LESSON PLAN

Name of Faculty	Deepa Kapoor
Department	Applied Science & Humanities
Semester	1st
Subject	Communication Skills in English
Lesson Plan for the Duration	1st August 2024 - 2nd Dec. 2024

Week		
1st (01 Aug. - 09 Aug.)		Orientation Programme
2nd (12 Aug - 20 Aug.)	Basic of Communication	Introduction, definition, meaning, Process of Communication etc.
3rd (21 Aug - 28 Aug.)	Types of communication	Formal, Informal, Verbal, Non verbal and written barriers of effective communication etc.
4th (29 Aug - 04 Sept.)	7Cs for effective communication	considerate, concrete, concise, clear, complete, correct, courteous.
5th (05 Sept - 11Sept.)	Art of effective communication	Choosing words, voice, modulation, clarity, time, simplification of words, technical communication
6th (12Sept - 19 Sept.)	Soft skills for professional Excellence	Introduction: Soft skill and Hard skill, importance of soft skills
7th (20 Sept - 27 Sept.)	Life skills	Self awareness and self analysis, adaptability, resilience, emotional intelligence and empathy ect.
8th (28 Sept - 05 Oct.)	Life skills	Applying soft skills across cultures, case studies.
9th (07 Oct - 14 Oct)	Short stories	The gift of Magi by O.Henry, Uncle Podger Hangs a picture by JeromeK Jerome.
10th (15 Oct - 22 Oct.)	Poetry	Night of the Scorpion by Nissim Ezekiel, Stopping by Woods on a snowyEvening by Robert Frost,
11th (23 Oct - 05 Nov.)	Poetry	Where the mind is without fear by Rabindranath Tagore.
12th (06 Nov - 21 Nov.)	Professional Writing	The art of precis writing Business and personal letters, drafting e-mail, notices, minutes of the meeting
13th (22 Nov - 28 Nov.)	Vocabulary and Grammar	Glossary of administrative terms(English and Hindi), one word substitution, idioms and phrases etc.
14th (29 Nov - 02 Dec.)	Vocabulary and Grammar	Part of speech, tenses etc.(English and Hindi), Punctuation, Active Passive

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14th (29 Nov. - 02 Dec.)	Polymers	Monomers, Homo & Co Ploymers, Degree of polymerization, Thermoplastics & Thermosetting Plastics (using polythene, PVC, PS, PTFE, NYLON 66, Bakelite) Vulkanization of rubber & properties of Vulcanised rubber

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LESSON PLAN

ame of Faculty	Ankaj Thakur
epartment	Applied Science & Humanities
emester	1st
ubject	Applied Chemistry
esson Plan for the Duration	01 August-02 December 2024

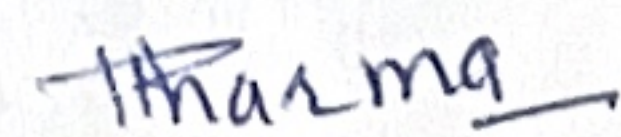| Week	Topic	Details Of Topics
1st (01 Aug.- 09 Aug.)		Orientation Programme
2nd (12 Aug.- 20 Aug.)	Atomic Structure	Definition-Electron,Proton,Neutron,Bohr's Theory with Success & Limitations,Hydrogen Spectrum,Heisenberg uncertainty principle,Quantum Numbers,Shape of s & p Orbitals,Difference b/w Orbit & Orbital,Pauli's Exclusion Principle,Hund's rule,Aufbau Rule,Electronic Configuration (Z=1-30)
3rd (21 Aug.- 28 Aug.)	Chemical Bonding & Solutions	Chemical Bonding,Cause of Chemical Bondind,Types of Bonds,Ionic Bond,Covalent Bond,Electronegativity,Difference b/w sigma & pie Bond,Electronic Sea Model of Metallic Bond,Solute,Solvent,Solution,Methods of expressing concentration of solution.
4th (29 Aug.- 04 Sept.)	Electro Chemistry & Corrosion	Electronic Concept of Oxidation ,Reduction & Redox Reactions,Definition-Electrolytes,Non-Electrolytes with examples,Faraday's Law of Electrolysis with simple numerical problems.
5th (05 Sept.- 11Sept.)		Industrial application of Electrolysis-*Elecrometallurgy,*Electroplating,*Electrolytic Refining,Primary Cell(Dry Cell),Secondary Cell(Lead Acid Storage Battery)
6th (12Sept.-19 Sept.)		Corrosion with types of Corrosion,H2 libration & O2 absorption mechanism of electrochemical corrosion,Internal & External Corrision preventive measures.
7th (20 Sept.-27 Sept.)	Engineering Materials	Natural Occurance of metals-mineral,ores of iron,aluminium & copper,gangue,flux,slag,metallurgy (a) Crushing & Grinding (b) Concentration of Ore (c) Extraction (d) Refining.
8th (28 Sept. - 05 Oct.)		Extraction of Iron from Haematite Ore,Definition of Alloys,Purpose of making alloys,Types of alloys with suitable examples,properties and applications.
9th (07 Oct.- 14 Oct.)	Water	Classification of Hard Water & Soft Water,Salts causing hardness of water,Unit of hardnes(mg/l and ppm),simple numericals of water hardness,Causes of poor latheringof soap in hard water,Disadvantages of using hard water in boilers.
10th (15 Oct.- 22 Oct.)		Water Softening Techniques (Zeolite Process),Municipal Water treatment-Sedimentation,coagulation, filtration,sterlizationProperties of water used for drinking & cooking purpose,Indian Standard Specification of drinking water.
11th (23 Oct. - 05 Nov.)	Fuels	Definition-Fuels,Combustion,Classification of fuels,Calorific Value(HCV& LCV),Calculation of HCV & LCV using Dulong's Formula,Characteristic of Good Fuel,Octane number & Cetane Number,Chemical compostion,calorific value and applications of LPG,CNG,Water Gas,Produer Gas, Biogas
12th (06 Nov - 21 Nov.)	Lubrication	Function & Characteristic properties of Good Lubricants,Classification with examples,Lubricant Mechanism-Hydrodynamic & Boundary Lubrication.
13th (22 Nov. - 28 Nov.)		Physical Properties (Viscosity & Viscosity Index,Oiliness,Flash & Fire Point),Chemical Properties(coke number,acid number,sapanification value) of Lubricants
14th (29 Nov. - 02 Dec.)	Polymers	Monomers,Homo & Co Ploymers,Degree of polymerization,Themoplastics & Thermosetting Plastics (using polythene,PVC,PS,PTFE,NYLON 66,Bakelite)Vulkanization of rubber & properties of Vulcanised rubber

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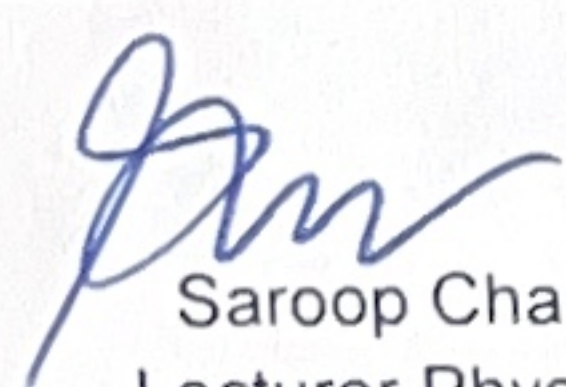
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LESSON PLAN

Name of Faculty	RAJNI SHARMA
Department	Applied Sciences And Humanities
Semester	1st
Subject	Mathematics- I
Lesson Plan for the Duration	1st August 2024 - 2nd December 2024

Week		Topic
1st (01 Aug.- 09 Aug.)		Orientation Programme
2nd (12 Aug.- 20 Aug.)	Trigonometry	Concept of angles, measurement of angles in degrees, grades and radians and their conversions.
3rd (21 Aug.- 28 Aug.)	Trigonometry	T-Ratios of Allied angles (without proof),Sum,difference formulae and their applications (without proof)
4th (29 Aug.- 04 Sept.)	Trigonometry	Product Formulae (Transformation of Product to Sum ,Difference and vice -versa),T-Ratio of multiple angles ,sub multiple angles (2A,3A,A/2).Graphs of sin x, cos x .
5th (05 Sept.- 11Sept.)	Differential Calculus	Definition of function ,Concept of limits .Four standard limits
6th (12Sept.-19 Sept.)	Differential Calculus	Differentiation by definition of x , sin x,cos x, tan x ,e^x.Differentiation of sum ,Product of functions .
7th (20 Sept.-27 Sept.)	Differential Calculus	Differentiation of quotient of function ,Differentiation of function of a function
8th (28 Sept. - 05 Oct.)	Differential Calculus	Differentiation of trigonometric and inverse trigonometric function, Logarithmic differentiation .
9th (07 Oct.- 14 Oct.)	Algebra	Complex Number : Definition ,real and imaginary parts of a complex number, polar and cartesian representation of complex number and its conversion from one from to other. Conjugate of comolex number.
10th (15 Oct.- 22 Oct.)	Algebra	Modulus and Amplitude of a complex number.Addition, Subtraction,Multiplication and Division of a complex number . De-movier's theorem, its application.
11th (23 Oct. - 05 Nov.)	Algebra	Partial Fractions : Definition of polynomial fraction proper & improper fractions and definition of partial fractions .To resoive proper into partial fraction with denominator containing non- repeated linear factors ,repeated linear factors
12th (06 Nov - 21 Nov.)	Algebra	Value of P(n,r) and C(n,r)
13th (22 Nov. - 28 Nov.)	Algebra	Binomial theorem : Binomial theorem (without proof) for positive integral index (expansion and general form) binomial theorem for any index (expansion without proof) .
14th (29 Nov. - 02 Dec.)	Algebra	First and second binomial approximation with applications

Signature of H.O.D

Signature of the Teacher

Lesson Plan

me of Faculty	Saroop Chand, Ankush Bharti
epartment	Applied Science & Humanities
emester	1st
ubject	Applied Physics-I
esson Plan for the uration	1st Aug.2024 to 02 Dec.2024

Week	Topic	Details Of Topics
1st (01 Aug.- 09 Aug.)	Orientation programme	Orientation programme
2nd (12 Aug.- 20 Aug.)	Unit 1: Physical world, Units and Measurements	Physical quantities: fundamental and derived, Units and systems of units (FPS, CGS and SI units), Dimensions and dimensional formulae of physical quantities, Principle of homogeneity of dimensions, Dimensional equations and their applications
3rd (21 Aug.- 28 Aug.)	Unit 1: Physical world, Units and Measurements	(conversion from one system of units to other, checking of dimensional equations and derivation of simple equations), Limitations of dimensional analysis. Errors in measurements (systematic and random), absolute error, relative error, error estimation and significant figures.
4th (29 Aug. - 04 Sept.)	Unit 2: Force and Motion	Scalar and Vector quantities – examples, representation of vector, types of vectors Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement only), Scalar and Vector Product, Resolution of a Vector and its application to inclined plane (Rectangular components) and lawn roller.
5th (05 Sept.- 11Sept.)	Unit 2: Force and Motion	Force, Momentum, Statement and derivation of conservation of linear momentum, its applications such as recoil of gun &rockets, Impulse and its applications. Circular motion, definition of angular displacement, angular velocity, angular acceleration, frequency, time period.
6th (12Sept.-19 Sept.)	Unit 2: Force and Motion	Relation between linear and angular velocity, linear acceleration and angular acceleration (related numerical), Centripetal and Centrifugal forces with live examples, Expression and applications such as banking of roads and bending of cyclist.
7th (20 Sept.-27 Sept.)	Unit 3: Work, Power and Energy	Work: Concept and units, examples of zero work, positive work and negative work Friction: concept, types, laws of limiting friction, coefficient of friction, methods for reducing friction and its engineering applications, Work done in moving an object on horizontal and inclined plane for rough and plane surfaces and related applications.
8th (28 Sept. - 05 Oct.)	Unit 3: Work, Power and Energy	Energy and its units, kinetic energy, gravitational potential energy with examples and derivations, Mechanical energy, conservation of mechanical energy for freely falling bodies, transformation of energy (examples). Power and its units, power and work relationship, calculation of power (numerical problems).
9th (07 Oct.- 14 Oct.)	Unit 4: Rotational Motion	Translational and rotational motions with examples. Definition of torque and angular momentum and their examples. Conservation of angular momentum (quantitative) and its applications.
10th (15 Oct.- 22 Oct.)	Unit 4: Rotational Motion	Moment of inertia and its physical significance, radius of gyration for rigid body, Theorems of parallel and perpendicular axes (statements only), Moment of inertia of rod, disc, ring and sphere (hollow and solid): (Formulae only).
11th (23 Oct. - 05 Nov.)	Unit 5: Properties of Matter	Elasticity: Definition of stress and strain, different types of modulii of elasticity, Hooke's law, significance of stress-strain curve.
12th (06 Nov - 21 Nov.)	Unit 5: Properties of Matter	Pressure: definition, units, atmospheric pressure, gauge pressure, absolute pressure, Fortin's Barometer and its applications.
13th (22 Nov. - 28 Nov.)	Unit 6: Heat and Thermometry	Concept of heat and temperature.Modes of heat transfer (conduction, convection and radiation with examples), scales of temperature and their relationship, Types of Thermometer (Mercury thermometer, bimetallic thermometer, Platinum resistance thermometer, Pyrometer) and their uses.
14th (29 Nov. - 02 Dec.)	Unit 6: Heat and Thermometry	Expansion of solids, liquids and gases, coefficient of linear, surface and cubical expansions and relation amongst them, Co-efficient of thermal conductivity.

Saroop Chand
Lecturer Physics

Ankush Bharti
Lecturer Physics