

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra SYLLABUS COVERAGE		Department: <u>Mechanical Engg</u> Subject <u>Thermal Engg-II</u>					
		Course <u>Programme Core</u> Duration <u>14 weeks</u>					
		Total Periods <u>56</u> Theory <u>56</u>					
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	R. marks	
01.	1-12.	Gas turbines.	Air-standard Brayton cycle brief description along with derivation of efficiency and $p-v$-$T-s$ diagrams. classification of open cycle and closed cycle gas turbines. comparison of gas turbines with reciprocating I.C engines and steam turbines. Application and limitation of gas turbines. General layout of open and closed cycle gas turbines, $p-v$-$T-s$ diagram and working.	Thermal Engg. by R.K. Rajput.			
02.		Jet Propulsion	Principle of jet propulsion, fuel used for jet propulsion, Applications. working of turbojet engine. Principle of Ram effect, working of Ramjet engine. Principle of rocket propulsion, working of rocket engine, applications. Comparison of jet and rocket propulsion.	Thermal Engg. by Mahesh M. Patil.			

To be approved from concerned HOD within seven days from beginning of semester & will be kept with the concerned teacher in his file.

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
02.	13-22.	Properties of steam.	Formation of steam under constant pressure. Industrial uses of steam, Basic definition, saturated liquid line, vapour line, liquid region, wet region, superheated region, critical point, saturated liquid, vapour, saturation temp, sensible heat, latent heat, wet steam, dryness fraction, wetness fraction, saturated steam, superheated steam, degree of superheat. Determination of enthalpy, volume, entropy of wet, dry and superheated steam using steam tables and mollier charts. Throttling process. Simple problems on above using steam tables and mollier charts.	Thermodynamics by Er. B.S. Uthi		

Extra Topics to be covered beyond the scope of the syllabus (as required by industry/ as recommended by Teacher which he/ she finds necessary)

Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

Approved / Not approved	
Date	HOD Sign
Date	Principal Sign

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>Mechanical Engg.</u> Subject <u>Thermal Engg. II</u>				
SYLLABUS COVERAGE		Course <u>Programme core</u> Duration <u>14 weeks</u>				
		Total Periods <u>56</u> Theory <u>56</u>				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	R. marks
03.	23-32.	Steam generators.	Functions and uses of steam boilers, classification of steam boilers with examples. Brief explanation with line sketches of Cochran, Babcox and Wilcox boilers. Comparison of water tube and fire tube tube boilers. Description with line sketches and working of modern high pressure boilers Lamont and Benson boilers. Boilers mountings: pr. gauge, water level indicator, fusible plug, blow down cock, stop valve, safety valve (dead weight, spring types). Boiler accessories, economizer, superheater, air pre heater, study of steam trap and separator; concept of the terms; actual, equivalent evaporation, factor of evaporation, boiler horse power and efficiency. Formulae for the above terms without proof. Simple direct problems on the above terms.			

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Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
33-44	Steam nozzles.	Types of steam nozzles; Flow of steam through nozzle, velocity of steam at the exit of nozzle in term of heat drop using analytical method. Simple direct problems on the above only using analytical method. Discharge of steam through nozzle. Critical pr. ratio. Methods of calculation of cross sectional area at throat and exit for max. discharge.			
45-56	Steam turbines.	classification of steam turbines with examples.			

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G P Kangra SYLLABUS COVERAGE		Department: <u>Mechanical Engg</u> Subject <u>Thermal Engg-II</u>				
		Course <u>Programme core</u> Duration <u>14 weeks</u>				
		Total Periods _____ Theory _____				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	R. marks
			Difference between impulse and reaction turbines. Principle of working of a simple De-Laval turbine with line diagram, velocity diagram (Diagrammatic representation only). Methods of reducing rotor speed. Compounding for velocity for pressure or both pressure and velocity. Working principle with line diagram of a Parson's reaction turbine velocity diagram (diagrammatic representation only). Bleeding, re-heating and re-heating factor			

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
			Governing of steam turbines, by throttle, By-pass and nozzle control governing.			

Extra Topics to be covered beyond the scope of the syllabus (as required by industry/ as recommended by Teacher which he/ she finds necessary)

Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

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Date 27/01/26	HOD Sign Aslam
Date 27/01/26	Principal Sign [Signature]

G P Kangra

Practical Planning & Coverage Status

Department: Mechanical Engg.
Course: Diploma

Laboratory: Material Testing Lab
Subject: Material Testing Lab - Group 2. (Group-2).

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	Prepall a specimen and examine the microstructure of the ferrous and non ferrous metals using the metallurgical microscope.	Metallurgical microscope.		02/02/26				
2.	Detect crack in the specimen using (i) visual inspection, die test, magnetic particle test.			09/02/26 16/02/26				
3.	Determine the Rockwell Hardness number for various materials like MS, Carbon steel, brass, copper & aluminium.	Rockwell Hardness tester.		23/02/26				
4.	Finding the resistance of materials to impact loads by Izod & Charpy test.	Izod tester		30/02/26 02/03/26				
5.	Torsion test on mild steel - finding between torque and angle of twist determination of shear modulus & stress.	UTM/ Torsion testing machine.		09/03/26 16/03/26				
6.	Find Young modulus of elasticity, yield point, % elongation and reduction in area, stress strain diagrams.			23/03/26 30/03/26				
7.	Determine modulus of rigidity, strain energy & stiffness by load deflection method.	Sprung load test apparatus		06/04/26 13/04/26				
8.	Single or double shear stress test on MS to find the resistance of material to shear load - UTM.							

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27/01/26

Principal Signature with date
27/01/2026

Department: Mechanical Engg.
Course: Diploma

Practical Planning & Coverage Status

Laboratory: CAD Lab.
Subject: Computer aided Machine Drawing Practice

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remark
		Equipment Set up	STD Ref. Write up					
1	Introduction to CAD Software	Available	Available	9-12/2	9-2-24			
2	Drawing aids and editing commands			9-13/2	9-5/2			
3	Basic dimensioning, Hatching, block and plot views.			9-12/2, 17/2, 18/2				
4	Isometric Drawing, printing and plotting			9-18/2, 19/2				
5	Detail and Assembly drawing of sleeve & cotter joint with B.O.M.			9-23/2, 24/2	9-25/2			
6	Detail and Ass. of Spigot and Gutter with B.O.M.			9-23/2, 24/2	9-25/2			
7	Detail and Ass. of Knuckle joint with B.O.M.			9-23/2, 24/2	9-25/2			
8	Detail and Ass. of stuffing Box with B.O.M.			9-23/2, 24/2	9-25/2			
9	Detail and Ass. of screw jack with B.O.M.			9-23/2, 24/2	9-25/2			
10	Detail and Ass. of foot step bearing with B.O.M.			9-23/2, 24/2	9-25/2			
11	Detail and Ass. of Machine vice with B.O.M.			9-23/2, 24/2	9-25/2			
12	Detail and Ass. of Connecting Rod with B.O.M.			9-23/2, 24/2	9-25/2			
13	Detail and Ass. of Bracket by Flanged coupling with B.O.M.			9-23/2, 24/2	9-25/2			
14	Detail and Ass. of Pneumatic Block with B.O.M.			9-23/2, 24/2	9-25/2			

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27/01/26

Principal Signature with date

Practical Planning & Coverage Status

Department: Mechanical Engg.
Course: Diploma

Laboratory: Thermal Engg.
Subject: Thermal Engg. Lab-II

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	Study of Cochran, Babco - ck and wilcox boiler with model	Model of Cochran Babco - ck and wilcox boilers	Thermal Engg. - II by Eagle Perbathan and	G-I → 4/2/26 G-II → 3/10/26	G-I → G-II →			
2.	Study of boiler mountings & accessories.	Mountings & Accessories models.	Thermal Engg. by R. S. Khurmi	G-I → 11/2/26 G-II → 10/10/26	G-I → G-II →			
3.	Conduct performance Test on VCR Test rig to determine COP of Refrigerator.	VCR Test Rig	S. Chand Publications	G-I → 18/2/26 G-II → 17/1/26	G-I → G-II →			
4.	Conduct Performance Test on reciprocating Compressor - 2.	Reciprocating Compressor Test rig.	- do -	G-I → 25/2/26 G-II → 24/1/26	G-I → G-II →			
5.	Conduct morse Test to determine the indicated power of individual cylinders.	Morse Test Rig.	- do -	G-I → 11/3/26 G-II → 3/6/26	G-I → G-II →			
6.	Conduct performance Test on 2/4 - stroke CI/SI engines.	Rope Brake dynamometer - 2.	- do -	G-I → 18/3/26 G-II → 10/3/26	G-I → G-II →			

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Principal Signature with date

G P Kangra

Practical Planning & Coverage Status

Department: Mechanical Engg.

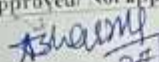
Laboratory: Thermal Engineering

Course: Diploma

Subject: Thermal Engg Lab-II

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
7.	Conduct Heat balance Test on CI / SI engine.	Test Rig	-do-	G-I → G-II →	G-I → 25/3/26 G-II → 17/3/26			
8.	Study of steam Turbine through models.	Models of Turbines	-do-	G-I → G-II →	G-I → 01/04/26 G-II → 24/3/26			
9.	Thermal Conductivity Test on thick slab / thick cylinder	Conductivity Test Apparatus	-do-	G-I → G-II →	G-I → 08/04/26 G-II → 31/3/26			
10.	Leak Detection Test of Refrigeration equipment.	Refrigeration equipment - for leak detection	-do-	G-I → G-II →	G-I → 22/4/26 G-II → 7/4/26			

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PLANNED SYLLABUS COVERAGE(Theory)

GPK-F-17

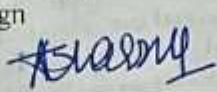
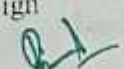
G P Kangra		Department: Mech. Engg.		Subject Program Elective - I		
SYLLABUS COVERAGE		Course Diploma		Duration 3 years		
		Total Periods 42		Theory 42		
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1	1-6	Introduction to basic structure of an Automobile	Basic Engine Components, Cylinder block, cylinder Head, Gaskets, cylinder liners, types of cylinder liners, Piston & Piston pin, Piston rings, Connecting rod, Crank shaft, Cam shaft, Crankcase, Engine valves, flywheel and governor.	Automobile Engg. Vol-I & Vol-II By Kripal Singh Automobile Engg. By R.B Gupta Satya Prakashan Publication		
2	7-17	Cooling & Lubrication system	The necessity of cooling system, Types of cooling system:- Air cooling and water cooling, Air cooling system, Types of water cooling systems Thermosyphon system and pump circulation system, Advantages and disadvantages of air cooling and water cooling systems, The Components of water cooling systems - fan, radiator, Pump and thermostat, the necessity of Lubrication system, SAE rating of Lubrication system, Types of Lubrication system, Petro Lubrication & High Pressure Lubrication system.	-do-		

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
		Fuel feed system	Convention of fuel and alternative fuels, Cetane numbers and octane numbers, Types of Carburettors :- Working of Simple Carburettor, Multipoint and Single point fuel Injection systems, Different fuel Transfer pumps, Working of SV Electrical and AC Mechanical pump, Fuel filters, Fuel Injection Pump, Fuel Injectors, Use of hydrogen and ethanol as alternative fuel (Basic Concept only)	-do-		

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Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

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Date 27/01/26	HOD Sign 
Date	Principal Sign 

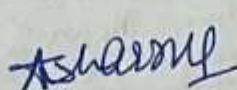
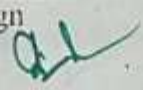
PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>Mech. Engg.</u> Subject <u>Program Elective - I</u>				
SYLLABUS COVERAGE		Course <u>Diploma</u> Duration <u>3 years</u>		Total Periods <u>42</u> Theory <u>42</u>		
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
3.	18-29	Ignition System	Introduction to ignition system, Battery ignition systems and Magneto ignition system, Electronic ignition system, Construction and working of lead acid battery, Elements of charging system, Elements of starting system, Types of lights used in automobile.	-do-		
		Transmission & Steering System	General arrangement of clutch, Principle of friction clutches, Constructional details of Single Plate clutch, Constructional detail of multiplate clutch, Constructional details of centrifugal clutch, necessity for gear ratios in Transmission, Types of gear boxes, Working of Sliding Mesh gearbox, working of Constant mesh gearbox,	-do-		

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
4.	30-36	Suspension System	Working of Propeller Shaft, working of universal joint, working of differential, types of rear axle, purpose of a front axle, necessity of steering system, Caster, Camber and King Pin inclination, Rack and Pinion steering system, Power steering. Necessity of suspension system, Torsion bar suspension system, Leaf Spring and Coil Spring Suspension System,	-do-		

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Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

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PLANNED SYLLABUS COVERAGE(Theory)

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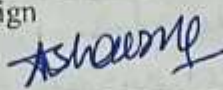
G P Kangra		Department: <u>Mech- Engg.</u> Subject <u>Program Elective-I</u>				
SYLLABUS COVERAGE		Course <u>Diploma</u>		Duration <u>3 years</u>		
		Total Periods <u>42</u>		Theory <u>42</u>		
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
			Independent suspension for front and rear wheel, working of telescopic shock absorber, functions of brakes, Types of brake, Working of Internal expanding brake, Working of disc brake.	-do-		
5.	37-42	Special Vehicles	Introduction to special vehicles, Tractor, motor grader, Scrappers, Excavators, Dumper Trucks.	-do-		
		Hybrid and Electric Vehicles.	Introduction to Hybrid and electric vehicles, Social and environmental Importance of Hybrid and electric vehicles, Electric vehicle drive train (line diagram only)			

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Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

Approved / Not approved	
Date 28/01/26	HOD Sign 
Date	Principal Sign 

* Use additional sheets (if required).

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>Mechanical Engg</u>		Subject <u>Power Plant Engineering</u>		R. marks
SYLLABUS COVERAGE		Course <u>Program Elective Core</u>		Duration <u>14 X 3 = 42 periods</u>		
		Total Periods <u>42</u>		Theory _____		
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	
1.	1-5	Introduction to Power plant	Introduction to power plants, Indian scenario in India, location of power plant, choice of power plant, classification of power plants.	P. K. Jain Introduction to Thermal Power plant Engineering		
2.	6-12	Economics of power plant	Terminology used in power plant, Peak load Base load factor, various factor affecting the operation of power plant, methods of meeting the fluctuating load in power plant, Performance & operating characteristics of power plant.	R. K. Jain Power plant Engineering		
3.	13-24	Hydro power plant	Introduction to Hydro electric power plant rainfall, runoff and its measurement, hydrograph, flow duration curve, selection of site for hydroelectric power plant, General layout of Hydro electric power plant and its working, classification of plant run-off river plant, storage river plant, pumped storage plant, advantages & disadvantages of hydroelectric power plant.	Vinod Kumar Patil, Power plant Engineering		
4.	25-36	Diesel & Gas turbine plant	Layout of diesel power plant, components & working of diesel power plant, Advantages & disadvantages of diesel power plant, Gas Turbine power plant schematic diagram, components & its working, combined cycle power generation, combined gas and steam turbine power			

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
5.	37-42	Nuclear power plant Environmental Impact of power plant Power plant safety	plant operation Introduction to Nuclear power - Radioactivity, Radioactive change - types of reactions, working of Nuclear power plant, thermal fissile reactors, PWR, BWR and gas cooled reactors Advantages & disadvantages of Nuclear power plant. Social & Economical issues of power plant, Green House effect, Acid precipitation, Acid rain, Acid snow, dry deposition, Acid fog. Thermal pollution from power plants. Radiation from power plants. Safety Policy to be observed in power plants, safety practice to be observed in boiler operations, oil handling, chemical handling system.			

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Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

Approved / Not approved	
Date 27/01/26	HOD Sign A. S. L. S. S.
Date 27/01/26	Principal Sign A. S. L. S. S.

Use additional sheets (if required).

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>Mechanical Engg.</u> Subject <u>Strength of Material</u>				
SYLLABUS COVERAGE		Course <u>Program Core Course</u> Duration <u>14 weeks</u>				
		Total Periods <u>14x4=56</u> Theory <u>56</u>				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	R. marks
1.	1-10	Simple stresses and strains	Types of forces, stress, strain and their nature, Mechanical properties of common engineering material, significance of various points on stress-strain diagram for MS and CI specimens, significance of factor of safety, Relation between elastic constants, stress and strain value in bodies of uniform section and of composite section under the influence of normal force, Thermal stresses in body of uniform section, (Cand of composite section) simple numerical problems on the above topics.	Strength of Materials By R.S.Khanna		
2.	11-14	Strain Energy	Strain energy or resilience, proof resilience and modulus of resilience. Formula without derivation of strain energy for the following cases i) gradually applied load ii) suddenly applied load iii) Impact / shock load. Simple numerical problems.	Strength of Materials By R.K.Bansal		
3.	15-28	Shear Force & Bending moment Diagrams.	Types of beams with examples a) cantilever beam b) simply supported beam c) overhanging beam d) continuous beam e) fixed beam. Types of beam loads.			

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
4.	29-39	Theory of Simple Bending and Deflection of Beams.	Point loads, UDL and UVL Definition and explanation of shear force and bending moment, calculation of shear force and bending moment and drawing S.F and B.M diagrams by the analytical methods only for the following cases (a) cantilever with point loads (b) cantilever with uniformly distributed load (c) simply supported beam with point loads (d) simply supported beam with UDL (e) overhanging beam with point loads at centre and at its free ends (f) overhanging beam with UDL throughout (g) combination of point and UDL for above related simple numericals problems. Explanation of terms: Neutral Layer, Neutral axis, Modulus of section, Moment of Resistance.			

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Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

Approved / Not approved	
Date 27/01/20	HOD Sign Ashwini
Date	Principal Sign [Signature]

Use additional sheets (if required).

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>Mechanical Engg.</u> Subject <u>Strength of materials</u>				
SYLLABUS COVERAGE		Course <u>Program core course</u> Duration <u>14 weeks</u>				
		Total Periods <u>14 x 4 = 56</u> Theory <u>56</u>				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	R. marks
5.	40-50	Torsion in shaft and springs.	Bonding stress, radius of curvature, Assumption in theory of simple bending, Bending equation $M/I = \frac{\sigma}{y} = \frac{E}{R}$, simple problems involving calculation of bending stress, Strength modulus of section and moment of resistance. Definition and explanation of deflection as applied to beams, Deflection formulae without proof for cantilever and simply supported beams with point load and UDL only. Related simple numerical problems. Definition and function of shaft, calculation of polar M.I for solid and hollow shafts, Assumptions in simple torsion, Torsion eqn $T = \frac{F}{J} \cdot \frac{\theta}{L} = \frac{C \theta}{R}$ simple problems on design of shaft based on strength of rigidity. Numerical problem related to comparison of strength and weight of solid and hollow shafts. Classification of springs. Nomenclature of closed coil Helical spring, Deflection formula for closed coil Helical spring Stiffness of spring.	Strength of material by R.S. Khurmi Strength of material by R.K. Bansal		

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
6.	51-56	Thin cylindrical shells.	simple numerical problems on closed coil Helical spring to find safe load, deflection size of coil and numbers of coils. Explanation of longitudinal and hoop stresses in the light of circumferential and longitudinal failure of shell, Derivation of expression for the longitudinal and hoop stresses, Related Numerical problems.			

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Approved / Not approved	
Date 27/01/26	HOD Sign <i>Aswathy</i>
Date	Principal Sign <i>Ind</i>

Use additional sheets (if required).

Practical Planning & Coverage Status

Department: Mechanical Engineering
Course: Program core course

Laboratory: Material Testing Lab
Subject: Material Testing Lab

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	Detect the cracks in the specimen using (i) visual inspection and ring test (ii) dye penetration Test (iii) Magnetic particle Test.		Strength of Material by R.S. Khurmi	G1 23/01/2026				
2.	Determination of modulus of rigidity, strain energy, shear stress and stiffness by load-deflection method.	Spring Testing apparatus	Strength of Material by R.S. Khurmi	G1 19/02/2026				
3.	Determination of Rockwell Hardness number for various materials like mild steel, high carbon steel, brass, copper, Aluminium.	Rockwell Hardness Tester	Strength of Material by R.S. Khurmi	G1 26/02/2026				
4.	Finding the resistance of materials to impact load by Izod and Charpy test.	Impact Testing Machine	Strength of Material by R.S. Khurmi	G1 5/03/2026				
5.	Finding Young modulus of Elasticity yield point, percentage elongation and percentage reduction in area stress strain diagram	Universal Testing Machine	Strength of Material by R.S. Khurmi	G1 19/03/2026				

Approved/ Not approved

R.S. Khurmi
27/11/20

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Principal Signature with date

Practical Planning & Coverage Status

Department: Mechanical Engineering
Course: Program Core Course

Laboratory: Material Testing Lab
Subject: Material Testing Lab

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
6.	Plotting tests on mild steel. Single or double shear test on M.S. bar to finding the resistance of material to shear load.	Universal Testing Machine	strength of material by R.S. Khurmi	G1 01/04/2026				
7.	Torsion Test on Mild steel - relation between Torque and angle of twist determination	Torsion Testing Machine	strength of material by R.S. Khurmi	G1 23/04/2026				
8.	Prepare a specimen and examine the microstructure of ferrous and non-ferrous metals using Metallurgical Microscope	Metallurgical Microscope	strength of material by R.S. Khurmi	G1 14/04/2026				

Approved/ Not approved

Khurmi
11/26

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