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Distance Learning Programmes Division (DLPD)

JEE (Main+Advanced) Postal All India Test Series Schedule & Syllabus

Class XI

S.No.	Dispatch Date	PHYSICS	MATHS	CHEMISTRY	
1	**PT-1 (Adv.) 09-Jul-18**	Mathematical Tools, Rectilinear Motion (Distance, Displacement, Average Velocity, Average Acceleration)	Fundamentals of Mathematics-I (FOM-1) (Representation of sets, Types of sets, Subset, superset, power set, Operations on sets : A ∪ B, A ∩ B, A – B, A Δ B,Venn Diagrams, De-Morgans law, Cardinal No. problems, Method of Interval ,Logarithm : Definition, Identity, Properties, Graph, Logarithm Equation ,Logarithmic Inequalities ,Characteristic and mantissa,Anti log Log table)	Introduction to Chemistry (Basic definition : amu , GMM ,GAM, mole , Avogadro's number, Mole-mass-number conversion for atoms/molecules , Avg.molar mass, units of P,T,V and interconversion , PV=nRT & Question based on it, STP)& Atomic Structure (Discovery of subatomic particles (Cathode+Anode Rays) , Thomson, Rutherford,Estimation of closest approach, Some terms(Isotopes,Isobars,Isotones, Isoelectronic), Electromagnetic Radiations (properties of waves))	IUPAC-Nomenclature (Introduction of σ and π bond. Valencies of C, H, X, O & N. Degree of C, H & X and structure formula ,Hybridization of carbon & DU of Hydrocarbon only, General formula, Bond Line formula, Structural formula and homologs ,Classification of organic compound, aromatic compound (excluding huckel rule) bicyclic compound, spiro compound , General Rules of IUPAC Nomenclature, IUPAC-Nomenclature of Alkane & Cyclo alkane with simple side chain (Alkyl Radical),IUPAC-Nomenclature of Alkane & Cyclo alkane with complex alkyl radical ,IUPAC-Nomenclature of Alkenes, alkynes, Cycloalkene and polyene, IUPAC-Nomenclature of non-chain terminating Functional groups (–OH, $–SO_3H$, Ketone, thiols and amines)
2	**CT-1 (Adv.) 06-Aug-18**	Mathematical Tools, Rectilinear Motion, Projectile Motion, Relative Motion (Relative Motion in 1-D , River Problem, wind ,Rain problem)	Fundamentals of Mathematics-I, Quadratic Equation, Trigonometry (T-ratios of allied angles, Domain and range, Graph of T-ratios,Sum or different of two angles (Sine and Cosine), Transformation of product into sum, Transformation of product into product of sine & cosine)	Introduction to Chemistry & Atomic Structure (Discovery of subatomic particles (Cathode+Anode Rays), Thomson, Rutherford, Estimation of closest approach, Some terms(Isotopes,Isobars,Isotones, Isoelectronic), Electromagnetic Radiations (properties of waves),Planck's Quantum Theory, Black Body Radiation , Photoelectric Effect , Bohr's Atomic Model , Spectrum , Spectral Lines)	IUPAC Nomenclature , Structural Isomerism, Structural identification
3	**CT-1 (Main) 10-Sep-18**	Mathematical Tools, Rectilinear Motion, Projectile Motion, Relative Motion, Newton's Law of Motion (NLM), Friction, Work, Power, Energy (WPE) (Calculation of work by constant force (Tension, Normal, Friction and Pseudo forces), Work done By variable forces,	Fundamentals of Mathematics-I, Quadratic Equation, Trigonometry, Statistics, Solution of Triangle, Sequence & Series (Introduction (Finish sequence and infinite sequence) A.P. : General form, sum, Properties A.P., Arithmetic mean (A.M.),G.P. → General term, sum, Properties of G.P.)	Introduction to Chemistry, Atomic Structure, Mole Concept (Density ,% Composition by mass, by mole, Minimum Molecular Mass Determination,Empirical & Molecular Formula, Stoichiometry,Equation based calculations, Concept of Limiting reagent,% Excess, % Yield , POAC ,Sequence & Parallel Reactions, Mixture analysis & % Purity,Basics of oxidation number, Oxidizing and reducing agents)	Structural Identification, Periodic Table, Basic Inorganic Nomenclature (BIN), ABC-1 (Alkane,Alkene,Alkyne,Benzene) & ABC-2 (Phenol,Aniline)
4	**PT-2 (Adv.) 01-Oct-18**	NLM, Friction, Work, Power and Energy, Circular Motion, Centre of Mass (Calculation of COM of system of particles)	Quadratic Equation, Trigonometry, Solution of Triangle, Sequence & Series, Binomial Theorem (Binomial expression and statement of binomial theorem, General term , Middle terms, Numerically greatest term in expansion of (a + b)n, Problem based on Remainder and divisibility , Standard expansion of $(x + y)^n$, $(x – y)^n$, $(x + y)^n \pm (x – y)^n$),Properties of Binomial coefficients, Summation of series with constant upper index multiplied with fixed constant,Product of Binomial coefficients)	Atomic Structure, Mole Concept & Gaseous State-1 (Boyle's law, Charle's law, Gay-lussac's law, Avogadro's hypothesis , Barometer & faulty barometer , Ideal gas Equation, Connecting vessels problems, Dalton's law and its applications, Graham's law of diffusion & effusion, KTG)	BIN, ABC-1, ABC-2,Chemical Bonding-1 (Types of bonding (Definitions of Ionic bond Covalent bond and Metallic bond) and octet rule,Limitations of octet rule, Formal charge,Writing the lewis dot structure,Writing resonating structures, finding average bond order,Stability of resonating structures, Finding bond order in oxoanions and their acids, VBT, overlapping of orbital) ,Chemical Bonding-2 (VSEPRT)
5	**CT-2 (Adv.) 26-Nov-18**	Mathematical Tools, Rectilinear Motion, Projectile Motion, Relative Motion, NLM, Friction, Work, Power, Energy, Circular Motion, Centre of Mass, Rigid Body Dynamics, Simple Harmonic Motion (SHM)	Fundamentals of Mathematics-I, Quadratic Equation, Trigonometry, Solution of Triangle, Sequence & Series, Binomial Theorem, Permutation & Combination (P & C), Straight Line (Rectangular Cartesian - coordinate system, Distance formula, Section formulas, Area of Δ,Slope formula, Condition of collinearity of 3 points,Equation of straight line in various forms, General form of Straight Line, Angle between two straight line in terms of slope,|| and ⊥ lines, Position of points w.r.t. line,Length of ⊥ Foot of ⊥ and image of points w.r.t. line, Ratio in which a line divides the line segment, Bisector of the angles between two lines,Special points of Δ. , Locus)	Introduction to Chemistry, Atomic Structure, Mole Concept, Gaseous state -1 (Boyle's law, Charle's law, Gay-lussac's law, Avogadro's hypothesis , Barometer & faulty barometer, Ideal gas Equation, Connecting vessels problems, Dalton's law and its applications, Graham's law of diffusion & effusion, KTG , Maxwell's distribution of gas velocities, Eudiometry) & Gaseous state -2 (Real gas Introduction , Vanderwaal's Equation & Verification, Virial equation, Critical phenomena, Reduced equation of state) ,Chemical Equilibrium,Thermodynamics (Introduction & Definitions + Graph Conversion,Reversible & Irreversible Process, Introduction of First Law ,Heat & Internal Energy ,Calculation of Work - Isothermal, Isochoric & Isobaric,CP & CV, γ (gamma), Enthalpy,Adiabatic Process,Questions based on Work + Comparison between Isothermal and Adiabatic, Some other processes (Phase Transformation, Polytropic Process, Free Expansion, For solids & Liquids)	Chemical Bonding-1 (Types of bonding (Definitions of Ionic bond Covalent bond and Metallic bond) and octet rule,Limitations of octet rule, Formal charge,Writing the lewis dot structure,Writing resonating structures, finding average bond order,Stability of resonating structures, Finding bond order in oxoanions and their acids, VBT, overlapping of orbital) ,Chemical Bonding-2 (VSEPRT , Hybridization ,Bond angle & Bond length / Bond Strength) ,Chemical Bonding-3 (Type of p bonding (p π-p π & p π d π bond) & Coordinate bonding , Electron deficient bonding & Back bonding , Hydrogen Bonding), Chemical Bonding-4 (Metallic Bonding , Molecular Orbital Theory,Application of Molecular Orbital Theory), Chemical Bonding-5 (Van der Waal's Forces & Fajan Rule, Dipole moment , Acidic and Basic Character)

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6	**CT-2 (Main) 17-Dec-18**	Mathematical Tools, Rectilinear Motion, Projectile Motion, Relative Motion, NLM, Friction, Work, Power, Energy, Circular Motion, Centre of Mass, Rigid Body Dynamics, Simple Harmonic Motion (SHM), Fluids, Surface Tension,Unit & Dimension,Elastisity and viscosity	Fundamentals of Mathematics-I, Quadratic Equation, Trigonometry, Statistics, Solution of Triangle, Sequence & Series, Binomial Theorem, P & C, Straight Line, Circle, Mathematical Reasoning	Introduction to Chemistry, Atomic Structure, Mole Concept, Gaseous state -1 & 2, Chemical Equilibrium, Thermodynamics & Thermochemistry,Ionic Equilibrium (Elementary)(Acid base concept, Properties of water, pH calculation (SA, SB, mixture of SA, mixture of SB, mixture of SA & SB, WA, WB),pH Calculation of WA,WB (Ostwald's dilution law), Salt hydrolysis (WA + SB, SA + WB,WA + WB))	Chemical Bonding-1 to Chemical Bonding-5, ABC-3 (R-X,ROH) & ABC-4 (Carbonyl,Carboxylic acid), General Organic Chemistry-1 (GOC-1) (Inductive effect Resonance,Resonance effect (Drawing Structure),Stability of Resonating structure,Mesomeric Effect)
7	**PT-3 (Adv.) 07-Jan-19**	Centre of Mass, Rigid Body Dynamics, SHM, Fluids, Surface Tension, Error, Elasticity and viscosity, String waves, Sound waves	P & C, Straight Line, Circle, Fundamentals of Mathematics-II (Modulus function : Definition, Equations , Graphs of Modulus (Linear only), Equations involving Modulus,Inequalities involving modulus ,Graphs related to modulus,Graphical transformations of modulus,Irrational Inequalities,Signum Function, Dirichlet Function, Greatest Integer & Fractional part And Its Properties)	Gaseous state1, Chemical Equilibrium, Gaseous state2, Thermodynamics, Ionic Equilibrium (Elementary) & Ionic Equilibrium (Advanced)	GOC-I (Inductive effect Resonance,Resonance effect (Drawing Structure,Stability of Resonating structure,Mesomeric effect & SIR,Hyperconjugation,Application of I.R.,M HC effects (Bond Length & Electron density on benzene ring),Aromaticity) & GOC-II (Carbanion and its stability,Carbocation and its stability,Carbocation and its rearrangement)
8	**MT(Main) 21-Jan-19**	Full Syllabus	Full Syllabus	Full Syllabus	Full Syllabus
9	**MT(Adv.) 28-Jan-19**	Full Syllabus	Full Syllabus	Full Syllabus	Full Syllabus
10	**AIOT(Main) 11-Feb-19**	Full Syllabus	Full Syllabus	Full Syllabus	Full Syllabus