MITS School Of Engineering, Bhubaneswar
Department of Basic Science
Lesson Plan

Name of the Faculty: Mrs. Anima Sahoo   **Sem:-**
1st
Subject: -Engg.Physics

Sl. No	Topics planed to be covered	Chapter as per syllabus	Reference books/chpt/pg no
L-1	**DIMENSIONS AND VECTORS**: Dimensions & Dimension Formula of physical equations.	Ch:1	+2 physics Vol I By Barik,Sharma ,Das Ch:1 Pg:9-102
L-2	.Resolution of vectors, Dot products .		
	cross Products of Vectors, simple Numerical		
L-3	**CURVLINEAR MOTION &KINEMATICS**: Definition & Concept –Projectile Motion,.	Ch:2	+2 physics Vol I By Barik,Sharma ,Das Ch:3 Pg:128-179
	Angle ofprojection, Trajectory		
L-4	Maximum height ,Time of flight and horizontal Condition		
	Friction- Defination of Static, Limiting & Dynamic Friction		
L-5	Laws of limiting friction,		
	methods to reduce friction,simple numerical		
	GRAVITAION, PLANETORY MOTION & SIMPLE HARMONIC MOTION	Ch:3	+2 physics Vol I By Barik,Sharma ,Das Ch:11 Pg:511-552
L-6	Keplers law of Planetory motion-statement with explanation ,		
L-7	Variation of acceleration due to gravity with latitude		
L-8	Definition of uniform circular motion		
L-9	angular displacement, angularvelocity, angularacceleration		
L-10	Simple harmonic motion, -definition		
L-11	parameters,frequnecyy and time period		
L-12	Uniform circular motion on any diameter and derivation of velocity and accelearation		
	SOUND & ACCOUSTICS	Ch:4	+2 physics Vol I By Barik,Sharma ,Das Ch:14 Pg:675-711
L-13	Longitudinal& transverse waves-definition		
	comparision,progressive and stationary wave-definition&comparison		
L-14	Derive wave parameters, derivation of releted formula,		
L-15	**Ultrasonics**- Defination,propoties		
L-16	applications,Dopplers effect		
L-17	**HEAT & THERMODYNAMIC**- Cofficient of linear,superfacial & cubical definition .	Ch:5	+2 physics Vol I By Barik,Sharma ,Das Ch:17 Pg:828-863
L-18	derivation of related between them		
L-19	1st law of Thermodynamic –statement&application		
L-20	cp cv-defination & derivation		
L-21	Thermal conductivity-definition ,S.I units, dimension& derivation of formula		
L-22	**OPTICS**: Relative index-definition& conceptual explanation,definition,	Ch:6	+2 physics Vol II by Barik,Sharma ,Das Ch: 15 Pg:851-892
L-23	refraction through a prism,angle-defination &explanation, and application		
L-24	Fibre optics-defination,concept & application		
L-25	MAGNETOSTATIC &ELECTROSTATIC: Coulombs law of magnetism- statement with explanation,,	Ch:7	+2 physics Vol II By Barik,Sharma ,Das Ch:7,Pg:527-568
L-26	Defination-unit pole ,magnetic field intensity		
L-27	magneticflux, flux density		
L-28	Electric field intensity, electricpotential,		
L-29	capacity of conductor, capacitance, numerical problems		
L-30	**CURRENT ELECTRICITY &ELECTROMAGNETISM**: Kirchhoff's law – statement with explanation,	Ch:8	+2 physics Vol I By Barik,Sharma ,Das Ch:18,Pg:864-900
L-31	application to Wheatstonebridge		
L-32	electro magnetism-Biot sarvats law		
L-33	Formula for magnetic field induction. Motion of a charged particle.		
L-34	Expression for the force acting on carrying straight conductor Placed in a uniform magnetic field,		
L-35	Flemings left hand rule-statement with explanation, diagram simple numerical		
L-36	**ELECTRO-MAGNETIC INDUCTION**: Faradays law of electromagnetic induction –	Ch:9	+2 physics Vol II By Barik,Sharma ,Das Ch:7,Pg:527-568
	statement with explanation,Lenzs law		
L-37	Flemings right hand rule-statement with explanation and vector diagram		

L-38	**MODERN PHYSICS** :Concept of photoelectric effect,		
L-39	Einsteins photoelectric equation	Ch:10	+2 physics Vol II By Barik,Sharma ,Das Ch:16,Pg:945-986
L-40	,laws of photoelectric equation		
L-41	Application of LASER,characterstic of LASER ,principle of LASER ,application of LASER.		

MITS School Of Engineering, Bhubaneswar
Department of Basic Science
Lesson Plan

Name of the Faculty:- Mr.Biswajit Mahunta   **Sem: 1st**

Subject: -Engg.Math – 1

Lect no	Topic to be Covered	Chapter as Syllabus	Reference book
1.	Introduction-The type of matrices and uses of matrix calculation in mathematics	Ch:1	Elements of mathematics II Page 85 - 134
2.	Algebra of matrices (addition and subtraction)		
3.	Algebra of matrices (Multiplication and division)		
4.	Types of Matrices		
5.	Transpose of matrices		
6.	Inverse of Matrix (second Order)		
7.	Inverse of Matrix (second Order)		
8.	Inverse of Matrix (Third Order)		
9.	Inverse of Matrix (Third Order)		
10.	Matrix Inverse Method To Solve The Equation In Two Variables		
11.	Introduction To Determinants		
12.	Properties Of Determinants		
13.	Properties Of Determinants		
14.	Introduction to Cramer`s Rule		
15.	Solving Equation Of Two Variables By Using Cramer`s Rule		
16.	Question Based on Cramer`s Rule		
17.	Question Based on Matrix Method		
18.	Introduction To Trigonometry	Ch:2	Elements of mathematics 1 Page 46 - 72
19.	Trigonometric Ratios And Its Sign Convention		
20.	Question Based on Trigonometric Ratios		
21.	Compound Angles And Its Notation		
22.	Compound Angle Formulas And Their Uses		
23.	Introduction To Multiple And Sub-multiple Angles		
24.	Formula Based On Multiple and Sub-Multiple Angles		
25.	Question Based on Multiple And Sub-Multiple Angles		
26.	Define Inverse Circular Function		
27.	Properties Based On Inverse Circular Function		
28.	Question Based On Inverse Trigonometric Function		
29.	Trigonometric Ratios And Angles Question		
30.	Introduction Of Geometry In Two Dimension (2D)	Ch:3	Elements of mathematics 1 Page
31.	Distance Formula And Question Based on It		
32.	Division Formula And Its Uses (Area Of A Triangles)		
33.	Calculation Slope Of A Straight Line		
34.	Angle Between Two Lines		
35.	Various Condition To Define Slope (Parallel and Perpendicular)		
36.	Different Forms Of A Straight Line		
37.	One Point Form And Two Point Form Of A Straight Line		
38.	Slope Point Form Of A Straight Line		
39.	Intercept And Perpendicular Form Of A Straight Line		
40.	Equation Of A line Passing Through A Point		
41.	Equation Of A Line Passing Through (parallel And Perpendicular) Condition		
42.	Intersection Of Two Lines		
43.	Distance Of A Point From A Line		
44.	Introduction To A Circle (Equation A Circle)	Ch:4	Elements of mathematics I Page 79 - 95
45.	Centre And Radius Form A Circle		
46.	General Equation Of A Circle		

47.	Question Based on General Equation And Centre Radius Form		
48.	Diameter Form Of A Circle		
49.	Question Based On Different Form Of A Circle		
50.	Introduction To Three Dimension (3D)	**Ch:5**	Elements of mathematics II Page 372 - 405
51.	Distance Formula In 3D		
52.	Section Formula And Direction Ratio		
53.	Direction Cosine OF 3D		
54.	Angle Between Two Lines And Equation Of Planes		
55.	General Form Of A Plane		
56.	Angle Between Two Plans and Equation Of Planes		
57.	Parallel And Perpendicular Form A Plane		
58.	Introduction To Sphere	**Ch:6**	Elements of mathematics II Page 435 - 511
59.	Centre And Radius Form A Sphere		
60.	General Form A Sphere		
61.	Diameter Form Of A Sphere		
62.	Question Based On Different Form A Sphere		

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Name of theFaculty:- Mrs. Anima Sahoo   **Sem: 1st**

Subject: -Engg.Chemistry

Sl. No	Topics planed to be covered	Chapter as per syllabus	Reference books/chpt/pg no
1	**PHYSICAL CHEMISTRY**: General concept of atomic structure, Rutherford's atomic model		
2	Bohr's atomic model, electronic configuration,		
3	**Aufbau's principle:** Atomic weight, molecularweight, equivalent weight		
4	**Concept of chemical bonds:** electrovalent bond, covalent bond, coordinate bond with examples		
5	Concept of Arrhenius, Lowry Bronsted and Lewis theory for acid and base with examples.		
6	Definition of salt ,types of salt, neutralization of acid and base,		
7	Definition of normality, molality,and molarity,PH of solution, importance of PH in industry(normal, acidic,basic,double,complex and simple).		
8	.**SOLUTION-**Definition of atomic weight, molecular weight,Equivalent weight.	Unit - 1	**A Text book of chemistry Nanda,Das,Sharma Page 3 - 56**
9	Determination of equivalent weight of acid,base and salt.		
10	Expression of molarity,molality and normalitywith simple problems.		
11	PH of solution with problem**.**		
12	Importance of PH in Industry(sugar,paper, textile etc)		
13	**ELECTRO CHEMISTRY-** definition of electrolyte,electrolysis,electrolytic cell with example.		
14	Faradays 1st law and 2nd law of electrolysis.		
15	Industrial application of electrolysis.Electro plating(zinc only)		
16	Corrosion: definition of corrosion, types of corrosion		
17	atmospheric corrosion		
18	Electrochemistry:.waterline corrosion		
19	,,Mechanism of rusting of iron only.		
20	Protection of corrosion by alloying and galvanization.		
	INORGANIC CHEMISTRY:		
21	Metallurgy: Definition of minerals,ore,flux,slag and gangue with example.		
22	Distinguish between Ores and Minerals.		
23	General methods of extraction of metals ore dressing,concentration oxidation ,	Unit - 2	**Engg.Chemistry by Dr.Sunakar Panda 9 - 45**
24	Reduction,refining of the metal,		
25	**ALLOYS**: definitionof alloys.Types of alloys.with example		
26	composition and uses of brass,bronze,alnico,duralumin		
27	Alloys(ferro, non ferro,amalgam)		
	ORGANIC CHEMISTRY		
28	Hydrocarbons: saturated and unsaturated Hydrocarbons.		
29	,Alipathic and Aromatic hydrocarbons.		
30	Nomenclature of Alkane,Alkene,Alkayne.	Unit - 3	**Engg.Chemistry by Dr.Sunakar Panda 89 - 125**
31	Alkyl halide and Alcohol.		**Engg.Chemistryby S.P Jahuar 54 - 144**
	INDUSTRIAL CHEMISTRY	Unit - 4	
32	**Wate**r:sources of water, soft water,hard water		

33	Types of hardness - Removal of hardness by lime soda method, (hot lime and cold lime soda method)
34	Principle, process and advantages of soda lime process.
35	Advantages of hot lime over cold lime process.
36	Organic ion exchange method.(principle,process and regeneration of resins)
37	**Lubricants**: definition of lubricant, types of lubricants,(solid,liquid and semisolid with examples only
38	Specific uses of lubricant and purpose of lubricants
39	**Fuel:** definition and classification of fuel ,
40	Definition of calorific value of fuel.Choice of good fuel.
41	Solid:Coal-Lignite,Bituminous
42	Liquid:Diesel,petrol, and kerosene.
43	Gaseous:Composition and uses of producer gas and water gas ,
44	Elementary idea about LPG and CNG
45	**Polymer**:Defination of Monomers,polymer,homopolymer
47	Co polymer and degree of polymerization.
48	Difference between Thermosetting and Thermoplastic, composition and uses of polythene.
49	Composittion and uses of Poly-Vinyl Chloride and Bakelite
50	Definition of elastomer(rubber), natural rubber and draw backs.
51	Vulcanisation of Rubber. Advantages of Vulcanised rubberover raw rubber.
52	Chemicals in Agriculture; Examples and use of pesticides, Insecticides,herbicides,fungicides .
53	Bio Fertilizers - definition, examples and uses.

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Name of the Faculty:- Mr. Manoranjan Jena   **Sem: 1st**

Subject: - Com. English

Sl. No	Topics planed to be covered	Chapter as per syllabus	Reference books/chpt/pg no
	Literature appreciation		
1	**Reading Comprehession** – Unseen passage about 200- 500 words.		
2	Skill reading about skimming the gest.		
3	Scanning for necessary information		
5	Close reading for inference and evaluation		
6	Main idea and supporting points.		
7	Guessing the meaning of unfamiliar words.		
8	Note making		
9	Summarizzing		
10	Supplying a suitable Title	Unit : 1	**Communicative English by R.K Panda**
	TEXT		
12	Standing up for yourself.		
13	Standing up for yourself.		
14	The magic of teamwork		
15	The magic of teamwork		
16	Inchape rock		
17	Inchape rock		
18	To my true friend		
19	To my true friend		
20	Comprehssion Questions		
	Vocabulary		
21	Use of Synonyms and Antonyms		
22	Same word use in different situation in different meaning	Unit : 2	**Communicative English by R.K Panda**
23	Single word substitute		
	Application of English Grammar		
24	Countable and uncountable noun		
25	Articles		
26	Determiners		
27	Modal verbs	Unit : 3	**Communicative English by R.K Panda**
28	Tenses		
29	Voice change		
30	Subject verb agreement		
	Formal writing skill		
31	Paragraph writing - Meaning		
32	Features of paragraph writing(Topic statement)		
33	Supporting points		
34	Developing ideas into paragraph		
35	Describing place, person,	Unit : 4	**Communicative English by R.K Panda**
36	Describing object,situation		
37	Notice		
38	Agenda		
39	Report writting		
40	Wrtting personal letters		**Communicative English by R.K Panda**
41	Letter to the principal		

42	Letter to the librarian,HOD		
43	Letter to the hostel superitendent		
44	Layout of a business letter		
45	Letter of inquiry		
46	Placing an order,Execution of an order		
47	Complain, cancelation of an order		
48	Job application and CV		
	Elements of Communication		
49	Meaning ,definition and concept		
50	Good and Bad communication		
51	Communication model		
52	One way communication		
53	Two way communication		
54	Process of communication	**Unit : 5**	**Communicative English by R.K Panda**
55	Factors responsible for communication		
56	Meaning of professional communication		
57	Types of professional communication		
58	Formal / systematic communication		
59	Upward communication		
60	Downward communication		

Department of Basic Science
Lesson Plan

Name of the Faculty: - Mr. Somanatha Jena　　　　　　　　　　**Sem: 1st**

Subject: - Mechanical Workshop

Sl. No	Topics planed to be covered	Name of the equipment	Status of manual	
	1.FITTING SHOP **1.1**-Domenstrate safety practices in fitting shop **1.2**-select suitable holding & clamping device for fitting jobs **1.3**-select suitable tool like -file ,vice, chisels,punch,scriber, hammer, surface plate, V-Block,try square, caliper etc **1.4**-Demoonstrate the following operations:,sawaing, chipping, fitting,cramping, grinding, marking reaming, taping, drilling,& angular cutting **1.5**- Introduction of chipping, demonstration on chipping and it's application **1.6**-Description demonstration and practice of simple operation of hack saw straight and angular cutting. **1.7-** Introduction and use of measuring tool used in fitting Shop like- steel rule , measuring tape , outside micrometre,vernier caliper and vernier height gauge **1.8-**Description and demonstration and pratice of thread cutting using taps and dies ***Job: cutting & fitting practice on a square of 50mm×50mm×8mm** *** MS flat job: Angular cutting practice of 45 degree (on above job)** **Job: preparation of stud(to cut. External threads) with the help of dies (mm or BSW)** ***Job: - H-fitting in the mild steel (ms) square** **Job: prepare one job male on female fitting**	File,vice, chisels, punch, scriber, hammer, surface plate, V-Block,try square, caliper, hacksaw, vernier caliper,steel rule, measuring tape, outside micrometer' vernier height gauge, angle plate	Available	Working
	2.SHEET METAL 2.1- Demonstrate safety practices in sheet metal Shop 2.2- prepare surface development for the jobs according to the drawing 2.3-Cut M.S and G.P sheets according to the surface development /drawing using standard sheet metal cutting tools. 2.4- select hand tool for sheet metal work 2.5- Demonstrate the process of metal clamp joining and revered joining of sheet metal ***Job: marking of sheet metal joint** ***Job: prepare a sheet metal tray or a funnel** ***Job: prepare a sheet metal job involving rolling, shearing, creasing, bending & cornering** ***Job: Prepare a lap riveting joint**	File,vice, chisels, punch, scriber, hammer, surface plate, V-Block,try square, caliper, hacksaw, vernier caliper,steel rule, measuring tape, outside micrometer' vernier height gauge, angle	Available	Working
	3.WELDING SHOP 3.1-introduction 3.2-safety precautions ion welding , safety equipment & it's application. In welding shop	File,vice, chisels, punch, scriber, hammer, try square, caliper, hacksaw, vernier	Available	Working

	3.3- Interdiction to welding, type of welding,common material, that can be welded, Interdiction to gas welding equipment, type of flame, adjustment of flame, application of gas welding , welding tool & safety precautions 3.4-Interduction to electric arc welding (AC/DC), practice in setting current & voltage for striking proper arc precautions while using Electric arc welding application of are welding Interdiction to polarity & their use 3.5- demonstrate & use of the different tool used in the welding shop with sketch ,hand shield, helmet, chipping hammer, gloves, welding lead, connectors, aprons, goggles 3.6- Demonstrate of welding defects & various types of joint & end preparation ***Job- preparation of lap joint by arc welding** ***Job- preparation of tee joint by arc welding** ***Preparation of single 'V' double 'V' butt joint by electric arc welding** ***Job- Brazing pratice use of spelt or (on ms sheet pieces)** ***Job- Gas welding pratice on worn – out & broken parts.**	caliper,steel rule, measuring tape, outside micrometer , anvil, hand shield, helmet, chipping hammer, gloves, welding lead, connectors, aprons, goggles		
	4.TURNING SHOP 4.1- Interdiction 4.2- safety precautions & safety equipment 4.3-various marking, measuring, cutting,& holding tool, 4.4- Demonstration of different parts of a lathe , demonstration on centering & turning & turning operations in a group of 06 students *** Job- plain turning,,taper turning & grooving practice on round bar**	Lathe machine, power sawsHammer,ring spanner, chuck key,tool key, cutting tools, knurling tool,Vernier caliperspindle gouge roughing gouge,oval skew chiselround nose scraperparting Tool,hollowing tool ,bowl gouge ,spindle gouge,roughing gougespindle gouge File,vice, chisels, punch, scriber, hammer, V-Block,try square, caliper, hacksaw, vernier caliper,steel rule, measuring tape, outside micrometer' height gauge	Available	Working

Name of the Faculty:Mrs. Anima Sahoo   **Sem: 1st**

Subject: -Engg.chemistry Lab

Sl. No	Topics planed to be covered	Chapter as per syllabus	Current Status	Lab Mannual
1	Preparation and study of properties of Co2 gas (carbon	Expt:1	Available	Available
2	Preparation and study of properties of Ammonia gas	Expt :2	Available	Available
3	Crystallization of Copper Sulphate from Copper Carbonate	Expt :3	Available	Available
4	Simple acid base Titration i)Acidimetry ii)Alkalimetry	Expt :4	Partially Available	Available
5	Test for Acid Radicals i. Carbonate ii.Sul	Expt :5	Available	Available
6	Test for Basic Radicals .Ammo nium Copper . Zinc Magnesium Aluminiu	Expt :6	Available	Available
7	Test for unknown acid radicals	Expt :7	Available	Available
8	Test for unknown basic radicals	Expt :8	Available	Available
9	Test for unknown salt	Expt :9	Available	Available

NAME OF THE FACULTY: Mr. Amit Ku Sahoo
SUBJECT: Basic Electrical and Electronics   **SEMESTER: 1st/2nd**

Basic Electrical Engineering

Lecturer No.	Topics Planed to be Covered	Chapter As Per Syllabus	Reference Books/Chapter/Page No.
Lect-1	Concept of current flow	CH-1	Fundamentals of Electrical Engg and Electronics by B.L Thereja Chapter-1 & 2
Lect-2	Concept of source and load		
Lect-3	State Ohm's law and concept of resistance		
Lect-4	Relation of V, I & R in series circuit		
Lect-5	Relation of V, I & R in parallel circuit		
Lect-6	Division of current in parallel circuit		
Lect-7	Effect of power in series & parallel circuit		
Lect-8	Kirchhoff's Law.		
Lect-9	Generation of alternating emf	CH-2	Fundamentals of Electrical Engg and Electronics by B.L Thereja Chapter- 3 & 16
Lect-10	Difference between D.C. & A.C		
Lect-11	State & Explain RMS value, Average value		
Lect-12	Represent AC values in phasor diagrams		
Lect-13	AC though RL, RC, RLC series circuits		
Lect-14	Concept of Power and Power factor		
Lect-15	Impedance triangle and power triangle		
Lect-16	Elementary idea on generation of electricity	CH-3	Principles of Power Systems by V.K Mehta Chapter-1
Lect-17	Thermal , nuclear power station with block diagram		
Lect-18	Hydro power station with block diagram		
Lect-19	Introduction of DC machines with main parts	CH-4	Fundamentals of Electrical Engg and Electronics by B.L Thereja Chapter- 10, 11 & 12
Lect-20	Classification of DC Machines		
Lect-21	Types and uses of single phase induction motors		
Lect-22	Different types of Lamps		
Lect-23	Star rating of home appliances		

Lect-24	Types of wiring for domestic installations	CH-5	Electrical Installation and Estimating by Surjit Singh Chapter-2 & 3
Lect-25	Layout of household electrical wiring		
Lect-26	List out the basic protective devices		
Lect-27	Calculate energy consumed in a small electrical installation		
Lect-28	Introduction to measuring instruments	CH-6	Fundamentals of Electrical Engg and Electronics by B.L Thereja Chapter- 15
Lect-29	Different uses of PMMC type of instruments		
Lect-30	Different uses of MI instruments and its connection diagram		

NAME OF THE FACULTY: Mr. Sandeep Kumar Champatiray
SUBJECT: Basic Electrical and Electronics   **SEMESTER:** 1st/2nd

Basic Electronics Engineering

Lecturer No.	Topics Planed to be Covered	Chapter As Per Syllabus	Reference Books/Chapter/Page No.
Lect-1	Basic Concept of Electronics and its application	CH-1	Principles of Electronics by V.K Mehta and Rohit Mehta Chapter-3
Lect-2	Basic Concept of Electron Emission & its types		
Lect-3	Classification of material according to electrical conductivity		
Lect-4	Difference between Intrinsic & Extrinsic Semiconductor		
Lect-5	Difference between vacuum tube & semiconductor		
Lect-6	Principle of working and use of PN junction diode		
Lect-7	Zener diode and Light Emitting Diode		
Lect-8	Integrated circuits (I.C) & its advantages.		
Lect-9	Rectifier & its uses	CH-2	Principles of Electronics by V.K Mehta and Rohit Mehta Chapter-6
Lect-10	Principles of working of different types of Rectifiers		
Lect-11	Functions of filters and classification of simple Filter		
Lect-12	Working of D.C power supply system		
Lect-13	Transistor, Different types of Transistor		
Lect-14	Need of biasing and explain different types of biasing		
Lect-15	Amplifiers & working principles of single phase CE amplifier		
Lect-16	Electronic Oscillator and its classification		
Lect-17	Working of Basic Oscillator		
Lect-18	Basic communication system	CH-3	Principles of Electronics by V.K Mehta and Rohit Mehta Chapter-14
Lect-19	Concept of Modulation and Demodulation		
Lect-20	Different types of Modulation		
Lect-21	Concept of Transducer and sensor	CH-4	Principles of Electronics by V.K Mehta and Rohit Mehta
Lect-22	Different type of Transducers		

			Chapter-20
Lect-23	Concept of active and passive transducer		
Lect-24	Working principle of photo emissive transducer		
Lect-25	photoconductive, photovoltaic transducer & its application		
Lect-26	Multimeter and its applications		
Lect-27	Analog and Digital Multimeter and their differences		
Lect-28	Working principle of Multimeter with Basic Block diagram		
Lect-29	Introduction to Cathod Ray Tube		
Lect-30	Working principle of CRO with simple Block diagram		

Department of Basic Science
Lesson Plan

Name oftheFaculty: Mrs.Anima Sahoo   **Sem: 1st**
Subject: -Engg.Physics Lab

Sl. No	Topics planed to be covered	Chapter as per syllabus	Reference books/chpt/pg no
1	Measurement of cross sectional area of a wire by Screw Gauge	Expt:1	Experimental chemistry by Barik,Sharma ,Das
2	Find the thickness and volume of glass piece using screw gauge	Expt:2	Experimental chemistry by Barik,Sharma ,Das
3	Measurement of volume of a solid cylinder by VERNIER CALLIPERS.	Expt::3	Experimental chemistry by Barik,Sharma ,Das
4	Measurement of volume of a hollow cylinder by VERNIER CALLIPERS.	Expt:4	Experimental chemistry by Barik,Sharma ,Das
5	Measurement of radius of curvature of a convex surface by a Spherometer.	Expt:5	Experimental chemistry by Barik,Sharma ,Das
6	Measurement of radius of curvature of a concave surface by a Spherometer.	Expt:6	Experimental chemistry by Barik,Sharma ,Das
7	To find the time period of simple pendulum and determination of g.	Expt:7	Experimental chemistry by Barik,Sharma ,Das
8	Determined the angle of a Prism .	Expt:8	Experimental chemistry by Barik,Sharma ,Das
9	Determined the refractive index of a Prism by drawing i-D curve	Expt:9	
10	Tracing of line of force due to a bar magnet with N-pole pointing North .pole.	Expt:10	

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Name of the Faculty:- Mr. Debasis Barik   **Sem: 1st**

Subject: -Engineering Drawing   **Academic Year-2022-23**

Lecturer	Topics Plan to be Covered	Chapter	Reference
L-01	**INTERDICTION & DEMONSTRATION**	CH-1	**Engineering drawing** (Dr.Rk.Dhawan) (N.D. Bhatt)
L-02	Identify various sizes of drawing board, drawing sheets as per BIS.		
L-03	List the type of pencils, instruments, scales (RF)		
L-04	Demonstrate laying of drawing sheet, Margin, standard layout,and title block,as per BIS, folding principles of drawing		
L-05	**TYPES OF LINES , LETTERING & DIMENSIONING**	CH-2	**Engineering drawing** (Dr.Rk.Dhawan) (N.D. Bhatt)
L-06	Demonstrate and explain the use of various types of lines		
L-07	Demonstrate the principle of single stroke, gothic lettering & numerals as per BIS		
L-08	**SCALES**	CH-3	**Engineering drawing** (Dr.Rk.Dhawan) (N.D. Bhatt)
L-09	Singnificance of scale in drawing; different scales.		
L-10	Define and draw plain scale and diagonal scale.		
L-11	**CURVES**	CH-4	**Engineering drawing** (Dr.Rk.Dhawan) (N.D. Bhatt)
L-12	Explain conic sections with illustration, explain terms like focus, vertex, directrix and eccentricity		
L-13	Draw conics section by eccentricity method – Ellipse,parabola and hyperbola		
L-14	Draw ellipse by concentric circles methods sand arc of circle method.		
L-15	Draw parabola by rectangle method and tangent method		
L-16	**ORTHOGRAPHIC PROJECTION**	CH-5	**Engineering drawing** (Dr.Rk.Dhawan) (N.D. Bhatt)
L-17	Demonstrate the principles of 1st angle and 3rd angle projection with the help of models and draw symbols		
L-18	Draw projection of points		
L-19	Draw projection of straight line (parallel to both planes parallel to one and parpendicular to other parallel to one and inclined to other and inclined to both reference planes)		
L20	Draw plane figure such as square, rectangular, triangle, circle, Pentagon, hexagon(perpendicular to one plane and inclined to other)		
L-21	Draw projection of solid such as prism, cylinder, cone, tetrahedron,and pyramid in simple position (with axis parallel to one reference plane and perpendicular to the other references plane)		
L-22	**SECTION & DEVELOPMENT**	CH-6	**Engineering drawing** (Dr.Rk.Dhawan) (N.D. Bhatt)
L-23	Draw. The sectional projection & development of prism , cylinder,cone, and pyramid,in simple position by a cutting plane perpendicular to one reference plane and inclined to other references plane		