

P.C.I.E.T., CHHENDIPADA, DIST- ANGUL

THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:-CIVIL ENGINEERING

SEMESTER: 1ST

SECTION:- C

NAME OF THE FACULTY:- (1) ASWINI KUMAR PRADHAN

(2) ER. SUBEDITA BEHERA (LECT. IN COMP. SC. & ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: COMPUTER APPLICATION (TH-1B)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	COMPUTER ORGANISATION	5	October	
	Introduction to Computer, Evolution of Computers	1		Dt. 27.10.2022
	Generation of Computers, Classification of computer	1		Dt. 28.10.2022
	Basic Organisation of Computer (Functional Block diagram)	1		Dt. 31.10.2022
	Input Devices, CPU & Output Devices.	1	November 2022	Dt. 1.11.2022
	Computer Memory and Classification of Memory	1		Dt. 3.11.2022
2	COMPUTER SOFTWARE	7		
	Software concept, System software, Application software	1		Dt. 4.11.2022
	What is Operating System, Objectives and Functions of O.S	1		Dt. 7.11.2022
	Types of Operating System: Batch Processing, Multiprogramming, Time Sharing OS	1		Dt. 10.11.2022
	Features of DOS, Windows and UNIX	1		Dt. 11.11.2022
	Programming Languages Compiler, interpreter	1		Dt. 14.11.2022
	Computer Virus, Different Types of computer virus, Detection and prevention of Virus	1		Dt. 15.11.2022
	Application of computers in different Domain	1		Dt. 17.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	COMPUTER NETWORK AND INTERNET	8		
	Networking concept, Protocol	1		Dt. 18.11.2022
	Connecting Media, Data Transmission mode	1		Dt. 21.11.2022
	Network Topologies	1		Dt. 22.11.2022
	Types of Network	1		Dt. 24.11.2022
	Networking Devices (Hub, Repeater, Switch, Bridge, Router, Gateway & NIC)	1		Dt. 25.11.2022
	Internet Services (E-Mail, WWW, FTP, Chatting, Internet Conferencing)	1		Dt. 28.11.2022
	Electronic Newspaper & Online Shopping	1		Dt. 29.11.2022
	Different types of Internet connectivity and ISP	1	December	Dt. 1.12.2022
4	FILE MANAGEMENT AND DATA PROCESSING	5		
	Concept of File and Folder	1		Dt. 2.12.2022
	File Access and Storage methods: Sequential, Direct, ISAM	1		Dt. 5.12.2022
	Data Capture	1		Dt. 6.12.2022
	Data storage	1		Dt. 8.12.2022
	Data Processing and Retrieval	1		Dt. 9.12.2022
5	PROBLEM SOLVING METHODOLOGY	5		
	Algorithm, Pseudo code	1		Dt. 12.12.2022
	Flowchart Generation of Programming Languages	2		Dt. 13.12.2022, Dt. 15.12.2022
	Structured Programming Language	1		Dt. 16.12.2022
	Examples of Problem solving through Flowchart	1		Dt. 19.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	OVERVIEW OF C PROGRAMMING LANGUAGE	15		
	Introduction to C, History of C	1		Dt. 20.12.2022
	Constants, Variables	1		Dt. 22.12.2022
	Data types in C	1		Dt. 22.12.2022
	Input and Output operations.	1		Dt. 23.12.2022
	Operators, Different types of operator	2		Dt. 26.12.2022, Dt. 27.12.2022
	Expressions, Type conversion & Typecasting	2		Dt. 29.12.2022, Dt. 30.12.2022
	Decision Control and Looping Statements (If, if-else, If-else-if, Switch, While, Do-while, For, Break, Continue & Goto)	4	January 2023	Dt. 2.1.2023, Dt. 3.1.2023, Dt. 5.1.2023, Dt. 6.1.2023
	Programming Assignments using the above features	3		Dt. 9.1.2023, Dt. 10.1.2023, Dt. 12.1.2023
7	ADVANCED FEATURES OF C	15		
	Functions and Passing Parameters to the Function (Call by Value and Call by Reference)	3		Dt. 13.1.2023, Dt. 16.1.2023, Dt. 17.1.2023, Dt. 19.1.2023
	Scope of Variables and Storage Classes	2		Dt. 20.1.2023, Dt. 23.1.2023, Dt. 24.1.2023
	Recursion Function and Types of Recursion	2		Dt. 27.1.2023, Dt. 30.1.2023, Dt. 31.1.2023
	One Dimensional Array and Multidimensional Array	2	February 2023	Dt. 2.2.2023, Dt. 3.2.2023
	String Operations and Pointers	2		Dt. 6.2.2023, Dt. 7.2.2023, Dt. 9.2.2023
	Pointer Expression and Pointer Arithmetic Programming	2		Dt. 10.2.2023, Dt. 13.2.2023, Dt. 14.2.2023, Dt. 16.2.2023
	Structure and Union	2		Dt. 17.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:-CIVIL ENGINEERING SEMESTER: 1ST SECTION:- C NAME OF THE FACULTY:- LALATENDU SAHU (LECT. IN PHYSICS)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING PHYSICS (TH-2A)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	UNIT 1 - UNITS AND DIMENSIONS	3	October	
	Physical quantities, Units, types of units and system of units	1		Dt. 27.10.2022
	Dimension and dimensional formulae of physical quantities	1		Dt. 31.10.2022
	Principle of homogeneity and application of dimensional analysis: Checking the correctness of physical relations and Numerical.	1	November 2022	Dt. 1.11.2022
2	UNIT 2 - SCALARS AND VECTORS	3		
	Concept of scalar and vector quantities with definition, types of vectors, Rules of vector addition: Statements of Triangle law of vector addition	1		Dt. 2.11.2022
	Parallelogram law of vector addition and simple numericals, Concept on Resolution of vectors with simple numerical on Horizontal and vertical components.	1		Dt. 3.11.2022
	Vector multiplication: Dot product and Cross Product with simple numericals on dot and cross products	1		Dt. 7.11.2022
3	UNIT 3 - KINEMATICS	6		
	Concept of Rest and Motion with examples, Fundamental ideas on distance, displacement, speed, velocity, acceleration and force, equations of motion under gravity both for upward and downward motion	1		Dt. 9.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Circular motion: Conceptual idea on circular motion and terms related to circular motion such as angular displacement, angular velocity and angular acceleration.	2		Dt. 10.11.2022, Dt. 14.11.2022
	Derivations of Relation between- (i) Linear & angular velocity, (ii) Linear & Angular acceleration	1		Dt. 15.11.2022
	Projectile motion: Definition and examples, Expression for equation of Trajectory, Time of Flight, Maximum Height and Horizontal Range for a projectile fired at an angle, condition for maximum horizontal range with simple numericals	2		Dt. 16.11.2022, Dt. 17.11.2022
	UNIT 4 – WORK AND FRICTION	5		
	Definition of work, its formula and SI unit with simple numericals	1		Dt. 21.11.2022
	Concept of friction with definition and simple examples, Types of friction	1		Dt. 22.11.2022
4	Definition with concept on limiting friction, and laws of limiting friction (statement only)	1		Dt. 23.11.2022
	Theory on Coefficient of Friction and simple numericals	1		Dt. 24.11.2022
	Methods to reduce friction with practical examples	1		Dt. 28.11.2022
	UNIT 5 - GRAVITATION	5		
	Introduction, a detail explanation on Newton's Laws of Gravitation (1 st and 2 nd law)	1		Dt. 29.11.2022
	A detail explanation on Newton's Laws of Gravitation (3 rd law) and Definition of Universal Gravitational Constant (G) with its unit and dimensions	2		Dt. 30.11.2022
	Definition and concept of acceleration due to gravity (g), Relation between 'g' and 'G' and definition of mass and weight	1	December 2022	Dt. 1.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Explanation (No derivation) on variation of 'g' with altitude and depth, statements on Kepler's Laws of Planetary motion.	1		Dt. 5.12.2022
	UNIT 6 - OSCILLATIONS AND WAVES	6		
	Definition and examples on Simple Harmonic Motion (SHM), expressions for displacement, velocity and acceleration of a body or particle in SHM	2		Dt. 6.12.2022, Dt. 7.12.2022
6	Wave Motion (Definition & Concept), Transverse and Longitudinal wave motion (Definition, examples and Comparison)	2		Dt. 8.12.2022, Dt. 12.12.2022
	Wave parameters and Establish a relation between velocity, frequency and Time period, Ultrasonics- Definition, properties & Applications	2		Dt. 13.12.2022, Dt. 14.12.2022
	UNIT 7 - HEAT AND THERMODYNAMICS	7		
	Heat & temperature-Definition and difference, Units of Heat (FPS, CGS, MKS & SI)	1		Dt. 15.12.2022
	Fundamental ideas on Specific heat, Change of State and Latent Heat with simple numericals.	1		Dt. 19.12.2022
7	Concept on Thermal expansion and Coefficient of linear (α), superficial (β) and cubical (γ) expansions of Solids, Relation between α , β and γ	2		Dt. 20.12.2022, Dt. 21.12.2022
	Definition and Relation between Work and Heat, Joule's Mechanical Equivalent of Heat, Statement and explanation on 1 st law of thermodynamics.	3		Dt. 22.12.2022, Dt. 26.12.2022 Dt. 27.12.2022
	UNIT 8 - OPTICS	4		
8	Concept of Reflection and laws of Reflection, Concept of Refraction and laws of Refraction and Refractive index (Definition, formula and Simple numericals)	2		Dt. 28.12.2022, Dt. 29.12.2022
	Concept and Explanation of Total Internal Reflection and Critical angle	1	January 2023	Dt. 2.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Definition, Properties and Applications on Fiber Optics	1		Dt. 3.1.2023
	UNIT 9 – ELECTROSTATICS & MAGNETOSTATICS	7		
	Concept of Electric field and Electric field intensity, Statement and Explanation of Coulomb's law and definition of Unit charge, Absolute & Relative Permittivity (Definition, Relation & Unit).	1		Dt. 4.1.2023, Dt. 5.1.2023
	Definition of Unit charge, Absolute & Relative Permittivity (Definition, Relation & Unit).	1		Dt. 9.1.2023
9	Electric Field, Electric field intensity, Electric potential & Electric potential difference (Definition, formula & SI units), Concept of capacitor and capacitance.	1		Dt. 10.1.2023, Dt. 11.1.2023
	Series and parallel combination of capacitors: Formula for equivalent capacitance and simple numericals	1		Dt. 12.1.2023, Dt. 16.1.2023
	Fundamental idea on magnet, Coulomb's law in magnetism and definition of Unit pole	1		Dt. 17.1.2023
	Definition of magnetic field and Magnetic field Intensity (H) with its formula and SI unit.	1		Dt. 18.1.2023
	Magnetic lines of force-Definition and Properties: Magnetic flux(ϕ) and Magnetic flux density (B)	1		Dt. 19.1.2023
	UNIT 10 – CURRENT ELECTRICITY.	6		
	Introduction to Electric Current	1		Dt. 23.1.2023
	Ohm's law and its applications	1		Dt. 24.1.2023
10	Series and parallel combination of resistors: Formula for equivalent resistance and	1		Dt. 25.1.2023
	Simple numericals on combination of resistors	1		Dt. 30.1.2023
	Kirchhoff's laws: Statements & Explanation with diagram	1		Dt. 31.1.2023
	Kirchhoff's laws: Explanation and application to circuit with diagram			Dt. 31.1.2023

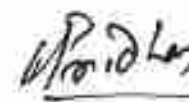
	Application of Kirchhoff's laws to Wheatstone bridge- Derivation of balance condition of Wheatstone bridge	1	February 2023	Dt. 1.2.2023
	UNIT 11 – ELECTROMAGNETISM & ELECTROMAGNETIC INDUCTION	5		
11	Introduction, Force acting on a current carrying conductor placed in a uniform magnetic field, Fleming's left hand rule	1		Dt. 2.2.2023
	Statement on Faraday's Laws of Electromagnetic Induction & Lenz's law	2		Dt. 6.2.2023, Dt. 7.2.2023
	Fleming's Right Hand Rule, Comparison between Fleming's RHR & LHR	2		Dt. 8.2.2023, Dt. 9.2.2023
	UNIT 12 - MODERN PHYSICS			
	Introduction to LASER and laser beam, characteristics of laser beam	1		Dt. 13.2.2023
12	LASER principle: Population inversion & Optical Pumping	1		Dt. 14.2.2023
	Application of LASER beams			Dt. 15.2.2023
	Concept on Wireless Transmission- Ground waves	1		Dt. 16.2.2023
	Sky waves & Space Waves			Dt. 20.2.2023

Lalataru Sahu

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:-CIVIL ENGINEERING SEMESTER: 1ST SECTION:- C NAME OF THE FACULTY:- KSHIRA MOHAN BEHRA (LECT. IN MATH.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING MATHEMATICS-I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Algebra (Matrices and Determinant)	18	October	
	a) Types of matrices	1		Dt. 27.10.2022
	b) Algebra of matrices	1		Dt. 28.10.2022
	Problem Solving and Tutorials	1		Dt. 29.10.2022
	c) Determinant	1		Dt. 31.10.2022
	d) Properties of determinant	1		Dt. 1.11.2022
	Problem Solving and Tutorials	1		Dt. 2.11.2022
	Problem Solving and Tutorials	1	November 2022	Dt. 3.11.2022
	Problem Solving and Tutorials	1		Dt. 4.11.2022, Dt. 5.11.2022
	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	1		Dt. 7.11.2022
	Problem Solving and Tutorials	1		Dt. 9.11.2022
	Problem Solving and Tutorials	1		Dt. 10.11.2022
	f) Cramer's Rule (Question should be on two variables)	1		Dt. 11.11.2022
	Problem Solving and Tutorials	1		Dt. 12.11.2022
	Problem Solving and Tutorials	1		Dt. 14.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	g) Solution of simultaneous equations by matrix inverse method (with two variables)	1		Dt. 15.11.2022
	Problem Solving and Tutorials	1		Dt. 16.11.2022
	Problem Solving and Tutorials	1		Dt. 17.11.2022
	Problem Solving and Tutorials	1		Dt. 18.11.2022
	TRIGONOMETRY	15		
	a) Trigonometrical ratios	1		Dt. 19.11.2022
	Problem Solving and Tutorials	1		Dt. 21.11.2022
	b) Compound angles, multiple and sub-multiple angles (only formulae)	1		Dt. 22.11.2022
	Problem Solving and Tutorials	1		Dt. 23.11.2022
	Problem Solving and Tutorials	1		Dt. 24.11.2022
2	c) Define inverse circular functions and its properties (no derivation)	2		Dt. 25.11.2022, Dt. 26.11.2022
	Problem Solving and Tutorials	1		Dt. 28.11.2022
	Problem Solving and Tutorials	1		Dt. 29.11.2022
	Problem Solving and Tutorials	1		Dt. 30.11.2022
	Problem Solving and Tutorials	1	December 2022	Dt. 1.12.2022
	Problem Solving and Tutorials	1		Dt. 2.12.2022
	Problem Solving and Tutorials	1		Dt. 3.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problem Solving and Tutorials	1		Dt. 5.12.2022
	Problem Solving and Tutorials	1		Dt. 6.12.2022
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(STRAIGHT LINE)	13		
	a) Introduction of geometry in two dimension b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)	1		Dt. 7.12.2022, Dt. 8.12.2022
	Problem Solving and Tutorials	1		Dt. 9.12.2022
	c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	1		Dt. 10.12.2022, Dt. 12.12.2022
	Problem Solving and Tutorials	1		Dt. 13.12.2022
	d) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form, (v) Perpendicular form	1		Dt. 14.12.2022, Dt. 15.12.2022
3	Problem Solving and Tutorials	1		Dt. 16.12.2022
	Problem Solving and Tutorials	1		Dt. 17.12.2022
	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line	1		Dt. 19.12.2022
	Problem Solving and Tutorials	1		Dt. 20.12.2022
	f) Equation of a line passing through the intersection of two lines	1		Dt. 21.12.2022
	Problem Solving and Tutorials	1		Dt. 22.12.2022
	g) Distance of a point from a line	1		Dt. 23.12.2022
	Problem Solving and Tutorials	1		Dt. 24.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
4	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(CIRCLE)	7		
	a) Equation of a circle (i) center radius form	2		Dt. 26.12.2022, Dt. 27.12.2022 Dt. 28.12.2022
	Problem Solving and Tutorials	1		Dt. 29.12.2022
	(ii) general equation of a circle	1		Dt. 30.12.2022, Dt. 31.12.2022
	Problem Solving and Tutorials	1	January 2023	Dt. 2.1.2023
	(iii) end point of diameter form	1		Dt. 3.1.2023
	Problem Solving and Tutorials	1		Dt. 4.1.2023
5	CO-ORDINATE GEOMETRY IN THREE DIMENSIONS	15		
	a) Distance formulae, section formulae in 3D	1		Dt. 5.1.2023, Dt. 6.1.2023
	Problem Solving and Tutorials	1		Dt. 7.1.2023
	Direction ratio, direction cosine, angle between two lines	1		Dt. 9.1.2023, Dt. 10.1.2023
	Problem Solving and Tutorials	1		Dt. 11.1.2023
	condition of parallelism and perpendicularity	1		Dt. 12.1.2023, Dt. 13.1.2023
	Problem Solving and Tutorials	1		Dt. 16.1.2023
	Problem Solving and Tutorials	1		Dt. 17.1.2023
	b) Equation of a plane i) General form	1		Dt. 18.1.2023, Dt. 19.1.2023
	Problem Solving and Tutorials	1		Dt. 20.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Angle between two planes, perpendicular distance of a point from a plane	1		Dt. 21.1.2023, Dt. 23.1.2023
	Problem Solving and Tutorials	1		Dt. 24.1.2023
	Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	1		Dt. 25.1.2023, Dt. 27.1.2023
	Problem Solving and Tutorials	1		Dt. 28.1.2023
	Problem Solving and Tutorials	1		Dt. 30.1.2023, Dt. 31.1.2023
	Problem Solving and Tutorials	1	February 2023	Dt. 1.2.2023
	SPHERE	7		
	Introduction to Sphere a) General Equation of a sphere	1		Dt. 2.2.2023, Dt. 3.2.2023
	Problem Solving and Tutorials	1		Dt. 4.2.2023, Dt. 6.2.2023
	i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	1		Dt. 7.2.2023, Dt. 8.2.2023, Dt. 9.2.2023
6	Problem Solving and Tutorials	1		Dt. 10.2.2023, Dt. 11.2.2023
	iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	1		Dt. 13.2.2023, Dt. 14.2.2023
	Problem Solving and Tutorials	1		Dt. 15.2.2023, Dt. 16.2.2023
	Problem Solving and Tutorials	1		Dt. 17.2.2023, Dt. 20.2.2023

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BRANCH:-CIVIL ENGINEERING SEMESTER: 1ST SECTION:- C

NAME OF THE FACULTY:- (1) ER. SUBHASHREE PRADHAN (HO.D., ELECT. ENGG.), (2) ER. SAROJ KUMAR SAHU (LECT. IN ELECT. ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023 THEORY SUBJECT: BASIC ELECTRICAL & ELECTRONICS ENGINEERING (TH-4(A & B))

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	FUNDAMENTALS	5	October	
	Concept of current flow, Concept of source and load.	1		Dt. 27.10.2022
	State Ohm's law and concept of resistance.	1		Dt. 28.10.2022
	Relation of V, I & R in series circuit, Relation of V, I & R in parallel circuit.	1		Dt. 31.10.2022
	Division of current in parallel circuit, Effect of power in series & parallel circuit.	1	November 2022	Dt. 1.11.2022
	Kirchhoff's Law, Simple problems on Kirchhoff's law.	1		Dt. 3.11.2022
2	A.C. THEORY	8		
	Generation of alternating emf.	1		Dt. 4.11.2022
	Difference between D.C. & A.C.			Dt. 7.11.2022
	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle.	1		Dt. 10.11.2022
	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.	1		Dt. 11.11.2022
	Represent AC values in phasor diagrams.	1		Dt. 14.11.2022
	AC through pure resistance, inductance & capacitance	1		Dt. 15.11.2022
AC through RL, RC, RLC series circuits.	1		Dt. 17.11.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Simple problems on RL, RC & RLC series circuits.	1		Dt. 18.11.2022
	Concept of Power and Power factor	1		Dt. 21.11.2022
	Impedance triangle and power triangle.			Dt. 22.11.2022
	GENERATION OF ELECTRICAL POWER	3		
3	Generation of electricity from thermal power station with block diagram	1		Dt. 24.11.2022
	Generation of electricity from Hydro power station with block diagram	1		Dt. 25.11.2022
	Generation of electricity from nuclear power station with block diagram	1		Dt. 28.11.2022
	CONVERSION OF ELECTRICAL ENERGY			
	Introduction of DC machines, Main parts of DC machines.	1		Dt. 29.11.2022
	DC generator, Classification of DC motor.	1	December 2022	Dt. 1.12.2022
4	Uses of different types of DC generators & motors.	1		Dt. 2.12.2022
	Types and uses of single phase induction motors.	1		Dt. 5.12.2022
	Concept of Lumen	1		Dt. 6.12.2022
	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.	1		Dt. 8.12.2022
	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)	1		Dt. 9.12.2022
	WIRING AND POWER BILLING	4		
5	Types of wiring for domestic installations.	1		Dt. 12.12.2022


Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Layout of household electrical wiring (single line diagram showing all the important component in the system)	1		Dt. 13.12.2022
	List out the basic protective devices used in house hold wiring.	1		Dt. 15.12.2022
	Calculate energy consumed in a small electrical installation	1		Dt. 16.12.2022
	MEASURING INSTRUMENTS			
	Introduction to measuring instruments.	1		Dt. 19.12.2022
	Torques in instruments.			Dt. 20.12.2022
6	Different uses of PMMC type of instruments (Ammeter & Voltmeter).	1		Dt. 22.12.2022
	Different uses of MI type of instruments (Ammeter & Voltmeter).			Dt. 22.12.2022
	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter.	1		Dt. 23.12.2022
	ELECTRONIC DEVICES	8		
	Basic Concept of Electronics and its application.	1		Dt. 26.12.2022
	Basic Concept of Electron Emission & its types.	1		Dt. 27.12.2022
	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.	2		Dt. 29.12.2022, Dt. 30.12.2022
1	Difference between Intrinsic & Extrinsic Semiconductor.	1	January 2023	Dt. 2.1.2023
	Difference between vacuum tube & semiconductor.	1		Dt. 3.1.2023
	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)	1		Dt. 5.1.2023
	Integrated circuits (I.C) & its advantages.	1		Dt. 6.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	ELECTRONIC CIRCUITS	9		
	Rectifier & its uses.	1		Dt. 9.1.2023
	Principles of working of different types of Rectifiers with their merits and demerits	1		Dt. 10.1.2023
2	Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)	1		Dt. 12.1.2023
	Working of D.C power supply system (unregulated) with help of block diagrams only	1		Dt. 13.1.2023
	Transistor, Different types of Transistor Configuration and state output and input	1		Dt. 16.1.2023
	current gain relationship in CE, CB and CC configuration			Dt. 16.1.2023
	Different types of biasing with circuit diagram,	1		Dt. 17.1.2023
	Amplifiers(concept) , working principles of single phase CE amplifier	1		Dt. 19.1.2023
	Electronic Oscillator and its classification	1		Dt. 20.1.2023
	Working of Basic Oscillator with different elements through simple Block Diagram	1		Dt. 23.1.2023
	COMMUNICATION SYSTEM	3		
3	Basic communication system	1		Dt. 24.1.2023
	Concept of Modulation and Demodulation, Difference between them	1		Dt. 27.1.2023
	Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave	1		Dt. 30.1.2023, Dt. 31.1.2023
	TRANSDUCERS AND MEASURING INSTRUMENTS	10		
4	Transducer and sensor with their differences.	1	February 2023	Dt. 2.2.2023
	Different type of Transducers & concept of active and passive transducer.	1		Dt. 3.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Working principle of photo emissive, photoconductive, photovoltaic transducer and its application	2		Dt. 6.2.2023, Dt. 7.2.2023
	Multimeter and its applications	1		Dt. 9.2.2023
	Analog and Digital Multimeter and their differences	1		Dt. 10.2.2023, Dt. 13.2.2023
	Working principle of Multimeter with Basic Block diagram	2		Dt. 14.2.2023, Dt. 16.2.2023
	CRO, working principle of CRO with simple Block diagram	2		Dt. 17.2.2023, Dt. 20.2.2023


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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:- ELECTRICAL ENGINEERING
EA

SEMESTER: 1ST SECTION:-

NAME OF THE FACULTY:- BISMITA PANI (LECT. IN ENGLISH)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : COMMUNICATIVE ENGLISH (TH-1A)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LITERATURE APPRECIATION	20	October	
	INTRODUCTION TO LITERATURE APPRECIATION	1		Dt. 27.10.2022
	SKIMMING THE GIST AND SCANNING FOR NECESSARY INFORMATION OF AN UNSEEN PASSAGE	1	November 2022	Dt. 1.11.2022, Dt. 2.11.2022
	CLOSE READING FOR INFERENCE AND EVALUATION, TRACING OUT THE MAIN IDEA AND ITS SUPPORTING POINTS	1		Dt. 3.11.2022, Dt. 9.11.2022
1	GUESSING THE MEANING OF UNFAMILIAR WORDS, NOTE-MAKING, SUMMARIZING, SUPPLYING A SUITABLE TITLE	1		Dt. 10.11.2022
	PRACTICE	1		Dt. 10.11.2022
	PRACTICE	1		Dt. 15.11.2022
	PRACTICE	1		Dt. 15.11.2022
	PRACTICE	1		Dt. 16.11.2022
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 17.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 17.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 22.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 22.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 23.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 23.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 24.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 24.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 29.11.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1		Dt. 29.11.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1		Dt. 30.11.2022
	QUESTION AND ANSWER DISCUSSION	1	December 2022	Dt. 1.12.2022
	VOCABULARY	5		
2	SYNONYMS AND ANTONYMS	2		Dt. 6.12.2022, Dt. 7.12.2022
	SAME WORD USED IN DIFFERENT SITUATIONS AND IN DIFFERENT MEANING	2		Dt. 8.12.2022, Dt. 13.12.2022
	SINGLE WORD SUBSTITUTE	1		Dt. 13.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	APPLICATION OF ENGLISH GRAMMAR	8		
	COUNTABLE NOUN AND UNCOUNTABLE NOUN TENSES	1		Dt. 14.12.2022
	ARTICLES AND DETERMINERS	1		Dt. 14.12.2022
	MODAL VERBS	1		Dt. 15.12.2022
	TENSES	1		Dt. 15.12.2022
	TENSES	1		Dt. 20.12.2022
	TENSES	1		Dt. 21.12.2022
	VOICE CHANGE	1		Dt. 21.12.2022
	SUBJECT-VERB AGREEMENT	1		Dt. 22.12.2022
4	FORMAL WRITING SKILLS	15		
	NOTICE AND AGENDA	1		Dt. 27.12.2022
	PARAGRAPH WRITING	1		Dt. 27.12.2022
	FEATURES OF PARAGRAPH WRITING	1		Dt. 28.12.2022
	DEVELOPING IDEAS INTO PARAGRAPHS	1		Dt. 29.12.2022
	PRACTICE	1		Dt. 29.12.2022
	REPORT WRITING PARALLEL	1	January 2023	Dt. 3.1.2023
	WRITING PERSONAL LETTER	1		Dt. 3.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LETTER TO PRINCIPAL	1		Dt. 4.1.2023
	LETTER TO LIBRARIAN	1		Dt. 5.1.2023
	LETTER TO HOD			Dt. 5.1.2023
	LETTER TO HOSTEL SUPERINTENDENT	1		Dt. 10.1.2023
	LAYOUT OF A BUSINESS LETTER	1		Dt. 11.1.2023
	LETTER OF ENQUIRY	1		Dt. 11.1.2023
	LETTER OF ORDER	1		Dt. 12.1.2023
	LETTER OF COMPLAINT	1		Dt. 17.1.2023
	CANCELLATION OF AN ORDER	1		Dt. 17.1.2023
	JOB APPLICATION	1		Dt. 18.1.2023
	C.V/ RESUME			Dt. 18.1.2023
	ELEMENTS OF COMMUNICATION	12		
	MEANING AND TYPES OF COMMUNICATION	1		Dt. 19.1.2023
	COMMUNICATION MODEL	1		Dt. 24.1.2023
5	PROCESS OF COMMUNICATION AND FACTORS RESPONSIBLE FOR IT	1		Dt. 24.1.2023
	MEANING AND TYPES OF PROFESSIONAL COMMUNICATION DIFFERENT AREAS OF NONVERBAL COMMUNICATION	2		Dt. 25.1.2023 , Dt. 31.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FORMAL COMMUNICATION AND ITS TYPE	1	February 2023	Dt. 1.2.2023
	UPWARD COMMUNICATION, DOWNWARD COMMUNICATION AND PARALLEL COMMUNICATION KINESICS	2		Dt. 2.2.2023, Dt. 7.2.2023
	INFORMAL COMMUNICATION AND ITS TYPE	1		Dt. 8.2.2023
	NON-VERBAL COMMUNICATION	1		Dt. 9.2.2023
	KINESICS OR BODYLANGUAGE & PROXEMICS OR SPATIAL LANGUAGE	1		Dt. 14.2.2023, Dt. 15.2.2023
	LANGUAGE OF SIGNS AND SYMBOLS	1		Dt. 16.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:- ELECTRICAL ENGINEERING
EA

SEMESTER: 1ST SECTION:-

NAME OF THE FACULTY:- (1) TAPAN KUMAR SAHU
(2) NIRUPAMA BEHERA (LECT. IN CHEMISTRY)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : ENGINEERING CHEMISTRY (TH-2B)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	A. PHYSICAL CHEMISTRY	22	October	
	Atomic structure	4		
1	Introduction	1		Dt. 27.10.2022
	Rutherford's atomic model (limitations), Atomic mass, mass number, isotopes, isobar	1		Dt. 31.10.2022
	Isotones, Bohr's atomic model, Bohr Bury scheme.	1	November 2022	Dt. 1.11.2022, Dt. 2.11.2022
	Aufbau's principle, Hund's rule, Electronic configuration	1		Dt. 3.11.2022, Dt. 7.11.2022
	Chemical Bonding	2		
2	Chemical Bonding- Definition, types of bonding	1		Dt. 9.11.2022, Dt. 10.11.2022
	Ionic bonding, examples	1		Dt. 14.11.2022
	Covalent bonding, Examples			Dt. 15.11.2022
	Coordinate bonding, examples			Dt. 15.11.2022
3	Acid Base Theory	6		
	Acid base theory-Arrhenius concept of acid & base	1		Dt. 16.11.2022
	Bronsted lowry & Lewis concept of acid & base	1		Dt. 17.11.2022
	Neutralization of acid & base, salts- definition & types.	1		Dt. 21.11.2022, Dt. 22.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Definition of Atomic weight, molecular weight, equivalent weight,	1		Dt. 23.11.2022
	Determination of equivalent weight of Acid, Base	1		Dt. 24.11.2022
	Determination of equivalent weight of salt	1		Dt. 28.11.2022
	Solutions	3		
4	Modes of expression of the concentrations (Molarity , Normality) with Simple Problems	1		Dt. 29.11.2022
	Molality with Simple Problems	1		Dt. 30.11.2022
	pH of solution (definition with simple numerical)	1	December 2022	Dt. 1.12.2022
	Importance of pH in industry (sugar, textile, paper industries only)			Dt. 5.12.2022
	Electrochemistry	4		
5	Definition and types (Strong & weak) of Electrolytes with example	1		Dt. 6.12.2022
	Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution).	1		Dt. 7.12.2022
	Faraday's 1st and 2nd law of Electrolysis (Statement, mathematical expression and Simple numerical)	1		Dt. 8.12.2022
	Industrial application of Electrolysis- Electroplating (Zinc only)	1		Dt. 12.12.2022
	Corrosion	3		
6	Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion,	1		Dt. 13.12.2022
	only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	2		Dt. 14.12.2022, Dt. 15.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	B. INORGANIC CHEMISTRY	8		
	Metallurgy	5		
7	Definition of Mineral, ores, gangue with example Distinction between Ores And Minerals.	1		Dt. 19.12.2022
	General methods of extraction of metals, i) Ore Dressing ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting) iv) Reduction (Smelting, Definition & examples of flux, slag) v) Refining of the metal (Electrorefining, & Distillation only)	2		Dt. 20.12.2022 Dt. 21.12.2022
8	Alloys	3		
	Definition of alloy, Types of alloys (Ferro, Non Ferro & Amalgam) with example.	1		Dt. 22.12.2022
	Composition and uses of Brass, Bronze, Alnico, Duralumin	1		Dt. 26.12.2022
	Doubt clear	1		Dt. 27.12.2022
	C. ORGANIC CHEMISTRY	10		
9	Hydrocarbons	1		Dt. 28.12.2022
	Saturated and Unsaturated Hydrocarbons (Definition with example)			Dt. 29.12.2022
	Aliphatic and Aromatic Hydrocarbons (Huckle's rule only). Difference between Aliphatic and aromatic hydrocarbons	3	January 2023	Dt. 2.1.2023 Dt. 3.1.2023
	IUPAC system of nomenclature of Alkane.	1		Dt. 4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	IUPAC system of nomenclature of Alkene,	1		Dt. 5.1.2023
	IUPAC system of nomenclature of Alkyne,	1		Dt. 9.1.2023
	IUPAC system of nomenclature of alkyl halide and alcohol	1		Dt. 10.1.2023
	Uses of some common aromatic compounds (Benzene, Toluene, BHC, Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life.	2		Dt. 11.1.2023 Dt. 12.1.2023
	D. INDUSTRIAL CHEMISTRY	20		
	Water Treatment	3		
10.	Sources of water, Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate),	1		Dt. 16.1.2023
	Removal of hardness by lime soda method (hot lime & cold lime—Principle, process & advantages) , Advantages of Hot lime over cold lime process.	1		Dt. 17.1.2023
	Organic Ion exchange method (principle, process, and regeneration of exhausted resins)	1		Dt. 18.1.2023
	Lubricants	4		
11	Definition of lubricant, Types (solid, liquid and semisolid with examples only)	1		Dt. 19.1.2023
	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 23.1.2023
	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 24.1.2023
	Doubt clear	1		Dt. 25.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Fuel	4		
	Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel.	1		Dt. 30.1.2023
12	Liquid: Diesel, Petrol, and Kerosene --- Composition and uses.	1		Dt. 31.1.2023
	Gaseous: Producer gas and Water gas (Composition and uses).	1	February 2023	Dt. 1.2.2023
	Elementary idea about LPG, CNG and coal gas (Composition and uses only).	1		Dt. 2.2.2023
	Polymer	5		
	Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization	1		Dt. 6.2.2023
13	Difference between Thermosetting and Thermoplastic, Composition and uses of Polythene.	1		Dt. 7.2.2023
	Poly-Vinyl Chloride and Bakelite.	1		Dt. 8.2.2023
	Definition of Elastomer (Rubber), Natural Rubber (it's draw backs).	1		Dt. 9.2.2023
	Vulcanisation of Rubber. Advantages of Vulcanised rubber over raw rubber.	1		Dt. 13.2.2023
	Chemicals in Agriculture	4		
	Pesticides: Insecticides	1		Dt. 14.2.2023
14	herbicides, fungicides- Examples and uses.	1		Dt. 15.2.2023
	Bio Fertilizers: Definition, examples and uses.	1		Dt. 16.2.2023
	Doubt clear	1		Dt. 20.2.2023

Ninupama Behera Tapankusahu

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- ELECTRICAL ENGINEERING SEMESTER: 1ST SECTION:- EA NAME OF THE FACULTY:- (1) DR. B.K. SAHOO (DIRECTOR)
 (2) KISHIRA MOHAN BEHERA (LECT. IN MATH.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING MATHEMATICS-I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Algebra (Matrices and Determinant)	18	October	
	a) Types of matrices	1		Dt. 27.10.2022, Dt. 28.10.2022
	b) Algebra of matrices	1		Dt. 29.10.2022
	Problem Solving and Tutorials	1		
	c) Determinant	1		Dt. 31.10.2022
	d) Properties of determinant	1		
	Problem Solving and Tutorials	1	November 2022	Dt. 1.11.2022
	Problem Solving and Tutorials	1		Dt. 2.11.2022
	Problem Solving and Tutorials	1		Dt. 3.11.2022
1	Problem Solving and Tutorials	1		Dt. 4.11.2022
	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	1		Dt. 5.11.2022, Dt. 7.11.2022
	Problem Solving and Tutorials	1		Dt. 9.11.2022
	Problem Solving and Tutorials	1		Dt. 10.11.2022
	Problem Solving and Tutorials	1		Dt. 11.11.2022
	f) Cramer's Rule (Question should be on two variables)	1		Dt. 12.11.2022
	Problem Solving and Tutorials	1		Dt. 14.11.2022
	Problem Solving and Tutorials	1		Dt. 15.11.2022
	g) Solution of simultaneous equations by matrix inverse method (with two variables)	1		Dt. 16.11.2022, Dt. 17.11.2022
	Problem Solving and Tutorials	1		Dt. 18.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problem Solving and Tutorials	1		Dt. 19.11.2022
	Problem Solving and Tutorials	1		Dt. 21.11.2022
	TRIGONOMETRY	15		
	a) Trigonometrical ratios	1		Dt. 22.11.2022, Dt. 23.11.2022
	Problem Solving and Tutorials	1		Dt. 24.11.2022
	b) Compound angles, multiple and sub-multiple angles (only formulae)	1		Dt. 25.11.2022, Dt. 26.11.2022
	Problem Solving and Tutorials	1		Dt. 28.11.2022
	Problem Solving and Tutorials	1		Dt. 29.11.2022, Dt. 30.11.2022
	c) Define inverse circular functions and its properties (no derivation)	2	December 2022	Dt. 1.12.2022, Dt. 2.12.2022
2	Problem Solving and Tutorials	1		Dt. 3.12.2022
	Problem Solving and Tutorials	1		Dt. 5.12.2022
	Problem Solving and Tutorials	1		Dt. 6.12.2022
	Problem Solving and Tutorials	1		Dt. 7.12.2022
	Problem Solving and Tutorials	1		Dt. 8.12.2022
	Problem Solving and Tutorials	1		Dt. 9.12.2022
	Problem Solving and Tutorials	1		Dt. 10.12.2022
	Problem Solving and Tutorials	1		Dt. 12.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(STRAIGHT LINE)	13		
	a) Introduction of geometry in two dimension b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)	1		Dt.13.12.2022, Dt.14.12.2022
	Problem Solving and Tutorials	1		Dt.15.12.2022
	c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	1		Dt.16.12.2022, Dt.17.12.2022
	Problem Solving and Tutorials	1		Dt.19.12.2022
3	d) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form, (v) Perpendicular form	1		Dt.20.12.2022, Dt.21.12.2022
	Problem Solving and Tutorials	1		Dt.22.12.2022
	Problem Solving and Tutorials	1		Dt.23.12.2022
	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line	1		Dt.24.12.2022, Dt.26.12.2022
	Problem Solving and Tutorials	1		Dt.27.12.2022
	f) Equation of a line passing through the intersection of two lines	1		Dt.28.12.2022
	Problem Solving and Tutorials	1		Dt.29.12.2022
	g) Distance of a point from a line	1		Dt.30.12.2022
	Problem Solving and Tutorials	1		Dt.31.12.2022
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(CIRCLE)	7		
4	a) Equation of a circle (i) center radius form	2	January 2023	Dt.2.1.2023, Dt.3.1.2023
	Problem Solving and Tutorials	1		Dt.4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	(ii) General equation of a circle	1		Dt. 5.1.2023
	Problem Solving and Tutorials	1		Dt. 6.1.2023
	(iii) End point of diameter form	1		Dt. 7.1.2023
	Problem Solving and Tutorials	1		Dt. 9.1.2023
	CO-ORDINATE GEOMETRY IN THREE DIMENSIONS	15		
5	a) Distance formulae, section formulae in 3D	1		Dt. 10.1.2023, Dt. 11.1.2023
	Problem Solving and Tutorials Direction ratio, direction cosine, angle between two lines	1		Dt. 12.1.2023, Dt. 13.1.2023
	Problem Solving and Tutorials	1		Dt. 16.1.2023
	Condition of parallelism and perpendicularity	1		Dt. 17.1.2023
	Problem Solving and Tutorials	1		Dt. 18.1.2023
	Problem Solving and Tutorials	1		Dt. 19.1.2023
	b) Equation of a plane i) General form	1		Dt. 20.1.2023, Dt. 21.1.2023
	Problem Solving and Tutorials	1		Dt. 23.1.2023, Dt. 24.1.2023
	Angle between two planes, perpendicular distance of a point from a plane	1		Dt. 25.1.2023, Dt. 27.1.2023
	Problem Solving and Tutorials	1		Dt. 28.1.2023
	Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	1		Dt. 30.1.2023, Dt. 31.1.2023
	Problem Solving and Tutorials	1	February 2023	Dt. 1.2.2023
	Problem Solving and Tutorials	1		Dt. 2.2.2023
	Problem Solving and Tutorials	1		Dt. 3.2.2023

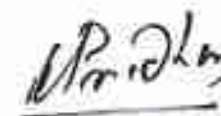
Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	SPHERE	7		
6	Introduction to Sphere a) General Equation of a sphere	1		Dt. 4.2.2023, Dt. 6.2.2023
	Problem Solving and Tutorials	1		Dt. 7.2.2023
	i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	1		Dt. 8.2.2023, Dt. 9.2.2023
	Problem Solving and Tutorials	1		Dt. 10.2.2023, Dt. 11.2.2023
	iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	1		Dt. 13.2.2023, Dt. 14.2.2023
	Problem Solving and Tutorials	1		Dt. 15.2.2023, Dt. 16.2.2023
	Problem Solving and Tutorials	1		Dt. 17.2.2023, Dt. 20.2.2023



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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-ELECTRICAL ENGINEERING SEMESTER: 1ST SECTION:- EA NAME OF THE FACULTY:- (1) ER. SUBHASHREE PRADHAN (HO.D., ELECT. ENGG.), (2) ER. PRAKASH JENA (LECT. IN ELECT. ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023 THEORY SUBJECT: BASIC ELECTRICAL & ELECTRONICS ENGINEERING (TH-4(A & B))

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FUNDAMENTALS	5	OCTOBER	
1	Concept of current flow, Concept of source and load.	1		Dt. 27.10.2022
	State Ohm's law and concept of resistance.	1		Dt. 28.10.2022
	Relation of V, I & R in series circuit, Relation of V, I & R in parallel circuit.	1		Dt. 31.10.2022
	Division of current in parallel circuit, Effect of power in series & parallel circuit.	1	November 2022	Dt. 1.11.2022, Dt. 2.11.2022
	Kirchhoff's Law, Simple problems on Kirchhoff's law.	1		Dt. 3.11.2022
	A.C. THEORY	8		
2	Generation of alternating emf.	1		Dt. 4.11.2022
	Difference between D.C. & A.C			Dt. 9.11.2022
	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle.	1		Dt. 10.11.2022
	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.	1		Dt. 11.11.2022
	Represent AC values in phasor diagrams.	1		Dt. 15.11.2022
	AC through pure resistance, inductance & capacitance	1		Dt. 16.11.2022
	AC through RL, RC, RLC series circuits.	1		Dt. 17.11.2022
	Simple problems on RL, RC & RLC series circuits.	1		Dt. 18.11.2022
	Concept of Power and Power factor	1		Dt. 22.11.2022
Impedance triangle and power triangle.			Dt. 23.11.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	GENERATION OF ELECTRICAL POWER	3		
	Generation of electricity from thermal power station with block diagram	1		Dt. 24.11.2022
	Generation of electricity from Hydro power station with block diagram	1		Dt. 25.11.2022
	Generation of electricity from nuclear power station with block diagram	1		Dt. 29.11.2022
4	CONVERSION OF ELECTRICAL ENERGY			
	Introduction of DC machines, Main parts of DC machines	1		Dt. 30.11.2022
	DC generator, Classification of DC motor	1	December 2022	Dt. 1.12.2022
	Uses of different types of DC generators & motors.	1		Dt. 2.12.2022
	Types and uses of single phase induction motors.	1		Dt. 6.12.2022
	Concept of Lumen	1		Dt. 7.12.2022
	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.	1		Dt. 8.12.2022
	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)	1		Dt. 9.12.2022
5	WIRING AND POWER BILLING	4		
	Types of wiring for domestic installations.	1		Dt. 13.12.2022
	Layout of household electrical wiring (single line diagram showing all the important component in the system).	1		Dt. 14.12.2022
	List out the basic protective devices used in house hold wiring.	1		Dt. 15.12.2022
	Calculate energy consumed in a small electrical installation	1		Dt. 16.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	MEASURING INSTRUMENTS			
	Introduction to measuring instruments.	1		Dt. 20.12.2022
	Torques in instruments.			Dt. 21.12.2022
	Different uses of PMMC type of instruments (Ammeter & Voltmeter).	1		Dt. 22.12.2022
	Different uses of MI type of instruments (Ammeter & Voltmeter).			Dt. 23.12.2022
	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter.	1		Dt. 27.12.2022
	ELECTRONIC DEVICES	8		
	Basic Concept of Electronics and its application.	1		Dt. 28.12.2022
	Basic Concept of Electron Emission & its types.	1		Dt. 29.12.2022
	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.	2	January 2023	Dt. 30.12.2022
				Dt. 3.1.2023
1	Difference between Intrinsic & Extrinsic Semiconductor.	1		Dt. 4.1.2023
	Difference between vacuum tube & semiconductor.	1		Dt. 5.1.2023
	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)	1		Dt. 6.1.2023
	Integrated circuits (I.C) & its advantages.	1		Dt. 10.1.2023
	ELECTRONIC CIRCUITS	9		
	Rectifier & its uses.	1		Dt. 11.1.2023
2	Principles of working of different types of Rectifiers with their merits and demerits	1		Dt. 12.1.2023
	Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)	1		Dt. 13.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Working of D.C power supply system (unregulated) with help of block diagrams only	1		Dt. 17.1.2023
	Transistor, Different types of Transistor Configuration and state output and input	1		Dt. 18.1.2023
	current gain relationship in CE, CB and CC configuration			Dt. 19.1.2023
	Different types of biasing with circuit diagram	1		Dt. 20.1.2023
	Amplifiers(concept) , working principles of single phase CE amplifier	1		Dt. 24.1.2023
	Electronic Oscillator and its classification	1		Dt. 25.1.2023
	Working of Basic Oscillator with different elements through simple Block Diagram	1		Dt. 27.1.2023
	COMMUNICATION SYSTEM	3		
	Basic communication system	1		Dt. 30.1.2023
3	Concept of Modulation and Demodulation, Difference between them	1		Dt. 31.1.2023
	Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave	1	February 2023	Dt. 1.2.2023
	TRANSDUCERS AND MEASURING INSTRUMENTS	10		
	Transducer and sensor with their differences.	1		Dt. 2.2.2023
4	Different type of Transducers & concept of active and passive transducer.	1		Dt. 3.2.2023
	Working principle of photo emissive, photoconductive, photovoltaic transducer and its application	2		Dt. 7.2.2023, Dt. 8.2.2023
	Multimeter and its applications	1		Dt. 9.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Analog and Digital Multimeter and their differences	1		Dt.10.2.2023
	Working principle of Multimeter with Basic Block diagram	2		Dt.14.2.2023, Dt.15.2.2023
	CRO, working principle of CRO with simple Block diagram	2		Dt.16.2.2023, Dt.17.2.2023 Dt.20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:- ELECTRICAL ENGINEERING
SECTION:- EB

SEMESTER: 1ST

NAME OF THE FACULTY:- BISMITA PANI (LECT. IN ENGLISH)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : COMMUNICATIVE ENGLISH (TH-1A)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LITERATURE APPRECIATION	20	October	
	INTRODUCTION TO LITERATURE APPRECIATION	1		Dt. 27.10.2022
	SKIMMING THE GIST AND SCANNING FOR NECESSARY INFORMATION OF AN UNSEEN PASSAGE	1		Dt. 28.10.2022
	CLOSE READING FOR INFERENCE AND EVALUATION, TRACING OUT THE MAIN IDEA AND ITS SUPPORTING POINTS	1		Dt. 31.10.2022
1	GUESSING THE MEANING OF UNFAMILIAR WORDS, NOTE-MAKING, SUMMARIZING, SUPPLYING A SUITABLE TITLE	1	November 2022	Dt. 2.11.2022
	PRACTICE	1		Dt. 3.11.2022
	PRACTICE	1		Dt. 4.11.2022
	PRACTICE	1		Dt. 7.11.2022
	PRACTICE	1		Dt. 9.11.2022
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 10.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 11.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 14.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 16.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 17.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 18.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 21.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 23.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 24.11.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1		Dt. 25.11.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1		Dt. 28.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 30.11.2022
	VOCABULARY	5		
2	SYNONYMS AND ANTONYMS	2	December 2022	Dt. 1.12.2022, Dt. 2.12.2022
	SAME WORD USED IN DIFFERENT SITUATIONS AND IN DIFFERENT MEANING	2		Dt. 5.12.2022, Dt. 7.12.2022
	SINGLE WORD SUBSTITUTE	1		Dt. 8.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	APPLICATION OF ENGLISH GRAMMAR	8		
	COUNTABLE NOUN AND UNCOUNTABLE NOUN TENSES	1		Dt. 9.12.2022
	ARTICLES AND DETERMINERS	1		Dt. 12.12.2022
	MODAL VERBS	1		Dt. 14.12.2022
	TENSES	1		Dt. 15.12.2022
	TENSES	1		Dt. 16.12.2022
	TENSES	1		Dt. 19.12.2022
	VOICE CHANGE	1		Dt. 21.12.2022
	SUBJECT-VERB AGREEMENT	1		Dt. 22.12.2022
4	FORMAL WRITING SKILLS	15		
	NOTICE AND AGENDA	1		Dt. 23.12.2022
	PARAGRAPH WRITING	1		Dt. 26.12.2022
	FEATURES OF PARAGRAPH WRITING	1		Dt. 28.12.2022
	DEVELOPING IDEAS INTO PARAGRAPHS	1		Dt. 29.12.2022
	PRACTICE	1		Dt. 30.12.2022
	REPORT WRITING PARALLEL	1	January 2023	Dt. 2.1.2023
	WRITING PERSONAL LETTER	1		Dt. 4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LETTER TO PRINCIPAL	1		Dt. 5.1.2023
	LETTER TO LIBRARIAN	1		Dt. 6.1.2023
	LETTER TO HOD			Dt. 9.1.2023
	LETTER TO HOSTEL SUPERINTENDENT	1		Dt. 11.1.2023
	LAYOUT OF A BUSINESS LETTER	1		Dt. 12.1.2023
	LETTER OF ENQUIRY	1		Dt. 13.1.2023
	LETTER OF ORDER	1		Dt. 16.1.2023
	LETTER OF COMPLAINT	1		Dt. 18.1.2023
	CANCELLATION OF AN ORDER	1		Dt. 19.1.2023
	JOB APPLICATION	1		Dt. 20.1.2023
	C.V/ RESUME			Dt. 23.1.2023
	ELEMENTS OF COMMUNICATION	12		
	MEANING AND TYPES OF COMMUNICATION	1		Dt. 25.1.2023
	COMMUNICATION MODEL	1		Dt. 27.1.2023
5	PROCESS OF COMMUNICATION AND FACTORS RESPONSIBLE FOR IT	1		Dt. 30.1.2023 , Dt. 31.1.2023
	MEANING AND TYPES OF PROFESSIONAL COMMUNICATION DIFFERENT AREAS OF NONVERBAL COMMUNICATION	2	February 2022	Dt. 1.2.2023 , Dt. 2.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FORMAL COMMUNICATION AND ITS TYPE	1		Dt. 3.2.2023
	UPWARD COMMUNICATION, DOWNWARD COMMUNICATION AND PARALLEL COMMUNICATION KINESICS	2		Dt. 6.2.2023, Dt. 8.2.2023 Dt. 9.2.2023
	INFORMAL COMMUNICATION AND ITS TYPE	1		Dt. 10.2.2023
	NON-VERBAL COMMUNICATION	1		Dt. 13.2.2023
	KINESICS OR BODYLANGUAGE & PROXEMICS OR SPATIAL LANGUAGE	1		Dt. 15.2.2023, Dt. 16.2.2023
	LANGUAGE OF SIGNS AND SYMBOLS	1		Dt. 17.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:- ELECTRICAL ENGINEERING
SECTION:- EB

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) TAPAN KUMAR SAHU
(2) NIRUPAMA BEHERA (LECT. IN CHEMISTRY)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : ENGINEERING CHEMISTRY (TH-2B)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	A.PHYSICAL CHEMISTRY	22		
	Atomic structure	4	October 2022	
1	Introduction	1		Dt. 28.10.2022
	Rutherford's atomic model (limitations), Atomic mass, mass number, isotopes, isobar	1		Dt. 29.10.2022, Dt. 31.10.2022
	Isotones, Bohr's atomic model, Bohr Bury scheme.	1	November 2022	Dt. 2.11.2022, Dt. 4.11.2022
	Aufbau's principle, Hund's rule, Electronic configuration	1		Dt. 5.11.2022, Dt. 7.11.2022
	Chemical Bonding	2		
2	Chemical Bonding- Definition, types of bonding	1		Dt. 9.11.2022, Dt. 11.11.2022
	Ionic bonding, examples	1		Dt. 12.11.2022
	Covalent bonding, Examples			Dt. 14.11.2022
	Coordinate bonding, examples			Dt. 14.11.2022
	Acid Base Theory	6		
3	Acid base theory-Arrhenius concept of acid & base	1		Dt. 16.11.2022
	Bronsted lowry & Lewis concept of acid & base	1		Dt. 18.11.2022
	Neutralization of acid & base, salts- definition & types.	1		Dt. 19.11.2022, Dt. 21.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Definition of Atomic weight, molecular weight, equivalent weight.	1		Dt. 23.11.2022
	Determination of equivalent weight of Acid, Base	1		Dt. 25.11.2022
	Determination of equivalent weight of salt.	1		Dt. 26.11.2022
	Solutions	3		
4	Modes of expression of the concentrations (Molarity , Normality) with Simple Problems	1		Dt. 28.11.2022
	Molality with Simple Problems	1		Dt. 30.11.2022
	pH of solution (definition with simple numerical)	1	December 2022	Dt. 2.12.2022
	Importance of pH in industry (sugar, textile, paper industries only)			Dt. 3.12.2022
	Electrochemistry	4		
5	Definition and types (Strong & weak) of Electrolytes with example.	1		Dt. 5.12.2022
	Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution).	1		Dt. 7.12.2022
	Faraday's 1st and 2nd law of Electrolysis (Statement, mathematical expression and Simple numerical)	1		Dt. 9.12.2022
	Industrial application of Electrolysis- Electroplating (Zinc only)	1		Dt. 10.12.2022
	Corrosion	3		
6	Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion.	1		Dt. 12.12.2022
	only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	2		Dt. 14.12.2022, Dt. 16.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	B. INORGANIC CHEMISTRY	8		
	Metallurgy	5		
7	Definition of Mineral, ores, gangue with example. Distinction between Ores And Minerals.	1		Dt. 17.12.2022
	General methods of extraction of metals, i) Ore Dressing ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting) iv) Reduction (Smelting, Definition & examples of flux, slag) v) Refining of the metal (Electrorefining, & Distillation only)	2		Dt. 19.12.2022 Dt. 21.12.2022
8	Alloys	3		
	Definition of alloy, Types of alloys (Ferro, Non Ferro & Amalgam) with example.	1		Dt. 23.12.2022
	Composition and uses of Brass, Bronze, Alnico, Duralumin	1		Dt. 24.12.2022
	Doubt clear	1		Dt. 26.12.2022
	C. ORGANIC CHEMISTRY	10		
9	Hydrocarbons	1		Dt. 28.12.2022
	Saturated and Unsaturated Hydrocarbons (Definition with example)			Dt. 30.12.2022
	Aliphatic and Aromatic Hydrocarbons (Huckel's rule only). Difference between Aliphatic and aromatic hydrocarbons	3	January 2023	Dt. 31.12.2022 Dt. 2.1.2023
	IUPAC system of nomenclature of Alkane,	1		Dt. 4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	IUPAC system of nomenclature of Alkene,	1		Dt. 6.1.2023
	IUPAC system of nomenclature of Alkyne,	1		Dt. 7.1.2023
	IUPAC system of nomenclature of alkyl halide and alcohol	1		Dt. 9.1.2023
	Uses of some common aromatic compounds (Benzene, Toluene, BHC, Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life.	2		Dt. 11.1.2023 Dt. 13.1.2023
	D. INDUSTRIAL CHEMISTRY	20		
	Water Treatment	3		
10	Sources of water, Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate),	1		Dt. 16.1.2023
	Removal of hardness by lime soda method (hot lime & cold lime—Principle, process & advantages) , Advantages of Hot lime over cold lime process.	1		Dt. 18.1.2023
	Organic ion exchange method (principle, process, and regeneration of exhausted resins)	1		Dt. 20.1.2023
	Lubricants	4		
11	Definition of lubricant, Types (solid, liquid and semisolid with examples only)	1		Dt. 21.1.2023
	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 23.1.2023
	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 25.1.2023
	Doubt clear	1		Dt. 27.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
12	Fuel	4		
	Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel.	1		Dt. 28.1.2023
	Liquid: Diesel, Petrol, and Kerosene --- Composition and uses.	1		Dt. 30.1.2023
	Gaseous: Producer gas and Water gas (Composition and uses).	1	February 2023	Dt. 1.2.2023
	Elementary idea about LPG, CNG and coal gas (Composition and uses only).	1		Dt. 3.2.2023
13	Polymer	5		
	Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization	1		Dt. 4.2.2023
	Difference between Thermosetting and Thermoplastic, Composition and uses of Polythene	1		Dt. 6.2.2023
	Poly-Vinyl Chloride and Bakelite	1		Dt. 8.2.2023
	Definition of Elastomer (Rubber): Natural Rubber (It's draw backs).	1		Dt. 10.2.2023
	Vulcanisation of Rubber Advantages of Vulcanised rubber over raw rubber.	1		Dt. 11.2.2023
14	Chemicals in Agriculture	4		
	Pesticides: Insecticides	1		Dt. 13.2.2023
	herbicides, fungicides- Examples and uses.	1		Dt. 15.2.2023
	Bio Fertilizers: Definition, examples and uses.	1		Dt. 17.2.2023
	Doubt clear	1		Dt. 20.2.2023

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CHHENDIPADA, ANGLI

P.C.I.E.T., CHHENDIPADA, DIST- ANGUL
THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- ELECTRICAL ENGINEERING SEMESTER: 1ST SECTION:- EB NAME OF THE FACULTY:- (1) DR. B.K. SAHOO (DIRECTOR)
 (2) KISHIRA MOHAN BEHERA (LECT. IN MATH.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING MATHEMATICS-I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Algebra (Matrices and Determinant)	18	October	
	a) Types of matrices	1		Dt. 27.10.2022, Dt. 28.10.2022
	b) Algebra of matrices	1		Dt. 29.10.2022
	Problem Solving and Tutorials	1		Dt. 31.10.2022
	c) Determinant	1		Dt. 31.10.2022
	d) Properties of determinant	1		Dt. 31.10.2022
	Problem Solving and Tutorials	1	November 2022	Dt. 1.11.2022
	Problem Solving and Tutorials	1		Dt. 2.11.2022
	Problem Solving and Tutorials	1		Dt. 3.11.2022
1	Problem Solving and Tutorials	1		Dt. 4.11.2022
	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	1		Dt. 5.11.2022, Dt. 7.11.2022
	Problem Solving and Tutorials	1		Dt. 9.11.2022
	Problem Solving and Tutorials	1		Dt. 10.11.2022
	Problem Solving and Tutorials	1		Dt. 11.11.2022
	f) Cramer's Rule (Question should be on two variables)	1		Dt. 12.11.2022
	Problem Solving and Tutorials	1		Dt. 14.11.2022
	Problem Solving and Tutorials	1		Dt. 15.11.2022
	g) Solution of simultaneous equations by matrix inverse method (with two variables)	1		Dt. 16.11.2022, Dt. 17.11.2022
	Problem Solving and Tutorials	1		Dt. 18.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problem Solving and Tutorials	1		Dt. 19.11.2022
	Problem Solving and Tutorials	1		Dt. 21.11.2022
	TRIGONOMETRY	15		
	a) Trigonometrical ratios	1		Dt. 22.11.2022, Dt. 23.11.2022
	Problem Solving and Tutorials	1		Dt. 24.11.2022
	b) Compound angles, multiple and sub-multiple angles (only formulae)	1		Dt. 25.11.2022, Dt. 26.11.2022
	Problem Solving and Tutorials	1		Dt. 28.11.2022
	Problem Solving and Tutorials	1		Dt. 29.11.2022, Dt. 30.11.2022
	c) Define inverse circular functions and its properties (no derivation)	2	December 2022	Dt. 1.12.2022, Dt. 2.12.2022
2	Problem Solving and Tutorials	1		Dt. 3.12.2022
	Problem Solving and Tutorials	1		Dt. 5.12.2022
	Problem Solving and Tutorials	1		Dt. 6.12.2022
	Problem Solving and Tutorials	1		Dt. 7.12.2022
	Problem Solving and Tutorials	1		Dt. 8.12.2022
	Problem Solving and Tutorials	1		Dt. 9.12.2022
	Problem Solving and Tutorials	1		Dt. 10.12.2022
	Problem Solving and Tutorials	1		Dt. 12.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(STRAIGHT LINE)	13		
	a) Introduction of geometry in two dimension b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)	1		Dt. 13.12.2022, Dt. 14.12.2022
	Problem Solving and Tutorials:	1		Dt. 15.12.2022
	c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	1		Dt. 16.12.2022, Dt. 17.12.2022
	Problem Solving and Tutorials:	1		Dt. 19.12.2022
3	d) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form, (v) Perpendicular form	1		Dt. 20.12.2022, Dt. 21.12.2022
	Problem Solving and Tutorials:	1		Dt. 22.12.2022
	Problem Solving and Tutorials:	1		Dt. 23.12.2022
	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line	1		Dt. 24.12.2022, Dt. 26.12.2022
	Problem Solving and Tutorials:	1		Dt. 27.12.2022
	f) Equation of a line passing through the intersection of two lines	1		Dt. 28.12.2022
	Problem Solving and Tutorials:	1		Dt. 29.12.2022
	g) Distance of a point from a line	1		Dt. 30.12.2022
	Problem Solving and Tutorials:	1		Dt. 31.12.2022
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(CIRCLE)	7		
4	a) Equation of a circle (i) center radius form	2	January 2023	Dt. 2.1.2023, Dt. 3.1.2023
	Problem Solving and Tutorials:	1		Dt. 4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	(ii) General equation of a circle	1		Dt. 5.1.2023
	Problem Solving and Tutorials	1		Dt. 6.1.2023
	(iii) End point of diameter form	1		Dt. 7.1.2023
	Problem Solving and Tutorials	1		Dt. 9.1.2023
	CO-ORDINATE GEOMETRY IN THREE DIMENSIONS	15		
5	a) Distance formulae, section formulae in 3D	1		Dt. 10.1.2023, Dt. 11.1.2023
	Problem Solving and Tutorials Direction ratio, direction cosine, angle between two lines	1		Dt. 12.1.2023, Dt. 13.1.2023
	Problem Solving and Tutorials	1		Dt. 16.1.2023
	Condition of parallelism and perpendicularity	1		Dt. 17.1.2023
	Problem Solving and Tutorials	1		Dt. 18.1.2023
	Problem Solving and Tutorials	1		Dt. 19.1.2023
	b) Equation of a plane i) General form	1		Dt. 20.1.2023, Dt. 21.1.2023
	Problem Solving and Tutorials	1		Dt. 23.1.2023, Dt. 24.1.2023
	Angle between two planes, perpendicular distance of a point from a plane	1		Dt. 25.1.2023, Dt. 27.1.2023
	Problem Solving and Tutorials	1		Dt. 28.1.2023
	Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	1		Dt. 30.1.2023, Dt. 31.1.2023
	Problem Solving and Tutorials	1	February 2023	Dt. 1.2.2023
	Problem Solving and Tutorials	1		Dt. 2.2.2023
	Problem Solving and Tutorials	1		Dt. 3.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	SPHERE	7		
	Introduction to Sphere: a) General Equation of a sphere	1		Dt. 4.2.2023, Dt. 6.2.2023
	Problem Solving and Tutorials:	1		Dt. 7.2.2023
6	i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	1		Dt. 8.2.2023, Dt. 9.2.2023
	Problem Solving and Tutorials:	1		Dt. 10.2.2023, Dt. 11.2.2023
	iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	1		Dt. 13.2.2023, Dt. 14.2.2023
	Problem Solving and Tutorials:	1		Dt. 15.2.2023, Dt. 16.2.2023
	Problem Solving and Tutorials:	1		Dt. 17.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-ELECTRICAL ENGINEERING SEMESTER: 1ST SECTION:- EB NAME OF THE FACULTY:- (1) ER. SUBHASHREE PRADHAN (HO.D., ELECT. ENGG.), (2) ER. PRAKASH JENA (LECT. IN ELECT. ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023 THEORY SUBJECT: BASIC ELECTRICAL & ELECTRONICS ENGINEERING (TH-4(A & B))

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FUNDAMENTALS	5	OCTober	
1	Concept of current flow, Concept of source and load.	1		Dt. 28.10.2022
	State Ohm's law and concept of resistance.	1		Dt. 31.10.2022
	Relation of V, I & R in series circuit, Relation of V, I & R in parallel circuit.	1	November 2022	Dt. 1.11.2022
	Division of current in parallel circuit, Effect of power in series & parallel circuit.	1		Dt. 2.11.2022
	Kirchhoff's Law, Simple problems on Kirchhoff's law.	1		Dt. 3.11.2022
	A.C. THEORY	8		
2	Generation of alternating emf.	1		Dt. 7.11.2022
	Difference between D.C. & A.C.			Dt. 9.11.2022
	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle.	1		Dt. 11.11.2022
	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.	1		Dt. 14.11.2022
	Represent AC values in phasor diagrams.	1		Dt. 15.11.2022
	AC through pure resistance, inductance & capacitance	1		Dt. 16.11.2022
	AC through RL, RC, RLC series circuits.	1		Dt. 18.11.2022
	Simple problems on RL, RC & RLC series circuits	1		Dt. 21.11.2022
Concept of Power and Power factor	1		Dt. 22.11.2022	
Impedance triangle and power triangle.			Dt. 23.11.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	GENERATION OF ELECTRICAL POWER	3		
	Generation of electricity from thermal power station with block diagram	1		Dt. 25.11.2022
	Generation of electricity from Hydro power station with block diagram	1		Dt. 28.11.2022
	Generation of electricity from nuclear power station with block diagram	1		Dt. 29.11.2022
4	CONVERSION OF ELECTRICAL ENERGY			
	Introduction of DC machines, Main parts of DC machines.	1		Dt. 30.11.2022
	DC generator, Classification of DC motor.	1	December 2022	Dt. 2.12.2022
	Uses of different types of DC generators & motors.	1		Dt. 5.12.2022
	Types and uses of single phase induction motors.	1		Dt. 6.12.2022
	Concept of Lumen	1		Dt. 7.12.2022
	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.	1		Dt. 9.12.2022
	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)	1		Dt. 12.12.2022
5	WIRING AND POWER BILLING	4		
	Types of wiring for domestic installations.	1		Dt. 13.12.2022
	Layout of household electrical wiring (single line diagram showing all the important component in the system).	1		Dt. 14.12.2022
	List out the basic protective devices used in house hold wiring.	1		Dt. 16.12.2022
	Calculate energy consumed in a small electrical installation	1		Dt. 19.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	MEASURING INSTRUMENTS			
	Introduction to measuring instruments.	1		Dt. 20.12.2022
	Torques in instruments.			Dt. 21.12.2022
	Different uses of PMMC type of instruments (Ammeter & Voltmeter).	1		Dt. 23.12.2022
	Different uses of MI type of instruments (Ammeter & Voltmeter).			Dt. 26.12.2022
	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter.	1		Dt. 27.12.2022
	ELECTRONIC DEVICES	8		
	Basic Concept of Electronics and its application.	1		Dt. 28.12.2022
	Basic Concept of Electron Emission & its types.	1		Dt. 30.12.2022
	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.	2	January 2023	Dt. 2.1.2023 Dt. 3.1.2023
1	Difference between Intrinsic & Extrinsic Semiconductor.	1		Dt. 4.1.2023
	Difference between vacuum tube & semiconductor.	1		Dt. 6.1.2023
	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)	1		Dt. 9.1.2023
	Integrated circuits (I.C) & its advantages.	1		Dt. 10.1.2023
	ELECTRONIC CIRCUITS	9		
	Rectifier & its uses.	1		Dt. 11.1.2023
2	Principles of working of different types of Rectifiers with their merits and demerits	1		Dt. 13.1.2023
	Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)	1		Dt. 16.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Working of D.C power supply system (unregulated) with help of block diagrams only	1		Dt. 17.1.2023
	Transistor, Different types of Transistor Configuration and state output and input	1		Dt. 18.1.2023
	current gain relationship in CE, CB and CC configuration			Dt. 20.1.2023
	Different types of biasing with circuit diagram,	1		Dt. 23.1.2023
	Amplifiers(concept) , working principles of single phase CE amplifier	1		Dt. 24.1.2023
	Electronic Oscillator and its classification	1		Dt. 25.1.2023
	Working of Basic Oscillator with different elements through simple Block Diagram	1		Dt. 27.1.2023
	COMMUNICATION SYSTEM	3		
	Basic communication system	1		Dt. 30.1.2023
3	Concept of Modulation and Demodulation, Difference between them	1		Dt. 31.1.2023
	Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave	1	February 2023	Dt. 1.2.2023
	TRANSDUCERS AND MEASURING INSTRUMENTS	10		
	Transducer and sensor with their differences.	1		Dt. 3.2.2023
4	Different type of Transducers & concept of active and passive transducer.	1		Dt. 6.2.2023
	Working principle of photo emissive, photoconductive, photovoltaic transducer and its application	2		Dt. 7.2.2023, Dt. 8.2.2023
	Multimeter and its applications	1		Dt. 10.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Analog and Digital Multimeter and their differences.	1		Dt. 13.2.2023
	Working principle of Multimeter with Basic Block diagram	2		Dt. 14.2.2023, Dt. 15.2.2023
	CRO, working principle of CRO with simple Block diagram	2		Dt. 17.2.2023, Dt. 20.2.2023

S. Prakashan P.J

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING
SECTION:- MA

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) ASWINI KUMAR PRADHAN
(2) ER. SUBEDITA BEHERA (LECT. IN COMP. SC. & ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: COMPUTER APPLICATION (TH-1B)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	COMPUTER ORGANISATION	5	October	
	Intruduction to Computer, Evolution of Computers	1		Dt. 28.10.2022
	Generation of Computers, Classification of computer	1		Dt. 31.10.2022
	Basic Organisation of Computer (Functional Block diagram)	1	November 2022	Dt. 1.11.2022
	Input Devices, CPU & Output Devices.	1		Dt. 2.11.2022
	Computer Memory and Classification of Memory	1		Dt. 4.11.2022
2	COMPUTER SOFTWARE	7		
	Software concept, System software, Application software	1		Dt. 7.11.2022
	What is Operating System, Objectives and Functions of O.S	1		Dt. 9.11.2022
	Types of Operating System: Batch Processing, Multiprogramming, Time Sharing OS	1		Dt. 11.11.2022
	Features of DOS, Windows and UNIX	1		Dt. 14.11.2022
	Programming Languages Compiler, interpreter	1		Dt. 15.11.2022
	Computer Virus, Different Types of computer virus, Detection and prevention of Virus	1		Dt. 16.11.2022
Application of computers in different Domain	1		Dt. 18.11.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	COMPUTER NETWORK AND INTERNET	8		
	Networking concept, Protocol	1		Dt. 21.11.2022
	Connecting Media, Data Transmission mode	1		Dt. 22.11.2022
	Network Topologies	1		Dt. 23.11.2022
	Types of Network	1		Dt. 25.11.2022
	Networking Devices (Hub, Repeater, Switch, Bridge, Router, Gateway & NIC)	1		Dt. 28.11.2022, Dt. 29.11.2022
	Internet Services (E-Mail, WWW, FTP, Chatting, Internet Conferencing)	1		Dt. 30.11.2022
	Electronic Newspaper & Online Shopping	1	December 2022	Dt. 2.12.2022
	Different types of Internet connectivity and ISP	1		Dt. 5.12.2022
4	FILE MANAGEMENT AND DATA PROCESSING	5		
	Concept of File and Folder	1		Dt. 6.12.2022
	File Access and Storage methods. Sequential, Direct, ISAM	1		Dt. 7.12.2022, Dt. 9.12.2022
	Data Capture	1		Dt. 12.12.2022
	Data storage	1		Dt. 13.12.2022
	Data Processing and Retrieval	1		Dt. 14.12.2022
5	PROBLEM SOLVING METHODOLOGY	5		
	Algorithm, Pseudo code	1		Dt. 16.12.2022
	Flowchart Generation of Programming Languages	2		Dt. 19.12.2022, Dt. 20.12.2022
	Structured Programming Language	1		Dt. 21.12.2022
	Examples of Problem solving through Flowchart	1		Dt. 23.12.2022, Dt. 26.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	OVERVIEW OF C PROGRAMMING LANGUAGE	15		
	Introduction to C, History of C	1		Dt. 27.12.2022
	Constants, Variables	1		Dt. 28.12.2022
	Data types in C	1		Dt. 30.12.2022
	Input and Output operations.	1	January 2023	Dt. 2.1.2023
	Operators, Different types of operator	2		Dt. 3.1.2023, Dt. 4.1.2023
	Expressions, Type conversion & Typecasting	2		Dt. 6.1.2023, Dt. 9.1.2023
	Decision Control and Looping Statements (If, If-else, If-else-if, Switch, While, Do-while, For, Break, Continue & Goto)	4		Dt. 10.1.2023, Dt. 11.1.2023 Dt. 13.1.2023, Dt. 16.1.2023
	Programming Assignments using the above features	3		Dt. 17.1.2023, Dt. 18.1.2023 Dt. 20.1.2023
7	ADVANCED FEATURES OF C	15		
	Functions and Passing Parameters to the Function (Call by Value and Call by Reference)	3		Dt. 23.1.2023, Dt. 24.1.2023 Dt. 25.1.2023
	Scope of Variables and Storage Classes	2		Dt. 27.1.2023, Dt. 30.1.2023
	Recursion Function and Types of Recursion	2	February	Dt. 31.1.2023, Dt. 1.2.2023
	One Dimensional Array and Multidimensional Array	2		Dt. 3.2.2023, Dt. 6.2.2023
	String Operations and Pointers	2		Dt. 7.2.2023, Dt. 8.2.2023
	Pointer Expression and Pointer Arithmetic Programming	2		Dt. 10.2.2023, Dt. 13.2.2023 Dt. 14.2.2023
	Structure and Union	2		Dt. 15.2.2023, Dt. 17.2.2023 Dt. 18.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING
SECTION:- MA

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) LALATENDU SAHU, (2) DOLAGOBIND SAHOO
(LECT. IN PHYSICS)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING PHYSICS (TH-2A)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	UNIT 1 - UNITS AND DIMENSIONS	3	October	
	Physical quantities, Units, types of units and system of units	1		Dt. 28.10.2022
	Dimension and dimensional formulae of physical quantities	1		Dt. 31.10.2022
	Principle of homogeneity and application of dimensional analysis: Checking the correctness of physical relations and Numerical.	1	November 2022	Dt. 1.11.2022
2	UNIT 2 - SCALARS AND VECTORS	3		
	Concept of scalar and vector quantities with definition, types of vectors. Rules of vector addition. Statements of Triangle law of vector addition	1		Dt. 2.11.2022
	Parallelogram law of vector addition and simple numericals. Concept on Resolution of vectors with simple numerical on Horizontal and vertical components	1		Dt. 4.11.2022
	Vector multiplication: Dot product and Cross Product with simple numericals on dot and cross products	1		Dt. 7.11.2022
3	UNIT 3 - KINEMATICS	6		
	Concept of Rest and Motion with examples, Fundamental ideas on distance, displacement, speed, velocity, acceleration and force, equations of motion under gravity both for upward and downward motion	1		Dt. 9.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Circular motion: Conceptual idea on circular motion and terms related to circular motion such as angular displacement, angular velocity and angular acceleration.	2		Dt. 11.11.2022, Dt. 14.11.2022
	Derivations of Relation between- (i) Linear & angular velocity, (ii) Linear & Angular acceleration	1		Dt. 15.11.2022
	Projectile motion: Definition and examples, Expression for equation of Trajectory, Time of Flight, Maximum Height and Horizontal Range for a projectile fired at an angle, condition for maximum horizontal range with simple numericals	2		Dt. 16.11.2022, Dt. 18.11.2022
	UNIT 4 – WORK AND FRICTION	5		
	Definition of work, its formula and SI unit with simple numericals	1		Dt. 21.11.2022
	Concept of friction with definition and simple examples, Types of friction	1		Dt. 22.11.2022
4	Definition with concept on limiting friction, and laws of limiting friction (statement only)	1		Dt. 23.11.2022
	Theory on Coefficient of Friction and simple numericals	1		Dt. 25.11.2022
	Methods to reduce friction with practical examples	1		Dt. 28.11.2022
	UNIT 5 - GRAVITATION	5		
	Introduction, a detail explanation on Newton's Laws of Gravitation (1 st and 2 nd law)	1		Dt. 29.11.2022
5	A detail explanation on Newton's Laws of Gravitation (3 rd law) and Definition of Universal Gravitational Constant (G) with its unit and dimensions	2	December 2022	Dt. 30.11.2022 Dt. 2.12.2022
	Definition and concept of acceleration due to gravity (g), Relation between 'g' and 'G' and definition of mass and weight	1		Dt. 5.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Explanation (No derivation) on variation of 'g' with altitude and depth, statements on Kepler's Laws of Planetary motion.	1		Dt. 6.12.2022
	UNIT 6 - OSCILLATIONS AND WAVES	6		
	Definition and examples on Simple Harmonic Motion (SHM), expressions for displacement, velocity and acceleration of a body or particle in SHM	2		Dt. 7.12.2022, Dt. 9.12.2022
6	Wave Motion (Definition & Concept), Transverse and Longitudinal wave motion (Definition, examples and Comparison)	2		Dt. 12.12.2022, Dt. 13.12.2022
	Wave parameters and Establish a relation between velocity, frequency and Time period, Ultrasonics- Definition, properties & Applications	2		Dt. 14.12.2022, Dt. 16.12.2022
	UNIT 7 - HEAT AND THERMODYNAMICS	7		
	Heat & temperature-Definition and difference, Units of Heat (FPS, CGS, MKS & SI)	1		Dt. 19.12.2022
	Fundamental ideas on Specific heat, Change of State and Latent Heat with simple numericals.	1		Dt. 20.12.2022
7	Concept on Thermal expansion and Coefficient of linear (α), superficial (β) and cubical (γ) expansions of Solids, Relation between α , β and γ	2		Dt. 21.12.2022, Dt. 23.12.2022
	Definition and Relation between Work and Heat, Joule's Mechanical Equivalent of Heat, Statement and explanation on 1 st law of thermodynamics.	3		Dt. 26.12.2022, Dt. 27.12.2022 Dt. 28.12.2022, Dt. 30.12.2022
	UNIT 8 - OPTICS	4		
8	Concept of Reflection and laws of Reflection, Concept of Refraction and laws of Refraction and Refractive index (Definition, formula and Simple numericals)	2	January 2023	Dt. 2.1.2023, Dt. 3.1.2023
	Concept and Explanation of Total Internal Reflection and Critical angle	1		Dt. 4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Definition, Properties and Applications on Fiber Optics	1		Dt. 6.1.2023
	UNIT 9 – ELECTROSTATICS & MAGNETOSTATICS	7		
	Concept of Electric field and Electric field intensity, Statement and Explanation of Coulomb's law and definition of Unit charge, Absolute & Relative Permittivity (Definition, Relation & Unit).	1		Dt. 9.1.2023, Dt. 10.1.2023
	Definition of Unit charge, Absolute & Relative Permittivity (Definition, Relation & Unit).	1		Dt. 11.1.2023
9	Electric Field, Electric field intensity, Electric potential & Electric potential difference (Definition, formula & SI units), Concept of capacitor and capacitance.	1		Dt. 13.1.2023
	Series and parallel combination of capacitors; Formula for equivalent capacitance and simple numericals	1		Dt. 16.1.2023
	Fundamental idea on magnet, Coulomb's law in magnetism and definition of Unit pole	1		Dt. 17.1.2023
	Definition of magnetic field and Magnetic field Intensity (H) with its formula and SI unit.	1		Dt. 18.1.2023
	Magnetic lines of force-Definition and Properties; Magnetic flux(ϕ) and Magnetic flux density (B)	1		Dt. 20.1.2023
	UNIT 10 – CURRENT ELECTRICITY	6		
	Introduction to Electric Current	1		Dt. 23.1.2023
	Ohm's law and its applications	1		Dt. 24.1.2023
10	Series and parallel combination of resistors; Formula for equivalent resistance and	1		Dt. 25.1.2023
	Simple numericals on combination of resistors	1		Dt. 27.1.2023
	Kirchhoff's laws: Statements & Explanation with diagram	1		Dt. 30.1.2023
	Kirchhoff's laws: Explanation and application to circuit with diagram			Dt. 30.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Application of Kirchhoff's laws to Wheatstone bridge- Derivation of balance condition of Wheatstone bridge	1		Dt. 31.1.2023
	UNIT 11 – ELECTROMAGNETISM & ELECTROMAGNETIC INDUCTION	5		
11	Introduction, Force acting on a current carrying conductor placed in a uniform magnetic field, Fleming's left hand rule	1	February 2023	Dt. 1.2.2023, Dt. 3.2.2023
	Statement on Faraday's Laws of Electromagnetic Induction & Lenz's law	2		Dt. 6.2.2023, Dt. 7.2.2023
	Fleming's Right Hand Rule, Comparison between Fleming's RHR & LHR	2		Dt. 8.2.2023, Dt. 10.2.2023
	UNIT 12 - MODERN PHYSICS			
	Introduction to LASER and laser beam, characteristics of laser beam	1		Dt. 13.2.2023
12	LASER principle: Population inversion & Optical Pumping	1		Dt. 14.2.2023
	Application of LASER beams			Dt. 15.2.2023
	Concept on Wireless Transmission- Ground waves	1		Dt. 17.2.2023
	Sky waves & Space Waves			Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING
SECTION:- MA

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) DR. B.K. SAHOO (DIRECTOR),
(2) KSHIRA MOHAN BEHRA (LECT. IN MATH.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING MATHEMATICS-I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Algebra (Matrices and Determinant)	18	October	
	a) Types of matrices	1		Dt. 27.10.2022
	b) Algebra of matrices	1		Dt. 28.10.2022
	Problem Solving and Tutorials	1		Dt. 29.10.2022
	c) Determinant	1		Dt. 31.10.2022
	d) Properties of determinant	1		Dt. 31.10.2022
	Problem Solving and Tutorials	1		Dt. 31.10.2022
	Problem Solving and Tutorials	1	November 2022	Dt. 1.11.2022
	Problem Solving and Tutorials	1		Dt. 2.11.2022
1	Problem Solving and Tutorials	1		Dt. 3.11.2022
	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	1		Dt. 4.11.2022
	Problem Solving and Tutorials	1		Dt. 5.11.2022
	Problem Solving and Tutorials	1		Dt. 7.11.2022
	Problem Solving and Tutorials	1		Dt. 9.11.2022
	f) Cramer's Rule (Question should be on two variables)	1		Dt. 10.11.2022
	Problem Solving and Tutorials	1		Dt. 11.11.2022
	Problem Solving and Tutorials	1		Dt. 12.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	g) Solution of simultaneous equations by matrix inverse method (with two variables)	1		Dt. 14.11.2022
	Problem Solving and Tutorials	1		Dt. 15.11.2022
	Problem Solving and Tutorials	1		Dt. 16.11.2022
	Problem Solving and Tutorials	1		Dt. 17.11.2022
	TRIGONOMETRY	15		
	a) Trigonometrical ratios	1		Dt. 18.11.2022
	Problem Solving and Tutorials	1		Dt. 19.11.2022
	b) Compound angles, multiple and sub-multiple angles (only formulae)	1		Dt. 21.11.2022, Dt. 22.11.2022
	Problem Solving and Tutorials	1		Dt. 23.11.2022
	Problem Solving and Tutorials	1		Dt. 24.11.2022
2	c) Define inverse circular functions and its properties (no derivation)	2		Dt. 25.11.2022, Dt. 26.11.2022
	Problem Solving and Tutorials	1		Dt. 28.11.2022
	Problem Solving and Tutorials	1		Dt. 29.11.2022
	Problem Solving and Tutorials	1		Dt. 30.11.2022
	Problem Solving and Tutorials	1	December 2022	Dt. 1.12.2022
	Problem Solving and Tutorials	1		Dt. 2.12.2022
	Problem Solving and Tutorials	1		Dt. 3.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problem Solving and Tutorials	1		Dt. 5.12.2022
	Problem Solving and Tutorials	1		Dt. 6.12.2022
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(STRAIGHT LINE)	13		
	a) Introduction of geometry in two dimension b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)	1		Dt. 7.12.2022, Dt. 8.12.2022
	Problem Solving and Tutorials	1		Dt. 9.12.2022
	c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	1		Dt. 10.12.2022, Dt. 12.12.2022
	Problem Solving and Tutorials	1		Dt. 13.12.2022
	d) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form, (v) Perpendicular form	1		Dt. 14.12.2022, Dt. 15.12.2022
3	Problem Solving and Tutorials	1		Dt. 16.12.2022
	Problem Solving and Tutorials	1		Dt. 17.12.2022
	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line	1		Dt. 19.12.2022
	Problem Solving and Tutorials	1		Dt. 20.12.2022
	f) Equation of a line passing through the intersection of two lines	1		Dt. 21.12.2022
	Problem Solving and Tutorials	1		Dt. 22.12.2022
	g) Distance of a point from a line	1		Dt. 23.12.2022
	Problem Solving and Tutorials	1		Dt. 24.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
4	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(CIRCLE)	7		
	a) Equation of a circle (i) center radius form	2		Dt. 26.12.2022, Dt. 27.12.2022
	Problem Solving and Tutorials	1		Dt. 28.12.2022
	(ii) general equation of a circle	1		Dt. 29.12.2022
	Problem Solving and Tutorials	1		Dt. 30.12.2022
	(iii) end point of diameter form	1		Dt. 31.12.2022
	Problem Solving and Tutorials	1	January 2023	Dt. 2.1.2023
5	CO-ORDINATE GEOMETRY IN THREE DIMENSIONS	15		
	a) Distance formulae, section formulae in 3D	1		Dt. 3.1.2023
	Problem Solving and Tutorials	1		Dt. 4.1.2023
	Direction ratio, direction cosine, angle between two lines	1		Dt. 5.1.2023, Dt. 6.1.2023
	Problem Solving and Tutorials	1		Dt. 7.1.2023
	condition of parallelism and perpendicularity	1		Dt. 9.1.2023
	Problem Solving and Tutorials	1		Dt. 10.1.2023
	Problem Solving and Tutorials	1		Dt. 11.1.2023
	b) Equation of a plane i) General form	1		Dt. 12.1.2023, Dt. 13.1.2023
	Problem Solving and Tutorials	1		Dt. 16.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Angle between two planes, perpendicular distance of a point from a plane	1		Dt. 17.1.2023, Dt. 18.1.2023
	Problem Solving and Tutorials	1		Dt. 19.1.2023
	Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	1		Dt. 20.1.2023, Dt. 21.1.2023
	Problem Solving and Tutorials	1		Dt. 23.1.2023
	Problem Solving and Tutorials	1		Dt. 24.1.2023
	Problem Solving and Tutorials	1		Dt. 25.1.2023, Dt. 27.1.2023
	SPHERE	7		
	Introduction to Sphere a) General Equation of a sphere	1		Dt. 28.1.2023, Dt. 30.1.2023
	Problem Solving and Tutorials	1	February	Dt. 31.1.2023, Dt. 1.2.2023
6	i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	1		Dt. 3.2.2023, Dt. 4.2.2023
	Problem Solving and Tutorials	1		Dt. 6.2.2023, Dt. 7.2.2023 Dt. 8.2.2023
	iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	1		Dt. 9.2.2023, Dt. 10.2.2023 Dt. 11.2.2023, Dt. 13.2.2023
	Problem Solving and Tutorials	1		Dt. 14.2.2023, Dt. 15.2.2023 Dt. 16.2.2023
	Problem Solving and Tutorials	1		Dt. 17.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING
SECTION:- MA

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) ER. SUBHASHREE PRADHAN (HO.D., ELECT. ENGG.), (2) ER. SAROJ KUMAR SAHU (LECT. IN ELECT. ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023 THEORY SUBJECT: BASIC ELECTRICAL & ELECTRONICS ENGINEERING (TH-4(A & B))

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	FUNDAMENTALS	5	October	
	Concept of current flow, Concept of source and load.	1		Dt. 27.10.2022
	State Ohm's law and concept of resistance.	1		Dt. 31.10.2022
	Relation of V, I & R in series circuit, Relation of V, I & R in parallel circuit.	1	November 2022	Dt. 1.11.2022
	Division of current in parallel circuit, Effect of power in series & parallel circuit.	1		Dt. 2.11.2022
	Kirchhoff's Law, Simple problems on Kirchhoff's law.	1		Dt. 3.11.2022
2	A.C. THEORY	8		
	Generation of alternating emf.	1		Dt. 7.11.2022
	Difference between D.C. & A.C.			Dt. 9.11.2022
	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle.	1		Dt. 10.11.2022
	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.	1		Dt. 14.11.2022
	Represent AC values in phasor diagrams.	1		Dt. 15.11.2022
	AC through pure resistance, inductance & capacitance	1		Dt. 16.11.2022
AC through RL, RC, RLC series circuits.	1		Dt. 17.11.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Simple problems on RL, RC & RLC series circuits.	1		Dt. 21.11.2022
	Concept of Power and Power factor	1		Dt. 22.11.2022
	Impedance triangle and power triangle.			Dt. 22.11.2022
	GENERATION OF ELECTRICAL POWER	3		
3	Generation of electricity from thermal power station with block diagram	1		Dt. 23.11.2022
	Generation of electricity from Hydro power station with block diagram	1		Dt. 24.11.2022
	Generation of electricity from nuclear power station with block diagram	1		Dt. 28.11.2022
	CONVERSION OF ELECTRICAL ENERGY			
	Introduction of DC machines, Main parts of DC machines.	1		Dt. 29.11.2022
	DC generator, Classification of DC motor.	1		Dt. 30.11.2022
4	Uses of different types of DC generators & motors.	1	December 2022	Dt. 1.12.2022
	Types and uses of single phase induction motors.	1		Dt. 5.12.2022
	Concept of Lumen	1		Dt. 6.12.2022
	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.	1		Dt. 7.12.2022
	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)	1		Dt. 8.12.2022
	WIRING AND POWER BILLING	4		
5	Types of wiring for domestic installations.	1		Dt. 12.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Layout of household electrical wiring (single line diagram showing all the important component in the system).	1		Dt. 13.12.2022
	List out the basic protective devices used in house hold wiring.	1		Dt. 14.12.2022
	Calculate energy consumed in a small electrical installation.	1		Dt. 15.12.2022
	MEASURING INSTRUMENTS			
	Introduction to measuring instruments.	1		Dt. 19.12.2022
	Torques in instruments.			Dt. 20.12.2022
6	Different uses of PMMC type of instruments (Ammeter & Voltmeter).	1		Dt. 21.12.2022
	Different uses of MI type of instruments (Ammeter & Voltmeter).			Dt. 22.12.2022
	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter.	1		Dt. 26.12.2022
	ELECTRONIC DEVICES	8		
	Basic Concept of Electronics and its application.	1		Dt. 27.12.2022
	Basic Concept of Electron Emission & its types.	1		Dt. 28.12.2022
	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.	2	January 2023	Dt. 29.12.2022 Dt. 2.1.2023
1	Difference between Intrinsic & Extrinsic Semiconductor.	1		Dt. 3.1.2023
	Difference between vacuum tube & semiconductor.	1		Dt. 4.1.2023
	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)	1		Dt. 5.1.2023
	Integrated circuits (I.C) & its advantages.	1		Dt. 9.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	ELECTRONIC CIRCUITS	9		
2	Rectifier & its uses.	1		Dt. 10.1.2023
	Principles of working of different types of Rectifiers with their merits and demerits	1		Dt. 11.1.2023
	Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)	1		Dt. 12.1.2023
	Working of D.C power supply system (unregulated) with help of block diagrams only	1		Dt. 16.1.2023
	Transistor, Different types of Transistor Configuration and state output and input current gain relationship in CE, CB and CC configuration	1		Dt. 17.1.2023
				Dt. 18.1.2023
				Dt. 19.1.2023
	Different types of biasing with circuit diagram.	1		Dt. 19.1.2023
	Amplifiers(concept) , working principles of single phase CE amplifier	1		Dt. 23.1.2023
	Electronic Oscillator and its classification	1		Dt. 24.1.2023
	Working of Basic Oscillator with different elements through simple Block Diagram	1		Dt. 25.1.2023
	COMMUNICATION SYSTEM	3		
3	Basic communication system	1		Dt. 30.1.2023
	Concept of Modulation and Demodulation, Difference between them	1		Dt. 31.1.2023
	Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave	1	February 2023	Dt. 1.2.2023
	TRANSDUCERS AND MEASURING INSTRUMENTS	10		
4	Transducer and sensor with their differences.	1		Dt. 2.2.2023
	Different type of Transducers & concept of active and passive transducer.	1		Dt. 6.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Working principle of photo emissive, photoconductive, photovoltaic transducer and its application	2		Dt. 7.2.2023, Dt. 8.2.2023
	Multimeter and its applications	1		Dt. 9.2.2023
	Analog and Digital Multimeter and their differences	1		Dt. 13.2.2023
	Working principle of Multimeter with Basic Block diagram	2		Dt. 14.2.2023, Dt. 15.2.2023
	CRO, working principle of CRO with simple Block diagram	2		Dt. 16.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING

SEMESTER: 1ST

**NAME OF THE FACULTY:- (1) ASWINI KUMAR PRADHAN
(2) ER. SUBEDITA BEHERA (LECT. IN COMP. SC. & ENGG.)**

SECTION:- MB

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: COMPUTER APPLICATION (TH-1B)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	COMPUTER ORGANISATION	5	October	
	Introduction to Computer, Evolution of Computers	1		Dt. 27.10.2022
	Generation of Computers, Classification of computer	1		Dt. 31.10.2022
	Basic Organisation of Computer (Functional Block diagram)	1	November 2022	Dt. 1.11.2022
	Input Devices, CPU & Output Devices	1		Dt. 2.11.2022
	Computer Memory and Classification of Memory	1		Dt. 3.11.2022
	COMPUTER SOFTWARE	7		
2	Software concept, System software, Application software	1		Dt. 7.11.2022
	What is Operating System, Objectives and Functions of O.S	1		Dt. 9.11.2022
	Types of Operating System: Batch Processing, Multiprogramming, Time Sharing OS	1		Dt. 10.11.2022
	Features of DOS, Windows and UNIX	1		Dt. 14.11.2022
	Programming Languages Compiler, Interpreter:	1		Dt. 15.11.2022
	Computer Virus, Different Types of computer virus, Detection and prevention of Virus	1		Dt. 16.11.2022
	Application of computers in different Domain	1		Dt. 17.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	COMPUTER NETWORK AND INTERNET	8		
	Networking concept, Protocol	1		Dt. 21.11.2022
	Connecting Media, Data Transmission mode	1		Dt. 22.11.2022
	Network Topologies	1		Dt. 23.11.2022
	Types of Network	1		Dt. 24.11.2022
	Networking Devices (Hub, Repeater, Switch, Bridge, Router, Gateway & NIC)	1		Dt. 28.11.2022
	Internet Services (E-Mail, WWW, FTP, Chatting, Internet Conferencing)	1		Dt. 29.11.2022, Dt. 30.11.2022
	Electronic Newspaper & Online Shopping	1	December 2022	Dt. 1.12.2022
	Different types of Internet connectivity and ISP	1		Dt. 5.12.2022
4	FILE MANAGEMENT AND DATA PROCESSING	5		
	Concept of File and Folder	1		Dt. 6.12.2022
	File Access and Storage methods: Sequential, Direct, ISAM	1		Dt. 7.12.2022
	Data Capture	1		Dt. 8.12.2022
	Data storage	1		Dt. 12.12.2022
	Data Processing and Retrieval	1		Dt. 13.12.2022
5	PROBLEM SOLVING METHODOLOGY	5		
	Algorithm, Pseudo code	1		Dt. 14.12.2022
	Flowchart Generation of Programming Languages	2		Dt. 15.12.2022, Dt. 19.12.2022
	Structured Programming Language	1		Dt. 20.12.2022
	Examples of Problem solving through Flowchart	1		Dt. 21.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	OVERVIEW OF C PROGRAMMING LANGUAGE	15		
	Introduction to C, History of C	1		Dt. 22.12.2022, Dt. 26.12.2022
	Constants, Variables	1		Dt. 27.12.2022
	Data types in C	1		Dt. 28.12.2022
	Input and Output operations.	1		Dt. 29.12.2022
	Operators, Different types of operator	2	January 2023	Dt. 2.1.2023, Dt. 3.1.2023
	Expressions, Type conversion & Typecasting	2		Dt. 4.1.2023, Dt. 5.1.2023
	Decision Control and Looping Statements (If, If-else, If-else-if, Switch, While, Do-while, For, Break, Continue & Goto)	4		Dt. 9.1.2023, Dt. 10.1.2023 Dt. 11.1.2023, Dt. 12.1.2023
	Programming Assignments using the above features	3		Dt. 16.1.2023, Dt. 17.1.2023 Dt. 18.1.2023
7	ADVANCED FEATURES OF C	15		
	Functions and Passing Parameters to the Function (Call by Value and Call by Reference)	3		Dt. 19.1.2023, Dt. 23.1.2023 Dt. 24.1.2023, Dt. 25.1.2023
	Scope of Variables and Storage Classes	2		Dt. 30.1.2023, Dt. 31.1.2023
	Recursion Function and Types of Recursion	2	February	Dt. 1.2.2023, Dt. 2.2.2023
	One Dimensional Array and Multidimensional Array	2		Dt. 6.2.2023, Dt. 7.2.2023
	String Operations and Pointers	2		Dt. 8.2.2023, Dt. 9.2.2023
	Pointer Expression and Pointer Arithmetic Programming	2		Dt. 13.2.2023, Dt. 14.02.2023
	Structure and Union	2		Dt. 15.02.2023, Dt. 16.02.2023 Dt. 29.02.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING
SECTION:- MB

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) LALATENDU SAHU, (2) DOLAGOBIND SAHOO
(LECT. IN PHYSICS)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING PHYSICS (TH-2A)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	UNIT 1 - UNITS AND DIMENSIONS	3	October	
1	Physical quantities, Units, types of units and system of units	1		Dt. 27.10.2022
	Dimension and dimensional formulae of physical quantities	1		Dt. 29.10.2022
	Principle of homogeneity and application of dimensional analysis: Checking the correctness of physical relations and Numerical.	1		Dt. 31.10.2022
	UNIT 2 - SCALARS AND VECTORS	3		
2	Concept of scalar and vector quantities with definition, types of vectors, Rules of vector addition: Statements of Triangle law of vector addition	1	November 2022	Dt. 1.11.2022
	Parallelogram law of vector addition and simple numericals, Concept on Resolution of vectors with simple numerical on Horizontal and vertical components	1		Dt. 3.11.2022
	Vector multiplication: Dot product and Cross Product with simple numericals on dot and cross products	1		Dt. 5.11.2022
	UNIT 3 - KINEMATICS	6		
3	Concept of Rest and Motion with examples, Fundamental ideas on distance, displacement, speed, velocity, acceleration and force, equations of motion under gravity both for upward and downward motion	1		Dt. 7.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Circular motion: Conceptual idea on circular motion and terms related to circular motion such as angular displacement, angular velocity and angular acceleration.	2		Dt. 10.11.2022, Dt. 12.11.2022
	Derivations of Relation between- (i) Linear & angular velocity, (ii) Linear & Angular acceleration	1		Dt. 14.11.2022
	Projectile motion: Definition and examples, Expression for equation of Trajectory, Time of Flight, Maximum Height and Horizontal Range for a projectile fired at an angle, condition for maximum horizontal range with simple numericals	2		Dt. 15.11.2022, Dt. 17.11.2022
	UNIT 4 – WORK AND FRICTION	5		
	Definition of work, its formula and SI unit with simple numericals	1		Dt. 19.11.2022
	Concept of friction with definition and simple examples, Types of friction	1		Dt. 21.11.2022
4	Definition with concept on limiting friction, and laws of limiting friction (statement only)	1		Dt. 22.11.2022
	Theory on Coefficient of Friction and simple numericals	1		Dt. 24.11.2022
	Methods to reduce friction with practical examples.	1		Dt. 26.11.2022
	UNIT 5 - GRAVITATION	5		
	Introduction, a detail explanation on Newton's Laws of Gravitation (1 st and 2 nd law)	1		Dt. 28.11.2022
5	A detail explanation on Newton's Laws of Gravitation (3 rd law) and Definition of Universal Gravitational Constant (G) with its unit and dimensions.	2	December 2022	Dt. 29.11.2022 Dt. 1.12.2022
	Definition and concept of acceleration due to gravity (g), Relation between 'g' and 'G' and definition of mass and weight.	1		Dt. 3.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Explanation (No derivation) on variation of 'g' with altitude and depth, statements on Kepler's Laws of Planetary motion.	1		Dt. 5.12.2022
	UNIT 6 - OSCILLATIONS AND WAVES	6		
	Definition and examples on Simple Harmonic Motion (SHM), expressions for displacement, velocity and acceleration of a body or particle in SHM	2		Dt. 6.12.2022, Dt. 8.12.2022
6	Wave Motion (Definition & Concept), Transverse and Longitudinal wave motion (Definition, examples and Comparison)	2		Dt. 10.12.2022, Dt. 12.12.2022
	Wave parameters and Establish a relation between velocity, frequency and Time period, Ultrasonics- Definition, properties & Applications	2		Dt. 13.12.2022, Dt. 15.12.2022
	UNIT 7 - HEAT AND THERMODYNAMICS	7		
	Heat & temperature-Definition and difference, Units of Heat (FPS, CGS, MKS & SI)	1		Dt. 17.12.2022
	Fundamental ideas on Specific heat, Change of State and Latent Heat with simple numericals.	1		Dt. 19.12.2022
7	Concept on Thermal expansion and Coefficient of linear (α), superficial (β) and cubical (γ) expansions of Solids, Relation between α , β and γ	2		Dt. 20.12.2022, Dt. 22.12.2022
	Definition and Relation between Work and Heat, Joule's Mechanical Equivalent of Heat, Statement and explanation on 1 st law of thermodynamics.	3		Dt. 24.12.2022, Dt. 26.12.2022 Dt. 27.12.2022
	UNIT 8 - OPTICS	4		
	Concept of Reflection and laws of Reflection, Concept of Refraction and laws of Refraction and Refractive index (Definition, formula and Simple numericals)	2		Dt. 29.12.2022, Dt. 31.12.2022
8	Concept and Explanation of Total Internal Reflection and Critical angle	1	January 2023	Dt. 2.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Definition, Properties and Applications on Fiber Optics	1		Dt. 3.1.2023
	UNIT 9 – ELECTROSTATICS & MAGNETOSTATICS	7		
	Concept of Electric field and Electric field intensity, Statement and Explanation of Coulomb's law and definition of Unit charge, Absolute & Relative Permittivity (Definition, Relation & Unit).	1		Dt. 5.1.2023, Dt. 7.1.2023
	Definition of Unit charge, Absolute & Relative Permittivity (Definition, Relation & Unit).	1		Dt. 9.1.2023
9	Electric Field, Electric field intensity, Electric potential & Electric potential difference (Definition, formula & SI units), Concept of capacitor and capacitance.	1		Dt. 10.1.2023
	Series and parallel combination of capacitors: Formula for equivalent capacitance and simple numericals.	1		Dt. 12.1.2023
	Fundamental idea on magnet, Coulomb's law in magnetism and definition of Unit pole	1		Dt. 16.1.2023
	Definition of magnetic field and Magnetic field Intensity (H) with its formula and SI unit.	1		Dt. 17.1.2023
	Magnetic lines of force-Definition and Properties. Magnetic flux(ϕ) and Magnetic flux density (B)	1		Dt. 19.1.2023
	UNIT 10 – CURRENT ELECTRICITY	6		
	Introduction to Electric Current	1		Dt. 21.1.2023
	Ohm's law and its applications	1		Dt. 23.1.2023
10	Series and parallel combination of resistors: Formula for equivalent resistance and	1		Dt. 24.1.2023
	Simple numericals on combination of resistors	1		Dt. 28.1.2023
	Kirchhoff's laws: Statements & Explanation with diagram	1		Dt. 30.1.2023
	Kirchhoff's laws: Explanation and application to circuit with diagram			Dt. 30.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Application of Kirchhoff's laws to Wheatstone bridge- Derivation of balance condition of Wheatstone bridge	1		Dt. 31.1.2023
	UNIT 11 – ELECTROMAGNETISM & ELECTROMAGNETIC INDUCTION	5		
11	Introduction, Force acting on a current carrying conductor placed in a uniform magnetic field, Fleming's left hand rule	1	February 2023	Dt. 2.2.2023
	Statement on Faraday's Laws of Electromagnetic Induction & Lenz's law	2		Dt. 4.2.2023, Dt. 6.2.2023
	Fleming's Right Hand Rule, Comparison between Fleming's RHR & LHR	2		Dt. 7.2.2023, Dt. 9.2.2023
	UNIT 12 - MODERN PHYSICS			
	Introduction to LASER and laser beam, characteristics of laser beam	1		Dt. 11.2.2023
12	LASER principle: Population inversion & Optical Pumping	1		Dt. 13.2.2023
	Application of LASER beams			Dt. 14.2.2023
	Concept on Wireless Transmission- Ground waves	1		Dt. 16.2.2023
	Sky waves & Space Waves			Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING
SECTION:- MB

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) DR. B.K. SAHOO (DIRECTOR),
(2) KSHIRA MOHAN BEHRA (LECT. IN MATH.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING MATHEMATICS-I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	Algebra (Matrices and Determinant)	18	October	
	a) Types of matrices b) Algebra of matrices	1		Dt. 27.10.2022, Dt. 28.10.2022
	Problem Solving and Tutorials	1		Dt. 29.10.2022
	c) Determinant d) Properties of determinant	1		Dt. 31.10.2022
	Problem Solving and Tutorials	1	November 2022	Dt. 1.11.2022
	Problem Solving and Tutorials	1		Dt. 2.11.2022
	Problem Solving and Tutorials	1		Dt. 3.11.2022
	Problem Solving and Tutorials	1		Dt. 4.11.2022
	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	1		Dt. 5.11.2022, Dt. 7.11.2022
	Problem Solving and Tutorials	1		Dt. 9.11.2022
	Problem Solving and Tutorials	1		Dt. 10.11.2022
	Problem Solving and Tutorials	1		Dt. 11.11.2022
	f) Cramer's Rule (Question should be on two variables)	1		Dt. 12.11.2022
	Problem Solving and Tutorials	1		Dt. 14.11.2022
	Problem Solving and Tutorials	1		Dt. 15.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	g) Solution of simultaneous equations by matrix inverse method (with two variables)	1		Dt. 16.11.2022, Dt. 17.11.2022
	Problem Solving and Tutorials	1		Dt. 18.11.2022
	Problem Solving and Tutorials	1		Dt. 19.11.2022
	Problem Solving and Tutorials	1		Dt. 21.11.2022
	TRIGONOMETRY	15		
	a) Trigonometrical ratios	1		Dt. 22.11.2022, Dt. 23.11.2022
	Problem Solving and Tutorials	1		Dt. 24.11.2022
	b) Compound angles, multiple and sub-multiple angles (only formulae)	1		Dt. 25.11.2022, Dt. 26.11.2022
	Problem Solving and Tutorials	1		Dt. 28.11.2022
	Problem Solving and Tutorials	1		Dt. 29.11.2022, Dt. 30.11.2022
2	c) Define inverse circular functions and its properties (no derivation)	2	December 2022	Dt. 1.12.2022, Dt. 2.12.2022
	Problem Solving and Tutorials	1		Dt. 3.12.2022
	Problem Solving and Tutorials	1		Dt. 5.12.2022
	Problem Solving and Tutorials	1		Dt. 6.12.2022
	Problem Solving and Tutorials	1		Dt. 7.12.2022
	Problem Solving and Tutorials	1		Dt. 8.12.2022
	Problem Solving and Tutorials	1		Dt. 9.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problem Solving and Tutorials	1		Dt. 10.12.2022
	Problem Solving and Tutorials	1		Dt. 12.12.2022
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS (STRAIGHT LINE)	13		
	a) Introduction of geometry in two dimension b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)	1		Dt. 13.12.2022, Dt. 14.12.2022
	Problem Solving and Tutorials	1		Dt. 15.12.2022
	c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	1		Dt. 16.12.2022, Dt. 17.12.2022
	Problem Solving and Tutorials	1		Dt. 19.12.2022
	d) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form, (v) Perpendicular form	1		Dt. 20.12.2022, Dt. 21.12.2022
3	Problem Solving and Tutorials	1		Dt. 22.12.2022
	Problem Solving and Tutorials	1		Dt. 23.12.2022
	e) Equation of a line passing through a point and (i) parallel to a line: (ii) Perpendicular to a line	1		Dt. 24.12.2022, Dt. 26.12.2022
	Problem Solving and Tutorials	1		Dt. 27.12.2022
	f) Equation of a line passing through the intersection of two lines.	1		Dt. 28.12.2022
	Problem Solving and Tutorials	1		Dt. 29.12.2022
	g) Distance of a point from a line	1		Dt. 30.12.2022
	Problem Solving and Tutorials	1		Dt. 31.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
4	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(CIRCLE)	7		
	a) Equation of a circle (i) center radius form	2	January 2023	Dt. 2.1.2023, Dt. 3.1.2023
	Problem Solving and Tutorials	1		Dt. 4.1.2023
	(ii) general equation of a circle	1		Dt. 5.1.2023
	Problem Solving and Tutorials	1		Dt. 6.1.2023
	(iii) end point of diameter form	1		Dt. 7.1.2023
	Problem Solving and Tutorials	1		Dt. 9.1.2023
5	CO-ORDINATE GEOMETRY IN THREE DIMENSIONS	15		
	a) Distance formulae, section formulae in 3D	1		Dt. 10.1.2023, Dt. 11.1.2023
	Problem Solving and Tutorials	1		Dt. 12.1.2023
	Direction ratio, direction cosine, angle between two lines	1		Dt. 13.1.2023, Dt. 16.1.2023
	Problem Solving and Tutorials	1		Dt. 17.1.2023
	condition of parallelism and perpendicularity	1		Dt. 18.1.2023
	Problem Solving and Tutorials	1		Dt. 19.1.2023
	Problem Solving and Tutorials	1		Dt. 20.1.2023
	b) Equation of a plane i) General form	1		Dt. 21.1.2023, Dt. 23.1.2023
	Problem Solving and Tutorials	1		Dt. 24.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Angle between two planes, perpendicular distance of a point from a plane	1		Dt. 25.1.2023, Dt. 27.1.2023
	Problem Solving and Tutorials	1		Dt. 28.1.2023
	Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	1		Dt. 30.1.2023, Dt. 31.1.2023
	Problem Solving and Tutorials	1	February 2023	Dt. 1.2.2023
	Problem Solving and Tutorials	1		Dt. 2.2.2023
	Problem Solving and Tutorials	1		Dt. 3.2.2023
	SPHERE	7		
	Introduction to Sphere a) General Equation of a sphere	1		Dt. 4.2.2023, Dt. 6.2.2023
	Problem Solving and Tutorials	1		Dt. 7.2.2023
	i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	1		Dt. 8.2.2023, Dt. 9.2.2023
6	Problem Solving and Tutorials	1		Dt. 10.2.2023, Dt. 11.2.2023
	iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	1		Dt. 13.2.2023, Dt. 14.2.2023
	Problem Solving and Tutorials	1		Dt. 15.2.2023, Dt. 16.2.2023
	Problem Solving and Tutorials	1		Dt. 17.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MECHANICAL ENGINEERING
SECTION:- MB

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) ER. BIBHUTI BHUSAN SAHU,
(2) ER. SAROJ KUMAR SAHU (LECT. IN ELECT. ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023 THEORY SUBJECT: BASIC ELECTRICAL & ELECTRONICS ENGINEERING (TH-4(A & B))

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	FUNDAMENTALS	5	October	
	Concept of current flow, Concept of source and load.	1		Dt. 27.10.2022
	State Ohm's law and concept of resistance.	1		Dt. 28.10.2022
	Relation of V, I & R in series circuit, Relation of V, I & R in parallel circuit.	1		Dt. 31.10.2022
	Division of current in parallel circuit, Effect of power in series & parallel circuit.	1	November 2022	Dt. 1.11.2022
	Kirchhoff's Law, Simple problems on Kirchhoff's law.	1		Dt. 3.11.2022
2	A.C. THEORY	8		
	Generation of alternating emf.	1		Dt. 4.11.2022
	Difference between D.C. & A.C.			Dt. 7.11.2022
	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle,	1		Dt. 10.11.2022
	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.	1		Dt. 11.11.2022
	Represent AC values in phasor diagrams.	1		Dt. 14.11.2022
	AC through pure resistance, inductance & capacitance	1		Dt. 15.11.2022
AC through RL, RC, RLC series circuits.	1		Dt. 17.11.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Simple problems on RL, RC & RLC series circuits.	1		Dt. 18.11.2022
	Concept of Power and Power factor	1		Dt. 21.11.2022
	Impedance triangle and power triangle.			Dt. 22.11.2022
	GENERATION OF ELECTRICAL POWER	3		
3	Generation of electricity from thermal power station with block diagram	1		Dt. 24.11.2022
	Generation of electricity from Hydro power station with block diagram	1		Dt. 25.11.2022
	Generation of electricity from nuclear power station with block diagram	1		Dt. 28.11.2022
	CONVERSION OF ELECTRICAL ENERGY			
	Introduction of DC machines, Main parts of DC machines.	1		Dt. 29.11.2022
	DC generator, Classification of DC motor.	1	December 2022	Dt. 1.12.2022
4	Uses of different types of DC generators & motors.	1		Dt. 2.12.2022
	Types and uses of single phase induction motors.	1		Dt. 5.12.2022
	Concept of Lumen	1		Dt. 6.12.2022
	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.	1		Dt. 8.12.2022
	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)	1		Dt. 9.12.2022
	WIRING AND POWER BILLING	4		
5	Types of wiring for domestic installations.	1		Dt. 12.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Layout of household electrical wiring (single line diagram showing all the important component in the system)	1		Dt. 13.12.2022
	List out the basic protective devices used in house hold wiring.	1		Dt. 15.12.2022
	Calculate energy consumed in a small electrical installation	1		Dt. 16.12.2022
	MEASURING INSTRUMENTS			
	Introduction to measuring instruments.	1		Dt. 19.12.2022
	Torques in instruments.			Dt. 20.12.2022
6	Different uses of PMMC type of instruments (Ammeter & Voltmeter).	1		Dt. 22.12.2022
	Different uses of MI type of instruments (Ammeter & Voltmeter).			Dt. 23.12.2022
	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter.	1		Dt. 26.12.2022
	ELECTRONIC DEVICES	8		
	Basic Concept of Electronics and its application.	1		Dt. 27.12.2022
	Basic Concept of Electron Emission & its types.	1		Dt. 29.12.2022
	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.	2	January 2023	Dt. 30.12.2022 Dt. 2.1.2023
1	Difference between Intrinsic & Extrinsic Semiconductor.	1		Dt. 3.1.2023
	Difference between vacuum tube & semiconductor.	1		Dt. 5.1.2023
	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)	1		Dt. 6.1.2023
	Integrated circuits (I.C) & its advantages.	1		Dt. 9.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	ELECTRONIC CIRCUITS	9		
	Rectifier & its uses.	1		Dt. 10.1.2023
	Principles of working of different types of Rectifiers with their merits and demerits	1		Dt. 12.1.2023
2	Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)	1		Dt. 13.1.2023
	Working of D.C power supply system (unregulated) with help of block diagrams only	1		Dt. 16.1.2023
	Transistor, Different types of Transistor Configuration and state output and input	1		Dt. 17.1.2023
	current gain relationship in CE, CB and CC configuration			Dt. 19.1.2023
	Different types of biasing with circuit diagram.	1		Dt. 20.1.2023
	Amplifiers(concept) , working principles of single-phase CE amplifier	1		Dt. 23.1.2023
	Electronic Oscillator and its classification	1		Dt. 24.1.2023
	Working of Basic Oscillator with different elements through simple Block Diagram	1		Dt. 27.1.2023
	COMMUNICATION SYSTEM	3		
	Basic communication system	1		Dt. 30.1.2023
3	Concept of Modulation and Demodulation, Difference between them	1		Dt. 31.1.2023
	Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave	1	February 2023	Dt. 2.2.2023
	TRANSDUCERS AND MEASURING INSTRUMENTS	10		
4	Transducer and sensor with their differences.	1		Dt. 3.2.2023
	Different type of Transducers & concept of active and passive transducer.	1		Dt. 6.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Working principle of photo emissive, photoconductive, photovoltaic transducer and its application	2		Dt. 7.2.2023, Dt. 9.2.2023
	Multimeter and its applications	1		Dt. 10.2.2023
	Analog and Digital Multimeter and their differences	1		Dt. 13.2.2023
	Working principle of Multimeter with Basic Block diagram	2		Dt. 14.2.2023, Dt. 16.2.2023
	CRO, working principle of CRO with simple Block diagram	2		Dt. 17.2.2023, Dt. 20.2.2023



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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:- MINING ENGINEERING SEMESTER: 1ST
SECTION:- MNA

NAME OF THE FACULTY:- BISMITA PANI (LECT. IN ENGLISH)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : COMMUNICATIVE ENGLISH (TH-1A)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LITERATURE APPRECIATION	20	October	
	INTRODUCTION TO LITERATURE APPRECIATION	1		Dt. 27.10.2022
	SKIMMING THE GIST AND SCANNING FOR NECESSARY INFORMATION OF AN UNSEEN PASSAGE	1	November 2022	Dt. 3.11.2022
	CLOSE READING FOR INFERENCE AND EVALUATION, TRACING OUT THE MAIN IDEA AND ITS SUPPORTING POINTS	1		Dt. 7.11.2022
1	GUESSING THE MEANING OF UNFAMILIAR WORDS. NOTE-MAKING. SUMMARIZING. SUPPLYING A SUITABLE TITLE	1		Dt. 10.11.2022
	PRACTICE	1		Dt. 10.11.2022
	PRACTICE	1		Dt. 14.11.2022
	PRACTICE	1		Dt. 14.11.2022
	PRACTICE	1		Dt. 15.11.2022
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 15.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 17.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 17.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 21.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 21.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 22.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 24.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 28.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 28.11.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1	December 2022	Dt. 1.12.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1		Dt. 1.12.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 1.12.2022
2	VOCABULARY	5		
	SYNONYMS AND ANTONYMS	2		Dt. 5.12.2022, Dt. 6.12.2022
	SAME WORD USED IN DIFFERENT SITUATIONS AND IN DIFFERENT MEANING	2		Dt. 8.12.2022, Dt. 12.12.2022
	SINGLE WORD SUBSTITUTE	1		Dt. 12.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	APPLICATION OF ENGLISH GRAMMAR	8		
	COUNTABLE NOUN AND UNCOUNTABLE NOUN TENSES	1		Dt. 13.12.2022
	ARTICLES AND DETERMINERS	1		Dt. 13.12.2022
	MODAL VERBS	1		Dt. 15.12.2022
	TENSES	1		Dt. 15.12.2022
	TENSES	1		Dt. 19.12.2022
	TENSES	1		Dt. 19.12.2022
	VOICE CHANGE	1		Dt. 20.12.2022
	SUBJECT-VERB AGREEMENT	1		Dt. 20.12.2022
4	FORMAL WRITING SKILLS	15		
	NOTICE AND AGENDA	1		Dt. 22.12.2022
	PARAGRAPH WRITING	1		Dt. 22.12.2022
	FEATURES OF PARAGRAPH WRITING	1		Dt. 26.12.2022
	DEVELOPING IDEAS INTO PARAGRAPHS	1		Dt. 27.12.2022
	PRACTICE	1		Dt. 27.12.2022
	REPORT WRITING PARALLEL	1		Dt. 29.12.2022
	WRITING PERSONAL LETTER	1		Dt. 29.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LETTER TO PRINCIPAL	1	January 2023	Dt. 2.1.2023
	LETTER TO LIBRARIAN	1		Dt. 3.1.2023
	LETTER TO HOD			Dt. 5.1.2023
	LETTER TO HOSTEL SUPERINTENDENT	1		Dt. 9.1.2023
	LAYOUT OF A BUSINESS LETTER	1		Dt. 10.1.2023
	LETTER OF ENQUIRY	1		Dt. 12.1.2023
	LETTER OF ORDER	1		Dt. 12.1.2023
	LETTER OF COMPLAINT	1		Dt. 16.1.2023
	CANCELLATION OF AN ORDER	1		Dt. 17.1.2023
	JOB APPLICATION	1		Dt. 19.1.2023
	C.V/ RESUME			Dt. 19.1.2023
	ELEMENTS OF COMMUNICATION	12		
	MEANING AND TYPES OF COMMUNICATION	1		Dt. 23.1.2023
	COMMUNICATION MODEL	1		Dt. 24.1.2023
5	PROCESS OF COMMUNICATION AND FACTORS RESPONSIBLE FOR IT	1		Dt. 30.1.2023
	MEANING AND TYPES OF PROFESSIONAL COMMUNICATION DIFFERENT AREAS OF NONVERBAL COMMUNICATION	2	February 2023	Dt. 31.1.2023 Dt. 2.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FORMAL COMMUNICATION AND ITS TYPE	1		Dt. 6.2.2023
	UPWARD COMMUNICATION, DOWNWARD COMMUNICATION AND PARALLEL COMMUNICATION KINESICS	2		Dt. 7.2.2023 Dt. 9.2.2023
	INFORMAL COMMUNICATION AND ITS TYPE	1		Dt. 13.2.2023
	NON-VERBAL COMMUNICATION	1		Dt. 14.2.2023
	KINESICS OR BODYLANGUAGE & PROXEMICS OR SPATIAL LANGUAGE	1		Dt. 16.2.2023
	LANGUAGE OF SIGNS AND SYMBOLS	1		Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:-MINING ENGINEERING SEMESTER: 1ST
SECTION:- MNA

NAME OF THE FACULTY:- (1) TAPAN KUMAR SAHU
(2) NIRUPAMA BEHERA (LECT. IN CHEMISTRY)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : ENGINEERING CHEMISTRY (TH-2B)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	A.PHYSICAL CHEMISTRY	22	October	
	Atomic structure	4		
1	Introduction	1		Dt. 27.10.2022
	Rutherford's atomic model (limitations), Atomic mass, mass number, isotopes, isobar	1		Dt. 31.10.2022
	Isotones, Bohr's atomic model, Bohr Bury scheme.	1	November 2022	Dt. 1.11.2022
	Aufbau's principle, Hund's rule, Electronic configuration	1		Dt. 2.11.2022
	Chemical Bonding	2		
2	Chemical Bonding- Definition, types of bonding	1		Dt. 3.11.2022
	Ionic bonding, examples	1		Dt. 7.11.2022
	Covalent bonding, Examples			Dt. 9.11.2022
	Coordinate bonding, examples			Dt. 9.11.2022
3	Acid Base Theory	6		
	Acid base theory-Arrhenius concept of acid & base	1		Dt. 11.11.2022
	Bronsted lowry & Lewis concept of acid & base	1		Dt. 12.11.2022
	Neutralization of acid & base, salts- definition & types	1		Dt. 14.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Definition of Atomic weight, molecular weight, equivalent weight,	1		Dt. 15.11.2022
	Determination of equivalent weight of Acid, Base	1		Dt. 16.11.2022
	Determination of equivalent weight of salt	1		Dt. 17.11.2022
	Solutions	3		
4	Modes of expression of the concentrations (Molarity , Normality) with Simple Problems	1		Dt. 21. 11. 2022
	Molality with Simple Problems	1		Dt. 22. 11. 2022
	pH of solution (definition with simple numerical)	1		Dt. 23. 11. 2022
	Importance of pH in Industry (sugar, textile, paper industries only)			Dt. 24. 11. 2022
	Electrochemistry	4		
5	Definition and types (Strong & weak) of Electrolytes with example.	1		Dt. 28.11.2022
	Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution).	1		Dt. 29.11.2022
	Faraday's 1st and 2nd law of Electrolysis (statement, mathematical expression and Simple numerical)	1		Dt. 30. 11. 2022
	Industrial application of Electrolysis- Electroplating (Zinc only).	1	December 2022	Dt. 1.12.2022
	Corrosion	3		
6	Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion,	1		Dt. 5.12.2022
	only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	2		Dt. 6.12.2022 , Dt. 7.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
7	B. INORGANIC CHEMISTRY	8		
	Metallurgy	5		
	Definition of Mineral, ores, gangue with example, Distinction between Ores And Minerals.	1		Dt. 8.12.2022
	General methods of extraction of metals, i) Ore Dressing ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting.) iv) Reduction (Smelting, Definition & examples of flux, slag) v) Refining of the metal (Electrorefining, & Distillation only)	2		Dt.12.12.2022 Dt.13.12.2022
8	Alloys	3		
	Definition of alloy, Types of alloys (Ferro, Non Ferro & Amalgam) with example.	1		Dt.14.12.2022
	Composition and uses of Brass, Bronze, Alnico, Duralumin	1		Dt.15.12.2022
	Doubt clear	1		Dt.19.12.2022
9	C. ORGANIC CHEMISTRY	10		
	Hydrocarbons	1		Dt. 20.12.2022
	Saturated and Unsaturated Hydrocarbons (Definition with example)	3		Dt. 21.12.2022
	Aliphatic and Aromatic Hydrocarbons (Huckel's rule only). Difference between Aliphatic and aromatic hydrocarbons			Dt. 22.12.2022
				Dt. 26.12.2022
			Dt. 27.12.2022	
IUPAC system of nomenclature of Alkane,	1		Dt.28.12.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	IUPAC system of nomenclature of Alkene,	1		Dt. 29.12.2022
	IUPAC system of nomenclature of Alkyne,	1	January 2023	Dt. 2.1.2023
	IUPAC system of nomenclature of alkyl halide and alcohol	1		Dt. 3.1.2023
	Uses of some common aromatic compounds (Benzene, Toluene, BHC, Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life.	2		Dt. 4.1.2023, Dt. 5.1.2023
	D. INDUSTRIAL CHEMISTRY	20		
	Water Treatment	3		
10	Sources of water, Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate),	1		Dt. 9.1.2023, Dt. 10.1.2023
	Removal of hardness by lime soda method (hot lime & cold lime—Principle, process & advantages) . Advantages of Hot lime over cold lime process.	1		Dt. 11.1.2023, Dt. 12.1.2023
	Organic ion exchange method (principle, process, and regeneration of exhausted resins)	1		Dt. 16.1.2023, Dt. 17.1.2023
	Lubricants	4		
11	Definition of lubricant, Types (solid, liquid and semisolid with examples only)	1		Dt. 18.1.2023, Dt. 19.1.2023
	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 23.1.2023
	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 24.1.2023
	Doubt clear	1		Dt. 25.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
12	Fuel	4		
	Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel.	1		Dt. 30.1.2023
	Liquid: Diesel, Petrol, and Kerosene --- Composition and uses.	1		Dt. 31.1.2023
	Gaseous: Producer gas and Water gas (Composition and uses).	1	February 2023	Dt. 1.2.2023
	Elementary idea about LPG, CNG and coal gas (Composition and uses only).	1		Dt. 2.2.2023
13	Polymer	5		
	Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization	1		Dt. 6.2.2023
	Difference between Thermosetting and Thermoplastic. Composition and uses of Polythene	1		Dt. 7.2.2023
	Poly-Vinyl Chloride and Bakelite.	1		Dt. 8.2.2023
	Definition of Elastomer (Rubber), Natural Rubber (it's draw backs).	1		Dt. 9.2.2023
	Vulcanisation of Rubber. Advantages of Vulcanised rubber over raw rubber.	1		Dt. 13.2.2023
14	Chemicals in Agriculture	4		
	Pesticides: Insecticides	1		Dt. 14.2.2023
	herbicides, fungicides- Examples and uses.	1		Dt. 15.2.2023
	Bio Fertilizers. Definition, examples and uses.	1		Dt. 16.2.2023
	Doubt clear	1		Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- MINING ENGINEERING
SECTION:- MNA

SEMESTER: 1ST

NAME OF THE FACULTY:- KISHIRA MOHAN BEHERA
(LECT. IN MATH.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING MATHEMATICS-I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Algebra (Matrices and Determinant)	18	October	
	a) Types of matrices	1		Dt. 27.10.2022, Dt. 28.10.2022
	b) Algebra of matrices	1		Dt. 29.10.2022
	Problem Solving and Tutorials	1		Dt. 31.10.2022
	c) Determinant	1		
	d) Properties of determinant	1		
	Problem Solving and Tutorials	1	November 2022	Dt. 1.11.2022
	Problem Solving and Tutorials	1		Dt. 2.11.2022
	Problem Solving and Tutorials	1		Dt. 3.11.2022
1	Problem Solving and Tutorials	1		Dt. 4.11.2022
	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	1		Dt. 5.11.2022, Dt. 7.11.2022
	Problem Solving and Tutorials	1		Dt. 9.11.2022
	Problem Solving and Tutorials	1		Dt. 10.11.2022
	Problem Solving and Tutorials	1		Dt. 11.11.2022
	f) Cramer's Rule (Question should be on two variables)	1		Dt. 12.11.2022
	Problem Solving and Tutorials	1		Dt. 14.11.2022
	Problem Solving and Tutorials	1		Dt. 15.11.2022
	g) Solution of simultaneous equations by matrix inverse method (with two variables)	1		Dt. 16.11.2022, Dt. 17.11.2022
	Problem Solving and Tutorials	1		Dt. 18.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problem Solving and Tutorials	1		Dt. 19.11.2022
	Problem Solving and Tutorials	1		Dt. 21.11.2022
	TRIGONOMETRY	15		
	a) Trigonometrical ratios	1		Dt. 22.11.2022, Dt. 23.11.2022
	Problem Solving and Tutorials	1		Dt. 24.11.2022
	b) Compound angles, multiple and sub-multiple angles (only formulae)	1		Dt. 25.11.2022, Dt. 26.11.2022
	Problem Solving and Tutorials	1		Dt. 28.11.2022
	Problem Solving and Tutorials	1		Dt. 29.11.2022, Dt. 30.11.2022
	c) Define inverse circular functions and its properties (no derivation)	2	December 2022	Dt. 1.12.2022, Dt. 2.12.2022
2	Problem Solving and Tutorials	1		Dt. 3.12.2022
	Problem Solving and Tutorials	1		Dt. 5.12.2022
	Problem Solving and Tutorials	1		Dt. 6.12.2022
	Problem Solving and Tutorials	1		Dt. 7.12.2022
	Problem Solving and Tutorials	1		Dt. 8.12.2022
	Problem Solving and Tutorials	1		Dt. 9.12.2022
	Problem Solving and Tutorials	1		Dt. 10.12.2022
	Problem Solving and Tutorials	1		Dt. 12.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(STRAIGHT LINE)	13		
	a) Introduction of geometry in two dimension b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)	1		Dt. 13.12.2022, Dt. 14.12.2022
	Problem Solving and Tutorials	1		Dt. 15.12.2022
	c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	1		Dt. 16.12.2022, Dt. 17.12.2022
	Problem Solving and Tutorials	1		Dt. 19.12.2022
	d) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form. (v) Perpendicular form	1		Dt. 20.12.2022, Dt. 21.12.2022
	Problem Solving and Tutorials	1		Dt. 22.12.2022
	Problem Solving and Tutorials	1		Dt. 23.12.2022
	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line	1		Dt. 24.12.2022, Dt. 26.12.2022
	Problem Solving and Tutorials	1		Dt. 27.12.2022
	f) Equation of a line passing through the intersection of two lines.	1		Dt. 28.12.2022
	Problem Solving and Tutorials	1		Dt. 29.12.2022
	g) Distance of a point from a line	1		Dt. 30.12.2022
Problem Solving and Tutorials	1		Dt. 31.12.2022	
4	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(CIRCLE)	7		
	a) Equation of a circle (i) center radius form	2	January 2023	Dt. 2.1.2023, Dt. 3.1.2023
	Problem Solving and Tutorials	1		Dt. 4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	(ii) General equation of a circle	1		Dt. 5.1.2023
	Problem Solving and Tutorials	1		Dt. 6.1.2023
	(iii) End point of diameter form	1		Dt. 7.1.2023
	Problem Solving and Tutorials	1		Dt. 9.1.2023
	CO-ORDINATE GEOMETRY IN THREE DIMENSIONS	15		
5	a) Distance formulae, section formulae in 3D	1		Dt. 10.1.2023, Dt. 11.1.2023
	Problem Solving and Tutorials Direction ratio, direction cosine, angle between two lines	1		Dt. 12.1.2023, Dt. 13.1.2023
	Problem Solving and Tutorials	1		Dt. 16.1.2023
	Condition of parallelism and perpendicularity	1		Dt. 17.1.2023
	Problem Solving and Tutorials	1		Dt. 18.1.2023
	Problem Solving and Tutorials	1		Dt. 19.1.2023
	b) Equation of a plane i) General form	1		Dt. 20.1.2023, Dt. 21.1.2023
	Problem Solving and Tutorials	1		Dt. 23.1.2023, Dt. 24.1.2023
	Angle between two planes, perpendicular distance of a point from a plane	1		Dt. 25.1.2023, Dt. 27.1.2023
	Problem Solving and Tutorials	1		Dt. 28.1.2023
	Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	1		Dt. 30.1.2023, Dt. 31.1.2023
	Problem Solving and Tutorials	1	February 2023	Dt. 1.2.2023
	Problem Solving and Tutorials	1		Dt. 2.2.2023
	Problem Solving and Tutorials	1		Dt. 3.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	SPHERE	7		
	Introduction to Sphere a) General Equation of a sphere	1		Dt. 4.2.2023, Dt. 6.2.2023
	Problem Solving and Tutorials	1		Dt. 7.2.2023
6	i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	1		Dt. 8.2.2023, Dt. 9.2.2023
	Problem Solving and Tutorials	1		Dt. 10.2.2023, Dt. 11.2.2023
	iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	1		Dt. 13.2.2023, Dt. 14.2.2023
	Problem Solving and Tutorials	1		Dt. 15.2.2023, Dt. 16.2.2023
	Problem Solving and Tutorials	1		Dt. 17.2.2023, Dt. 20.2.2023



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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MINING ENGINEERING
SECTION:- MNA

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) ER. SAROJ KUMAR SAHU
(2) ER. PRAKASH JENA (LECT. IN ELECT. ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023 **THEORY SUBJECT: BASIC ELECTRICAL & ELECTRONICS ENGINEERING (TH-4(A & B))**

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FUNDAMENTALS	5	October	
1	Concept of current flow, Concept of source and load.	1		Dt. 27.10.2022
	State Ohm's law and concept of resistance.	1		Dt. 28.10.2022
	Relation of V, I & R in series circuit, Relation of V, I & R in parallel circuit.	1		Dt. 31.10.2022
	Division of current in parallel circuit, Effect of power in series & parallel circuit.	1	November 2022	Dt. 1.11.2022
	Kirchhoff's Law, Simple problems on Kirchhoff's law.	1		Dt. 3.11.2022
	A.C. THEORY	8		
2	Generation of alternating emf.	1		Dt. 4.11.2022
	Difference between D.C. & A.C.			Dt. 7.11.2022
	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle.	1		Dt. 10.11.2022
	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.	1		Dt. 11.11.2022
	Represent AC values in phasor diagrams.	1		Dt. 14.11.2022
	AC through pure resistance, inductance & capacitance	1		Dt. 15.11.2022
	AC through RL, RC, RLC series circuits.	1		Dt. 17.11.2022
	Simple problems on RL, RC & RLC series circuits.	1		Dt. 18.11.2022
Concept of Power and Power factor	1		Dt. 21.11.2022	
Impedance triangle and power triangle.			Dt. 21.11.2022	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	GENERATION OF ELECTRICAL POWER.	3		
3	Generation of electricity from thermal power station with block diagram	1		Dt. 22.11.2022
	Generation of electricity from Hydro power station with block diagram	1		Dt. 24.11.2022
	Generation of electricity from nuclear power station with block diagram	1		Dt. 25.11.2022
	CONVERSION OF ELECTRICAL ENERGY			
4	Introduction of DC machines, Main parts of DC machines.	1		Dt. 28.11.2022
	DC generator, Classification of DC motor.	1		Dt. 29.11.2022
	Uses of different types of DC generators & motors.	1	December 2022	Dt. 1.12.2022
	Types and uses of single phase induction motors.	1		Dt. 2.12.2022
	Concept of Lumen	1		Dt. 5.12.2022
	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.	1		Dt. 6.12.2022
	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)	1		Dt. 8.12.2022
	WIRING AND POWER BILLING	4		
5	Types of wiring for domestic installations:	1		Dt. 9.12.2022
	Layout of household electrical wiring (single line diagram showing all the important component in the system).	1		Dt. 12.12.2022
	List out the basic protective devices used in house hold wiring.	1		Dt. 13.12.2022
	Calculate energy consumed in a small electrical installation	1		Dt. 15.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	MEASURING INSTRUMENTS			
	Introduction to measuring instruments.	1		Dt.16.12.2022
	Torques in instruments.			Dt.16.12.2022
	Different uses of PMMC type of instruments (Ammeter & Voltmeter).	1		Dt.19.12.2022
	Different uses of MI type of instruments (Ammeter & Voltmeter).			Dt.19.12.2022
	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter.	1		Dt.20.12.2022
	ELECTRONIC DEVICES	8		
	Basic Concept of Electronics and its application.	1		Dt.22.12.2022
	Basic Concept of Electron Emission & its types.	1		Dt.23.12.2022
	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.	2		Dt.26.12.2022, Dt.27.12.2022
1	Difference between Intrinsic & Extrinsic Semiconductor.	1		Dt.29.12.2022
	Difference between vacuum tube & semiconductor.	1		Dt.30.12.2022
	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)	1	January 2023	Dt.2.1.2023
	Integrated circuits (I.C) & its advantages.	1		Dt.3.1.2023
	ELECTRONIC CIRCUITS	9		
	Rectifier & its uses.	1		Dt.6.1.2023
2	Principles of working of different types of Rectifiers with their merits and demerits	1		Dt.9.1.2023
	Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)	1		Dt.10.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Working of D.C power supply system (unregulated) with help of block diagrams only	1		Dt. 12.1.2023
	Transistor, Different types of Transistor Configuration and state output and input	1		Dt. 13.1.2023
	current gain relationship in CE, CB and CC configuration			Dt. 16.1.2023
	Different types of biasing with circuit diagram.	1		Dt. 17.1.2023
	Amplifiers(concept) , working principles of single phase CE amplifier	1		Dt. 19.1.2023
	Electronic Oscillator and Its classification	1		Dt. 20.1.2023
	Working of Basic Oscillator with different elements through simple Block Diagram	1		Dt. 23.1.2023
	COMMUNICATION SYSTEM	3		
	Basic communication system	1		Dt. 24.1.2023
3	Concept of Modulation and Demodulation, Difference between them	1		Dt. 27.1.2023
	Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave	1		Dt. 30.1.2023, Dt. 31.1.2023
	TRANSDUCERS AND MEASURING INSTRUMENTS	10		
	Transducer and sensor with their differences.	1	February 2023	Dt. 2.2.2023
4	Different type of Transducers & concept of active and passive transducer.	1		Dt. 3.2.2023
	Working principle of photo emissive, photoconductive, photovoltaic transducer and Its application	2		Dt. 6.2.2023, Dt. 7.2.2023
	Multimeter and its applications	1		Dt. 9.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Analog and Digital Multimeter and their differences	1		Dt. 10.2.2023, Dt. 13.2.2023
	Working principle of Multimeter with Basic Block diagram	2		Dt. 14.2.2023, Dt. 16.2.2023
	CRO, working principle of CRO with simple Block diagram	2		Dt. 17.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:- MINING ENGINEERING SEMESTER: 1ST
SECTION:- MNB

NAME OF THE FACULTY:- BISMITA PANI (LECT. IN ENGLISH)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : COMMUNICATIVE ENGLISH (TH-1A)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LITERATURE APPRECIATION	20	October	
	INTRODUCTION TO LITERATURE APPRECIATION	1		Dt. 27.10.2022
	SKIMMING THE GIST AND SCANNING FOR NECESSARY INFORMATION OF AN UNSEEN PASSAGE	1		Dt. 28.10.2022
	CLOSE READING FOR INFERENCE AND EVALUATION, TRACING OUT THE MAIN IDEA AND ITS SUPPORTING POINTS	1		Dt. 31.10.2022
1	GUESSING THE MEANING OF UNFAMILIAR WORDS, NOTE-MAKING, SUMMARIZING, SUPPLYING A SUITABLE TITLE	1	November 2022	Dt. 1.11.2022
	PRACTICE	1		Dt. 3.11.2022
	PRACTICE	1		Dt. 4.11.2022
	PRACTICE	1		Dt. 7.11.2022
	PRACTICE	1		Dt. 10.11.2022
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 11.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	STANDING UP FOR YOURSELF READING AND EXPLANATION	1		Dt. 14.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 15.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 17.11.2022
	INCHCAPE ROCK READING AND EXPLANATION	1		Dt. 18.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 21.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 22.11.2022
	THE MAGIC OF TEAMWORK READING AND EXPLANATION	1		Dt. 24.11.2022
	QUESTION AND ANSWER DISCUSSION	1		Dt. 25.11.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1		Dt. 28.11.2022
	TO MY TRUE FRIEND READING AND EXPLANATION	1		Dt. 29.11.2022
	QUESTION AND ANSWER DISCUSSION	1	December 2022	Dt. 1.12.2022
2	VOCABULARY	5		
	SYNONYMS AND ANTONYMS	2		Dt. 2.12.2022, Dt. 5.12.2022
	SAME WORD USED IN DIFFERENT SITUATIONS AND IN DIFFERENT MEANING	2		Dt. 6.12.2022, Dt. 8.12.2022
	SINGLE WORD SUBSTITUTE	1		Dt. 9.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	APPLICATION OF ENGLISH GRAMMAR	8		
	COUNTABLE NOUN AND UNCOUNTABLE NOUN TENSES	1		Dt. 12.12.2022
	ARTICLES AND DETERMINERS	1		Dt. 13.12.2022
	MODAL VERBS	1		Dt. 15.12.2022
	TENSES	1		Dt. 16.12.2022
	TENSES	1		Dt. 19.12.2022
	TENSES	1		Dt. 20.12.2022
	VOICE CHANGE	1		Dt. 22.12.2022
	SUBJECT-VERB AGREEMENT	1		Dt. 23.12.2022
4	FORMAL WRITING SKILLS	15		
	NOTICE AND AGENDA	1		Dt. 26.12.2022
	PARAGRAPH WRITING	1		Dt. 27.12.2022
	FEATURES OF PARAGRAPH WRITING	1		Dt. 29.12.2022
	DEVELOPING IDEAS INTO PARAGRAPHS	1		Dt. 30.12.2022
	PRACTICE	1	January 2023	Dt. 2.1.2023
	REPORT WRITING PARALLEL	1		Dt. 3.1.2023
	WRITING PERSONAL LETTER	1		Dt. 5.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	LETTER TO PRINCIPAL	1		Dt. 6.1.2023
	LETTER TO LIBRARIAN	1		Dt. 9.1.2023
	LETTER TO HOD			Dt. 10.1.2023
	LETTER TO HOSTEL SUPERINTENDENT	1		Dt. 12.1.2023
	LAYOUT OF A BUSINESS LETTER	1		Dt. 13.1.2023
	LETTER OF ENQUIRY	1		Dt. 16.1.2023
	LETTER OF ORDER	1		Dt. 17.1.2023
	LETTER OF COMPLAINT	1		Dt. 19.1.2023
	CANCELLATION OF AN ORDER	1		Dt. 20.1.2023
	JOB APPLICATION	1		Dt. 23.1.2023
	C.V/ RESUME			Dt. 24.1.2023
	ELEMENTS OF COMMUNICATION	12		
	MEANING AND TYPES OF COMMUNICATION	1		Dt. 27.1.2023
	COMMUNICATION MODEL	1		Dt. 30.1.2023
5	PROCESS OF COMMUNICATION AND FACTORS RESPONSIBLE FOR IT	1		Dt. 31.1.2023
	MEANING AND TYPES OF PROFESSIONAL COMMUNICATION DIFFERENT AREAS OF NONVERBAL COMMUNICATION	2	February 2023	Dt. 2.2.2023 Dt. 3.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FORMAL COMMUNICATION AND ITS TYPE	1		Dt. 6.2.2023
	UPWARD COMMUNICATION, DOWNWARD COMMUNICATION AND PARALLEL COMMUNICATION KINESICS	2		Dt. 7.2.2023, Dt. 9.2.2023
	INFORMAL COMMUNICATION AND ITS TYPE	1		Dt. 10.2.2023
	NON-VERBAL COMMUNICATION	1		Dt. 13.2.2023
	KINESICS OR BODYLANGUAGE & PROXEMICS OR SPATIAL LANGUAGE	1		Dt. 14.2.2023, Dt. 16.2.2023
	LANGUAGE OF SIGNS AND SYMBOLS	1		Dt. 17.2.2023, Dt. 20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022-23

BRANCH:-MINING ENGINEERING

SEMESTER: 1ST

NAME OF THE FACULTY:- (1) TAPAN KUMAR SAHU

SECTION:- MNB

(2) NIRUPAMA BEHERA (LECT. IN CHEMISTRY)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT : ENGINEERING CHEMISTRY (TH-2B)

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	A.PHYSICAL CHEMISTRY	22	October	
	Atomic structure	4		
1	Introduction	1		Dt. 27.10.2022
	Rutherford's atomic model (limitations), Atomic mass, mass number, isotopes, isobar	1		Dt. 28.10.2022
	Isotones, Bohr's atomic model, Bohr Bury scheme,	1		Dt. 29.10.2022
	Aufbau's principle, Hund's rule, Electronic configuration	1		Dt. 31.10.2022
	Chemical Bonding	2		
2	Chemical Bonding- Definition, types of bonding	1	November 2022	Dt. 1.11.2022
	Ionic bonding, examples	1		Dt. 3.11.2022
	Covalent bonding, Examples			Dt. 3.11.2022
	Coordinate bonding, examples			Dt. 3.11.2022
	Acid Base Theory	6		
3	Acid base theory-Arrhenius concept of acid & base	1		Dt. 4.11.2022
	Bronsted lowry & Lewis concept of acid & base.	1		Dt. 5.11.2022
	Neutralization of acid & base, salts- definition & types.	1		Dt. 10.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Definition of Atomic weight, molecular weight, equivalent weight,	1		Dt. 11.11.2022
	Determination of equivalent weight of Acid, Base	1		Dt. 12.11.2022
	Determination of equivalent weight of salt	1		Dt. 15.11.2022
	Solutions	3		
4	Modes of expression of the concentrations (Molarity , Normality) with Simple Problems	1		Dt. 17.11.2022
	Molality with Simple Problems	1		Dt. 18.11.2022
	pH of solution (definition with simple numerical)	1		Dt. 19.11.2022
	Importance of pH in industry (sugar, textile, paper industries only)			Dt. 19.11.2022
	Electrochemistry	4		
5	Definition and types (Strong & weak) of Electrolytes with example	1		Dt. 22.11.2022
	Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution).	1		Dt. 24.11.2022
	Faraday's 1st and 2nd law of electrolysis (statement, mathematical expression and Simple numerical)	1		Dt. 25.11.2022
	Industrial application of Electrolysis- Electroplating (Zinc only).	1		Dt. 26.11.2022
	Corrosion	3		
6	Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion,	1		Dt. 29.11.2022
	only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	2	December 2022	Dt. 1.12.2022, Dt. 2.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	B. INORGANIC CHEMISTRY	8		
	Metallurgy	5		
	Definition of Mineral, ores, gangue with example, Distinction between Ores And Minerals.	1		Dt. 3.12.2022
7	General methods of extraction of metals, i) Ore Dressing ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting) iv) Reduction (Smelting, Definition & examples of flux, slag) v) Refining of the metal (Electrorefining, & Distillation only)	2		Dt. 6.12.2022 Dt. 8.12.2022 Dt. 9.12.2022
	Alloys	3		
	Definition of alloy. Types of alloys (Ferro, Non Ferro & Amalgam) with example.	1		Dt. 10.12.2022
8	Composition and uses of Brass, Bronze, Alnico, Duralumin	1		Dt. 13.12.2022
	Doubt clear	1		Dt. 15.12.2022
	C. ORGANIC CHEMISTRY	10		
	Hydrocarbons	1		Dt. 16.12.2022
	Saturated and Unsaturated Hydrocarbons (Definition with example)			Dt. 17.12.2022
9	Aliphatic and Aromatic Hydrocarbons (Huckel's rule only). Difference between Aliphatic and aromatic hydrocarbons	3		Dt. 20.12.2022 Dt. 22.12.2022 Dt. 23.12.2022
	IUPAC system of nomenclature of Alkane,	1		Dt. 24.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	IUPAC system of nomenclature of Alkene,	1		Dt. 27.12.2022
	IUPAC system of nomenclature of Alkyne,	1		Dt. 29.12.2022
	IUPAC system of nomenclature of alkyl halide and alcohol	1		Dt. 30.12.2022, Dt. 31.12.2022
	Uses of some common aromatic compounds (Benzene, Toluene, BHC, Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life.	2	January 2023	Dt. 3.1.2023 Dt. 5.1.2023
	D. INDUSTRIAL CHEMISTRY	20		
	Water Treatment	3		
	Sources of water, Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate),	1		Dt. 6.1.2023 Dt. 7.1.2023
10	Removal of hardness by lime-soda method (hot lime & cold lime—Principle, process & advantages) . Advantages of Hot lime over cold lime process.	1		Dt. 10.1.2023 Dt. 12.1.2023
	Organic ion exchange method (principle, process, and regeneration of exhausted resins)	1		Dt. 13.1.2023
	Lubricants	4		
	Definition of lubricant, Types (solid, liquid and semisolid with examples only)	1		Dt. 17.1.2023
11	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 19.1.2023
	specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	1		Dt. 20.1.2023
	Doubt clear	1		Dt. 21.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
12	Fuel	4		
	Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel.	1		Dt. 24.1.2023 , Dt. 27.1.2023
	Liquid: Diesel, Petrol, and Kerosene --- Composition and uses.	1		Dt. 28.1.2023
	Gaseous: Producer gas and Water gas (Composition and uses).	1		Dt. 31.1.2023
	Elementary idea about LPG, CNG and coal gas (Composition and uses only).	1	February 2023	Dt. 2.2.2023
13	Polymer	5		
	Definition of Monomer, Polymer; Homo-polymer, Co-polymer and Degree of polymerization	1		Dt. 3.2.2023
	Difference between Thermosetting and Thermoplastic. Composition and uses of Polythene	1		Dt. 4.2.2023
	Poly-Vinyl Chloride and Bakelite.	1		Dt. 7.2.2023
	Definition of Elastomer (Rubber). Natural Rubber (it's draw backs).	1		Dt. 9.2.2023
	Vulcanisation of Rubber. Advantages of Vulcanised rubber over raw rubber.	1		Dt. 10.2.2023
14	Chemicals in Agriculture	4		
	Pesticides: Insecticides	1		Dt. 11.2.2023
	herbicides, fungicides- Examples and uses.	1		Dt. 14.2.2023
	Bio Fertilizers: Definition, examples and uses.	1		Dt. 16.2.2023
	Doubt clear	1		Dt. 17.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- MINING ENGINEERING
SECTION:- MNB

SEMESTER: 1ST

NAME OF THE FACULTY:- KISHIRA MOHAN BEHERA
(LECT. IN MATH.)

SEMESTER FROM : 25.10.2022 to 20.02.2023

THEORY SUBJECT: ENGINEERING MATHEMATICS-I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Algebra (Matrices and Determinant)	18	October	
	a) Types of matrices	1		Dt. 27.10.2022, Dt. 28.10.2022
	b) Algebra of matrices			
	Problem Solving and Tutorials	1		Dt. 29.10.2022
	c) Determinant			
	d) Properties of determinant	1		Dt. 31.10.2022
	Problem Solving and Tutorials	1	November 2022	Dt. 1.11.2022
	Problem Solving and Tutorials	1		Dt. 2.11.2022
	Problem Solving and Tutorials	1		Dt. 3.11.2022
1	Problem Solving and Tutorials	1		Dt. 4.11.2022
	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	1		Dt. 5.11.2022, Dt. 7.11.2022
	Problem Solving and Tutorials	1		Dt. 9.11.2022
	Problem Solving and Tutorials	1		Dt. 10.11.2022
	Problem Solving and Tutorials	1		Dt. 11.11.2022
	f) Cramer's Rule (Question should be on two variables)	1		Dt. 12.11.2022
	Problem Solving and Tutorials	1		Dt. 14.11.2022
	Problem Solving and Tutorials	1		Dt. 15.11.2022
	g) Solution of simultaneous equations by matrix inverse method (with two variables)	1		Dt. 16.11.2022, Dt. 17.11.2022
	Problem Solving and Tutorials	1		Dt. 18.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problem Solving and Tutorials	1		Dt. 19.11.2022
	Problem Solving and Tutorials	1		Dt. 21.11.2022
	TRIGONOMETRY	15		
	a) Trigonometrical ratios	1		Dt. 22.11.2022, Dt. 23.11.2022
	Problem Solving and Tutorials	1		Dt. 24.11.2022
	b) Compound angles, multiple and sub-multiple angles (only formulae)	1		Dt. 25.11.2022, Dt. 26.11.2022
	Problem Solving and Tutorials	1		Dt. 28.11.2022
	Problem Solving and Tutorials	1		Dt. 29.11.2022, Dt. 30.11.2022
	c) Define inverse circular functions and its properties (no derivation)	2	December 2022	Dt. 1.12.2022, Dt. 2.12.2022
2	Problem Solving and Tutorials	1		Dt. 3.12.2022
	Problem Solving and Tutorials	1		Dt. 5.12.2022
	Problem Solving and Tutorials	1		Dt. 6.12.2022
	Problem Solving and Tutorials	1		Dt. 7.12.2022
	Problem Solving and Tutorials	1		Dt. 8.12.2022
	Problem Solving and Tutorials	1		Dt. 9.12.2022
	Problem Solving and Tutorials	1		Dt. 10.12.2022
	Problem Solving and Tutorials	1		Dt. 12.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(STRAIGHT LINE)	13		
	a) Introduction of geometry in two dimension b) Distance formulae; division formulae, area of a triangle (only formulae no derivation)	1		Dt.13.12.2022, Dt.14.12.2022
	Problem Solving and Tutorials	1		Dt.15.12.2022
	c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	1		Dt.16.12.2022, Dt.17.12.2022
	Problem Solving and Tutorials	1		Dt.19.12.2022
	d) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form, (v) Perpendicular form	1		Dt.20.12.2022, Dt.21.12.2022
3	Problem Solving and Tutorials	1		Dt.22.12.2022
	Problem Solving and Tutorials	1		Dt.23.12.2022
	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line	1		Dt.24.12.2022, Dt.26.12.2022
	Problem Solving and Tutorials	1		Dt.27.12.2022
	f) Equation of a line passing through the intersection of two lines	1		Dt.28.12.2022
	Problem Solving and Tutorials	1		Dt.29.12.2022
	g) Distance of a point from a line	1		Dt.30.12.2022
	Problem Solving and Tutorials	1		Dt.31.12.2022
	CO-ORDINATE GEOMETRY IN TWO DIMENSIONS(CIRCLE)	7		
4	a) Equation of a circle (i) center radius form	2	January 2023	Dt.2.1.2023, Dt.3.1.2023
	Problem Solving and Tutorials	1		Dt.4.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	(ii) General equation of a circle	1		Dt. 5.1.2023
	Problem Solving and Tutorials	1		Dt. 6.1.2023
	(iii) End point of diameter form	1		Dt. 7.1.2023
	Problem Solving and Tutorials	1		Dt. 9.1.2023
	CO-ORDINATE GEOMETRY IN THREE DIMENSIONS	15		
5	a) Distance formulae, section formulae in 3D	1		Dt. 10.1.2023, Dt. 11.1.2023
	Problem Solving and Tutorials Direction ratio, direction cosine, angle between two lines	1		Dt. 12.1.2023, Dt. 13.1.2023
	Problem Solving and Tutorials	1		Dt. 16.1.2023
	Condition of parallelism and perpendicularity	1		Dt. 17.1.2023
	Problem Solving and Tutorials	1		Dt. 18.1.2023
	Problem Solving and Tutorials	1		Dt. 19.1.2023
	b) Equation of a plane i) General form	1		Dt. 20.1.2023, Dt. 21.1.2023
	Problem Solving and Tutorials	1		Dt. 23.1.2023, Dt. 24.1.2023
	Angle between two planes, perpendicular distance of a point from a plane	1		Dt. 25.1.2023, Dt. 27.1.2023
	Problem Solving and Tutorials	1		Dt. 28.1.2023
	Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	1		Dt. 30.1.2023, Dt. 31.1.2023
	Problem Solving and Tutorials	1	February 20	Dt. 1.2.2023
	Problem Solving and Tutorials	1		Dt. 2.2.2023
	Problem Solving and Tutorials	1		Dt. 3.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	SPHERE	7		
6	Introduction to Sphere a) General Equation of a sphere	1		Dt.4.2.2023, Dt.6.2.2023
	Problem Solving and Tutorials	1		Dt.7.2.2023
	i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	1		Dt.8.2.2023, Dt.9.2.2023
	Problem Solving and Tutorials	1		Dt.10.2.2023, Dt.11.2.2023
	iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	1		Dt.13.2.2023, Dt.14.2.2023
	Problem Solving and Tutorials	1		Dt.15.2.2023, Dt.16.2.2023
	Problem Solving and Tutorials	1		Dt.17.2.2023, Dt.20.2.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-MINING ENGINEERING SEMESTER: 1ST
SECTION:- MNB

NAME OF THE FACULTY:- (1) ER. PRAKASH JENA,
(2) ER. BIBHUTI BHUSAN SAHU (LECT. IN ELECT. ENGG.)

SEMESTER FROM : 25.10.2022 to 20.02.2023 THEORY SUBJECT: BASIC ELECTRICAL & ELECTRONICS ENGINEERING (TH-4(A & B))

CLASS ALLOTTED /WEEK : 04 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	FUNDAMENTALS	5	October	
1	Concept of current flow, Concept of source and load.	1		Dt. 27.10.2022
	State Ohm's law and concept of resistance.	1		Dt. 28.10.2022
	Relation of V, I & R in series circuit, Relation of V, I & R in parallel circuit.	1	November 2022	Dt. 1.11.2022
	Division of current in parallel circuit, Effect of power in series & parallel circuit.	1		Dt. 2.11.2022
	Kirchhoff's Law, Simple problems on Kirchhoff's law.	1		Dt. 3.11.2022
	A.C. THEORY	8		
2	Generation of alternating emf.	1		Dt. 4.11.2022
	Difference between D.C. & A.C.			Dt. 4.11.2022
	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle.	1		Dt. 9.11.2022
	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.	1		Dt. 10.11.2022
	Represent AC values in phasor diagrams.	1		Dt. 11.11.2022
	AC through pure resistance, inductance & capacitance	1		Dt. 15.11.2022
	AC through RL, RC, RLC series circuits.	1		Dt. 16.11.2022
	Simple problems on RL, RC & RLC series circuits.	1		Dt. 17.11.2022
	Concept of Power and Power factor	1		Dt. 18.11.2022
	Impedance triangle and power triangle.			Dt. 18.11.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	GENERATION OF ELECTRICAL POWER	3		
3	Generation of electricity from thermal power station with block diagram	1		Dt. 22.11.2022
	Generation of electricity from Hydro power station with block diagram	1		Dt. 23.11.2022
	Generation of electricity from nuclear power station with block diagram	1		Dt. 24.11.2022
	CONVERSION OF ELECTRICAL ENERGY			
4	Introduction of DC machines, Main parts of DC machines.	1		Dt. 25.11.2022
	DC generator, Classification of DC motor,	1		Dt. 29.11.2022
	Uses of different types of DC generators & motors.	1		Dt. 30.11.2022
	Types and uses of single phase induction motors.	1	December 2022	Dt. 1.12.2022
	Concept of Lumen	1		Dt. 2.12.2022
	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.	1		Dt. 6.12.2022
	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)	1		Dt. 7.12.2022
5	WIRING AND POWER BILLING	4		
	Types of wiring for domestic installations.	1		Dt. 8.12.2022
	Layout of household electrical wiring (single line diagram showing all the important component in the system).	1		Dt. 9.12.2022
	List out the basic protective devices used in house hold wiring.	1		Dt. 13.12.2022
	Calculate energy consumed in a small electrical installation	1		Dt. 14.12.2022

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	MEASURING INSTRUMENTS			
	Introduction to measuring instruments.	1		Dt-15.12.2022
	Torques in instruments.			Dt-15.12.2022
	Different uses of PMMC type of instruments (Ammeter & Voltmeter).	1		Dt-16.12.2022
	Different uses of MI type of instruments (Ammeter & Voltmeter).			Dt. 20.12.2022
	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter.	1		Dt. 21.12.2022
	ELECTRONIC DEVICES	8		
	Basic Concept of Electronics and its application.	1		Dt-22.12.2022
	Basic Concept of Electron Emission & its types.	1		Dt. 23.12.2022
	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.	2		Dt. 27.12.2022, Dt. 28.12.2022
1	Difference between Intrinsic & Extrinsic Semiconductor.	1		Dt-29.12.2022
	Difference between vacuum tube & semiconductor.	1		Dt. 30.12.2022
	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED).	1	January 2023	Dt. 3.1.2023
	Integrated circuits (I.C) & its advantages.	1		Dt. 4.1.2023
	ELECTRONIC CIRCUITS	9		
	Rectifier & its uses.	1		Dt-5.1.2023
2	Principles of working of different types of Rectifiers with their merits and demerits	1		Dt. 6.1.2023
	Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)	1		Dt. 10.1.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Working of D.C power supply system (unregulated) with help of block diagrams only	1		Dt.11.1.2023
	Transistor, Different types of Transistor Configuration and state output and input	1		Dt.12.1.2023
	current gain relationship in CE,CB and CC configuration			Dt.13.1.2023
	Different types of biasing with circuit diagram.	1		Dt.17.1.2023
	Amplifiers(concept) , working principles of single phase CE amplifier	1		Dt.18.1.2023
	Electronic Oscillator and its classification	1		Dt.19.1.2023
	Working of Basic Oscillator with different elements through simple Block Diagram	1		Dt.20.1.2023
	COMMUNICATION SYSTEM	3		
	Basic communication system	1		Dt.24.1.2023
3	Concept of Modulation and Demodulation, Difference between them	1		Dt.25.1.2023, Dt.27.1.2023
	Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave	1		Dt.30.1.2023, Dt.31.1.2023
	TRANSDUCERS AND MEASURING INSTRUMENTS	10		
	Transducer and sensor with their differences.	1	February 2023	Dt.1.2.2023
4	Different type of Transducers & concept of active and passive transducer.	1		Dt.2.2.2023, Dt.3.2.2023
	Working principle of photo emissive, photoconductive, photovoltaic transducer and its application.	2		Dt.7.2.2023, Dt.8.2.2023
	Multimeter and its applications	1		Dt.9.2.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Analog and Digital Multimeter and their differences.	1		Dt. 10.2.2022, Dt. 14.2.2022
	Working principle of Multimeter with Basic Block diagram	2		Dt. 15.2.2022, Dt. 16.2.2022
	CRO, working principle of CRO with simple Block diagram	2		Dt. 17.2.2022, Dt. 20.2.2022

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