V - notches 	Working	
2	Digital Hydraulic Bench	H1F	TQ Techquiment	This product supplies a controlled flow of water to a wide variety of laboratory experiment modules.	Not working	
3	Friction loss in a pipe Apparatus	H7	TQ Techquiment	Study of friction loss in a pipe, including: <ul style="list-style-type: none"> • Investigations of laminar and turbulent flows • Demonstration and measurement in the change of the laws of resistance (friction factor) from laminar to turbulent flow. • Finding the critical Reynolds number. • Verifying Poiseuille's equation and the coefficient of viscosity for water in the laminar flow region 	Working	
4	Flow Meter Calibration	H40	TQ Techquiment	<ul style="list-style-type: none"> • Accuracy of nozzle flow meters. • Losses and k value. • Calculation of the coefficient of discharge. 	Working	
5	Pipework energy losses	H34	TQ Techquiment	Measurement and comparison of losses in: <ul style="list-style-type: none"> • Mitre bend • Elbow bend. • Large radius bend. • Sudden expansion. • Sudden contraction 	Working	





6	Flow-Through an Orifice	H4	TQ Techquiment	<p>Investigations into a variety of orifices over a range of flow rates, including</p> <ul style="list-style-type: none"> • Determination of contraction and velocity coefficients. • Calculation of discharge coefficient • Determination of actual discharge coefficient, and comparison with calculated values 	Working	
7	Pelton Turbine	H19	TQ Techquiment	<p>To study the:</p> <ul style="list-style-type: none"> • Performance charts of power, speed, torque, and efficiency. • The effect of spear valve position 	Working	
8	Francis Turbine	H18	TQ Techquiment	<p>To study the:</p> <ul style="list-style-type: none"> • Efficiency of a Francis turbine. • Performance of a Francis turbine at different flow rates. • The effect of different guide vane settings on turbine performance 	Working	
9	Bernoulli's Theorem	H5	TQ Techquiment	<ul style="list-style-type: none"> • A comprehensive study of a Venturi meter and Bernoulli's theorem, including: • Direct measurement of the static head distribution along with a Venturi tube • Measurement of the meter coefficient of discharge at various flow rates 	Working	
10	Impact of a jet	H8	TQ Techquiment	<p>Measurement of the impact force and comparison with momentum change of four different plates:</p> <ul style="list-style-type: none"> • Flat plate. • Hemispherical plate. • Inclined flat the plate. • 120-degree conical plate • 30-degree angled plate 	Not working	



Mechanical Measurements Lab

S.No.	Item Name	Model	Manufacturer	Usage	status	Picture
1	Digimatic Outside Micrometer	Series 293	Mitutoyo	<ul style="list-style-type: none"> • Outside dimension measurement • Faster measurement • Accurate measurement 	Working	
2	Vernier caliper	Series 530	Mitutoyo	<ul style="list-style-type: none"> • To measure plain and basic Design • Can measure steps • Carbided tipped caliper so optimal for measurements of castings, grinding stones. 	Working	
3	ABS Digimatic Caliper	Series 532	Mitutoyo	<ul style="list-style-type: none"> • Fine augments aids slider position • Allows step measurements 	Working	
4	Anvil type micrometer	Series 125	Metrica	<ul style="list-style-type: none"> • For measuring work piece features when access is difficult 		
5	Height Gauge	Series 516	Mitutoyo	<ul style="list-style-type: none"> • Fits comfortably on the hand • Easy movement on the Surface plate • Large knocking nobs for easy measurement 	Working	

6	Height gauge with Counter	Series 514	Mitutoyo	<ul style="list-style-type: none"> • Improved operability 	Working	
7	Gauge blocks	Series 516	Mitutoyo	<ul style="list-style-type: none"> • Boxed gauges to measured wide variety of dimensions • Depending on convenience and environmental also can be considered. 	Working	
8	Universal Hardness Tester	HRB 187.5	Mitutoyo	<ul style="list-style-type: none"> • Estimate Brinell/Vickers Hardness of any material 	Working	

MECHANICAL POWER LAB (ME 494)

S.No .	Item Name	Model	Manufacturer	Usage	status	Picture
1	Thermal expansion Apparatus	10.0103564-2040	Gunt Hamburg	Learning Objectives A. Thermal expansion of different materials such as PVC, PE, copper and steel B. Determination of thermal expansion coefficients and the expansion force. C. Measurement of pipe elongation D. Effect of varying pipe diameter E. Expansion compensator	Not Working	
2	Rankine Cyclor	772 WUSA	Turbine Technologies LTD	Learning Objectives. To study the working and performance analysis of Rankine Cycle	Not working	
3	Heat Exchanger	TICT109	Cussons Technologies	Learning Objectives. A. To determine the relationship between Nusselts and Rey-nolds numbers applied to a single heated tube positioned transversely to a stream of air. B. To determine the effect of change of diameter on the heat transfer coefficient to a single tube in cross flow. C. To determine the effect of change of position of the heated tube within a cross flow tube bundle. D. To examine the effect of heat transfer of a Flat Plate.	Working but Software is required	
4	Vapor Condensation Apparatus	TE6A/EA201780	Gunt Hamburg	Learning Objectives A. Dropwise and film condensation B. Determination of the heat transfer coefficient	Working but software required	

				C. Effect of pressure, temperature and non-condensable gases on the heat transfer coefficient		
5	Vapor Absorption System	ET480,201480	Gunt Hamburg	<p>Learning Objectives</p> <p>A. Demonstrate the basic principle of an absorption refrigeration system</p> <p>B. Absorption refrigeration system and its main components</p> <p>C. Operating behavior under load</p>	Working but some maintenance required with Gas cylinder	
6	Four Stroke Petrol Engine Model	BSC-502	Best Scientific Company	<p>Learning Objectives</p> <p>A. Demonstration engine model is mounted on metal base with mounted diagram.</p> <p>B. Ignition is shown by means of miniature.</p> <p>C. Carburetor and fuel supply are sectioned.</p>	Working	
7	Shell and Tube Heat Exchanger	TICT	Edibon	<p>Learning Objectives</p> <p>a. Heating Water in computer controlled thermostatic bath.</p> <p>b. Regulation and measurement cold and hot water flows and temperatures.</p> <p>c. Measurement of pressure drop</p>	Not Working	