

DEPT-MECHANICAL ENGINEERING

SL No	Name of the Laboratory	List of equipments	List of Experiments
1	Strength of Material Laboratory	Universal testing machine	Determine end reaction in s beam
		Torsion testing machine	Determination of torsional rigidity of the shaft using torsion testing machine
		Impact testing machine	Determination of salient point(Ypung's modulus,yield point,fracture point) from stress-strain curve using Universal Testing Machine
		Brinells Hardness testing machine	Determination of hardness number by Rockwell/Vickers hardness testing machine
			Determination of toughness using impact testing machine(Chsrpy/Izod)
2	Thermal Engineering Labrotary	2 stroke petrol engine	Study of 2-S,4-S petrol engine
		4 stroke petrol engine	study of 2-S,4-S dieselengine
		2 stroke diesel engine	Study of boiler (Fire tube,Water tube)
		4 stroke diesel engine	Study of steam engine
		4 stroke computerised diesel engine	calculation of brake thermal efficiency and specific fuel consuption.
		4 stroke computerised petrol engine	
		Models of babcock and wilcox boiler	
		Model of lancashire boiler	
3	Workshop	Capstan turret lathe	Preparation of try suare
		universal grinding machine	Preparation of hammer
		surface grinding machine	Preparation of male -female joint
		Universal Milling machine	Preparation of hexagonal flat bolt
		Radial Drilling machine	Preparation of octagonal flat chisel
		ARC Welding machine	Cutting of slot,botch,mortise and tenon
		TIG welding machine	Plane turning
		Pedestral grinding machine	Step turining
		Horizontal ginding machine	Taper turning
		Shaper machine	Grooving
		Power hack saw	Chamfering
		Hand drill Machine	External threading
			preparation of simple moulis
			preparation of cores
			job involving drilling and boring
			job involving turret lathe
			internal threading
			joint through arc welding
	Joint through gas welding		
	joining two non ferrous through TIG welding		
	joints involving carpentry.		

4	FLUID MECHANICS AND HYDRAULIC MACHINES	Orificemeter apparatus	Study of pressure measuring devices manometers,bourdon tube pressure gauge
		venturimeter apparatus	verification of bernoullis theorem
		pitot static apparatus	determination of Cd from venturimeter
		losses in pipe apparatus	determination od Cc,Cv and Cd from orificemeter
		hydraulic ram apparatus	determination of darcys coefficient from flow through pipes
		Metacentric height apparatus	performane testing impulse turbine
		Impact of jet apparartus	performance testing reaction turbine
		Bernoullis theorem apparatus	performance testing centrifugal pump
		Notch apparatus	performance testing reciprocating pump
		Orifice and mouthpiece apparatus	
		Pelton wheel turbine	
		Francis turbine	
		Reciprocating pump	
		Centrifugal pump	
5	HEAT POWER LAB	2 stroke petrol engine	calculation of brake thermal efficiency and specific fuel consuption of disel engine
		4 stroke petrol engine	calculation of brake thermal efficiency and specific fuel consuption of petrol engine
		2 stroke diesel engine	Determine the BHP,HO,IHP,BSFC of a multi cylinder engine
		4 stroke diesel engine	Determine the mechanical efficiency of an air compressor
		4 stroke computerised diesel engine	Study the constrution features of domestic refrigerator
		4 stroke computerised petrol engine	study of construction features of Window AC
		air compressor	Study of construction features of split AC
		experimental split AC trainer	Determine the COP of a refrigerator
		Experimantal window AC trainer	
		water cooling tower	
		Ice plant trainer	
		Mechanical heat pump	
		AC fault simulator	
		Oil hydraulic trainer	
Pneumatic Trainer			
5	THEORY OF MACHINE & MEASUREMENTV LAB	Governor	Determiation of centrifugal force of a governor
		Static balancing machine	Study and determiation of static balancing apparatus
		Epicyclic gear train	study and demonstraion of epicyclic gear train
		Vernier calliper	Determiation of the thickness of ground MS flat to an accuracy of 0.02 mm using vernier calliper
		Slip gauge	Determiation of diameter of a cylindrical componrnt to an accuracy of 0.01 using micrometer
		Micrometer	Determine the thickness of grounf MS PLATE using slip gauge.

		coriolis component	
6	AUTOMOBILE ENGINEERING LAB		Study of differential mechanism of an automobile
			study of braking systems(Hydraulic and air brake)
			Study of Multiple clutch
			study of automobile chassis
			study of gear trains
			study of electrical system of automobile
7	CAD/CAM Lab		study of air compressor.
			2D Drafting:
			Dimentioning and command essential for creating 2D drawing
			create rectangle circle and polygon
			3D Drafting:
		create various drawing view of 3D parts	