

JEE MAIN 5 Years PYQs Analysis - Mathematics (Based on 104 JEE Main Paper)

Chapter Wise Weightage-Percentage of Questions asked in 5 Years of JEE Main Exam from a Particular Chapter

Question Count- Number of Questions from each topic asked in past 5 Years of JEE Main Exam

Topicwise Weightage-Percentage Weightage of topic as compared to other topics of the same chapter

Chapter_Names	Chapter Wise Weightage	No. of Question per paper	Topic_Names	Question_Count (In 104 NTA paper)	Topicwise Weightage
Basic Mathematics	0.59%	0.18	Inequalities Logarithm	8 10	44.00% 56.00%
QUADRATIC EQUATION	3.30%	0.99	Nature of Roots, relation between roots and coefficients Condition for Common Roots Location of roots Special forms	78 3 5 14	78.00% 3.00% 5.00% 14.00%
SEQUENCE AND SERIES	5.74%	1.72	Arithmetic Progression(AP) Summation of AP series Geometric Progression Summation of GP series AM-GM-HM, Miscellaneous Sequences Definition Based Properties Of conjugate and modulus Properties of Amplitude Complex number-Geometry Rotation theorem	42 11 38 17 66 11 26 9 44 2	24.00% 6.00% 22.00% 10.00% 38.00% 10.00% 25.00% 8.00% 42.00% 2.00%
Complex Numbers	3.50%	1.05	Demoivre's Theorem,Cube Root Of Unity,Nth Roots Of Unity	14	13.00%
PERMUTATIONS AND COMBINATIONS	3.60%	1.08	Fundamental Principle of Counting, Combination, Arrangement Formation of Groups and Distribution Circular Permutation Total Number of Combination and permutation Distribution of alike and different Objects Derangement	73 3 1 25 6 1	67.00% 3.00% 1.00% 23.00% 6.00% 1.00%
BINOMIAL THEOREM	5.05%	1.52	Binomial Expression, Binomial Theorem Binomial Coefficients and their Sums General Introduction and Definitions Addition and Multiplication Theorem on Probability,geometrical probability conditional probability, dependent and independent events	105 48 14 36 23	69.00% 31.00% 12.00% 31.00% 19.00%
PROBABILITY	3.90%	1.17	Total Probability theorem,Baye's Theorem Bernoulli's trial, Binomial Probability Distribution	9	8.00%
MATRICES and Determinants	7.46%	2.24	Definition, Types of Matrices, Trace of a Matrix, Equality of Matrices, Addition and subtraction of Matrices, Properties of Matrix addition and Subtraction Properties of determinants Adjoint of a Square Matrix, Inverse of A Matrix, Properties of Adjoint and Inverse of Matrix System of Linear Equations in Three Unknowns Based on Trigonometric Formulae	64 38 40 84 26	31.00% 28.00% 17.00% 18.00% 37.00%
Trigonometric Ratios and Identities	1.02%	0.31	Conditional Identities, Some Standard Identities in Triangle Maximum and Minimum Values of Trigonometric Function Introduction, Principal Solution of a Trigonometric Equations, General Solution of Equations Trigonometric Inequalities and System of Inequality	2 3 15 2	6.00% 10.00% 37.00% 5.00%
TRIGONOMETRIC EQUATIONS	1.35%	0.41	Solving System of Trigonometric Equations	24	59.00%

INVERSE TRIGONOMETRIC FUNCTIONS	1.59%	0.48	Properties of ITF	25	52.00%
			Equations, Inequalities, Involving ITF	14	29.00%
SOLUTIONS OF TRIANGLES	0.36%	0.11	Summation of Series	9	19.00%
			Sine Rule, Cosine Rule, Projection Formula, Napier Formula	4	36.00%
FUNCTIONS	3.50%	1.05	Trigonometric Function of Half Angles, m-n Rules	2	18.00%
			Radius of Incircle, Escribed Circle, Orthocentre And Pedal Triangle, Excentral Triangle	5	45.00%
LIMITS of Functions	2.51%	0.75	Domain, Co-domain, Range of Function, Types of Function, Odd and Even Functions	40	38.00%
			Classification of Functions	29	27.00%
CONTINUITY	1.32%	0.4	Inverse of Functions, Periodic Functions, Functional equations	16	15.00%
			0/0 and ∞/∞ forms and other indeterminate forms	59	78.00%
DIFFERENTIABILITY and METHOD OF DIFFERENTIATION	2.91%	0.87	$1/\infty$ forms, RHL and LHL of functions	12	16.00%
			Sandwich Theorem and Newton Leibnitz form	5	7.00%
APPLICATION OF DERIVATIVES	4.75%	1.43	Continuity in an Interval, Types of Discontinuities	35	88.00%
			Continuity of Composite Functions	1	3.00%
INDEFINITE INTEGRATION	1.65%	0.5	Discrete Point Continuity	4	10.00%
			Derivability over an Interval	37	42.00%
DEFINITE INTEGRATION	5.08%	1.53	Differentiation of function satisfying the given rule	12	14.00%
			L' Hospital's Rule, Higher order derivative	17	19.00%
Application of Integrals	2.97%	0.89	Derivative of different type of function, Derivative of A Function w.r.t. Another Function	21	24.00%
			Inverse Functions And Their Derivatives	1	1.00%
Application of Integrals	2.97%	0.89	Equations of Tangent and Normal to a curve	42	29.00%
			Rolle's Theorem, Lagrange's Mean Value Theorem, Cauchy's Mean Value Theorem	8	6.00%
Region Represented by a Linear Inequality, Determination of Areas for Different Cases Area Enclosed between two or more Curves	13	77	Rate Measurements, Monotonicity of a function at a point, Monotonicity in an interval	37	26.00%
			Global Maximum/Minimum	31	22.00%
Application of Integrals	2.97%	0.89	Application of Maxima and Minima, Geometrical Applications, Optimization	19	13.00%
			Application of Maxima and Minima, Shortest distance between two curves or curve and a line or curve and a point.	7	5.00%
Application of Integrals	2.97%	0.89	Substitution Method	17	34.00%
			Integration by parts	12	24.00%
Application of Integrals	2.97%	0.89	Integration of Irrational Algebraic Expression, Partial Fraction	18	36.00%
			Integration as process of summation, Elementary definite Integration	3	6.00%
Application of Integrals	2.97%	0.89	Integration as process of summation, Elementary definite Integration	17	11.00%
			Properties of Definite Integral	97	63.00%
Application of Integrals	2.97%	0.89	Derivative of Antiderivative Function	8	5.00%
			Limit of Sum	9	6.00%
Application of Integrals	2.97%	0.89	Estimation of Definite Integration	21	14.00%
			Walli's Theorem and Reduction Formula	2	1.00%

DIFFERENTIAL EQUATION	1.25	Definitions, Order and Degree of Differential Equation, Formation of Differential Equations Variables Separable Method	10	8.00%
		Homogeneous Equations,Exact differential equation	34	27.00%
			17	13.00%
STRAIGHT LINES	0.81	Linear Differential Equations,Equations Reducible To Linear Form (Bernoulli's Equation)	65	52.00%
		Equation Of A Straight Line In Various Forms, Centroid and Incentre	43	52.00%
		Angle Between Two Straight Lines In Terms Of Their Slopes	12	15.00%
CIRCLES	0.97	Area Of A Triangle, Condition Of Collinearity Of Three Points (Area Form)	16	20.00%
		Equation Of A Family Of Straight Lines Passing Through The Points Of Intersection Of Two Given Lines	10	12.00%
		General Equation Of Second Degree Representing A Pair Of Straight Lines	1	1.00%
PARABOLA	0.73	Equation Of A Circle In Various Form, Intercepts Made By A Circle On The Axes	27	28.00%
		Line And A Circle,Tangent,Tangent And Normal,Length Of A Tangent	46	47.00%
		A Family Of Circles,Director Circle	13	13.00%
ELLIPSE	0.63	Equation Of The Chord With A Given Middle Point,Chord Of Contact,Pole And Polar	3	3.00%
		Common Tangents To Two Circles,Radical Axis And Radical Centre,Orthogonality Of Two Circles	9	9.00%
		General Equation Of A Conic, Focal Directrix Property, Distinguishing Between The Conic, Definitions, parabola introduction	11	15.00%
HYPERBOLA	0.5	Line and a Parabola, Tangents	56	76.00%
		Normals to the Parabola	5	7.00%
		Director Circle,Chord of Contact,Polar & Pole, Chord with a Given Middle Point, Diameter	2	3.00%
HYPERBOLA	0.5	Line And An Ellipse, tangents,Normals	60	94.00%
		Director circle,Chord Of Contact,Polar & Pole, Chord With A Given Middle Point, Diameter, Properties of ellipse	4	6.00%
		Standard Equation and Definitions, basics	8	16.00%
HYPERBOLA	0.5	Line And hyperbola, tangents, director circle, Normals	41	82.00%
		Chord Of Contact, Polar & Pole, Chord With A Given Middle Point, Diameter, Properties of ellipse	1	2.00%

VECTORS 4.69%	1.41	2.21	7.36%	Scalar Product of two vectors	41	29.00%	
				Vector Product of two vectors	35	25.00%	
				Scalar Triple Product / Box Product / Mixed Product, Coplanarity of Vectors	38	27.00%	
				Vector Triple Product	15	11.00%	
				Linear Combinations / Linearly Independence and Dependence of Vectors	8	6.00%	
				Reciprocal System of Vectors, Application of Vectors	5	4.00%	
				Direction Cosines, Equation of a Line, Shortest distance between two lines	67	30.00%	
Three Dimensional Geometry		Family of Planes, Distance Between Point and Plane		106	48.00%		
ANGLE BETWEEN PLANES, ANGLE BETWEEN 2 LINES, ANGLE BETWEEN LINE AND PLANE		30		30	13.00%		
EQUATION OF A PLANE		20		20	9.00%		
STATEMENT, SIMPLE STATEMENT, COMPOUND STATEMENT, LOGICAL CONNECTIVES		5		5	5.00%		
TRUTH TABLE, LOGICAL EQUIVALENCE, TAUTOLOGY AND CONTRADICTION		66		66	65.00%		
ALGEBRA OF STATEMENTS, NEGATION OF COMPOUND STATEMENTS		23		23	23.00%		
DUALITY, CONVERSE, INVERSE AND CONTRAPOSITIVE OF THE CONDITIONAL STATEMENT ($p \rightarrow q$)		7		7	7.00%		
ARITHMETIC MEAN, GEOMETRIC MEAN, HARMONIC MEAN		2		2	2.00%		
MEDIAN, MODE AND RELATION BETWEEN MEAN, MEDIAN AND MODE		5		5	5.00%		
MEASURES OF DISPERSION, VARIOUS MEASURES, RANGE		3		3	3.00%		
MEAN DEVIATION		7		7	8.00%		
STANDARD DEVIATION, VARIANCE		66		66	73.00%		
VARIOUS PROPERTIES OF VARIANCE		3		3	3.00%		
MISCELLANEOUS		5		5	5.00%		
SET AND RELATIONS		68		68	100.00%		
SETS		27		27	100.00%		
HEIGHTS AND DISTANCES		0.27		0.27	0.89%		
HEIGHTS AND DISTANCES		27		27	100.00%		

JEE MAIN 5 Years PYQs Analysis - Chemistry (Based on 104 JEE Main Paper)

Chapter Wise Weightage-Percentage of Questions asked in 5 Years of JEE Main Exam from a Particular Chapter

Question Count- Number of Questions from each topic asked in past 5 Years of JEE Main Exam

Topicwise Weightage-Percentage Weightage of topics as compared to other topics of the same chapter

Chapter_Names	Chapter Wise Weightage	No. of Question per paper	Topic_Names	Question Count	Topicwise Weightage
Some Basic Concepts of Chemistry	2.82%	0.85	Uncertainty in Measurement and Laws of Chemical Combinations	4	4.88%
			Atomic & Molecular Masses	1	1.22%
			Mole Concept and Molar Masses	29	35.37%
			Percentage Composition and Empirical & Molecular Formula	15	18.29%
Structure of Atom	3.34%	1	Stoichiometry & Stoichiometric Calculation	33	40.24%
			Sub-Aromatic Particles and Atomic Models	5	5.15%
			Developments Leading to the Bohr's Model of Atom	23	23.71%
			Bohr's Model for Hydrogen Atom	27	27.84%
Classification of Elements and Periodicity in Properties	1.93%	0.58	Towards Quantum Mechanical Model of the Atom	7	7.22%
			Quantum Mechanical Model of the Atom	35	36.08%
			Modern Periodic Law & Nomenclature of Elements	7	12.50%
			Electronic Configuration and Types of Elements: s-, p-, d-, f-blocks	8	14.29%
Chemical Bonding and Molecular Structure	3.34%	1	Periodic Trends in Properties of Elements	41	73.21%
			Kossel Lewis Theory & Lewis Dot Structure	1	1.03%
			Ionic Or Electrovalent Bonding and Covalent Bonding	4	4.12%
			Bond Parameters and VSEPR Theory	50	51.55%
State of Matter	1.89%	0.57	Valence Bond Theory, Hybridisation & Molecular Orbital Theory	39	40.21%
			Hydrogen Bonding	3	3.09%
			Intermolecular Forces and The Gas Laws	11	20.00%
			Ideal Gas Equation	25	45.45%
Thermodynamics	3.65%	1.09	Kinetic Molecular Theory of Gases and Molecular Speeds	1	1.82%
			Deviation From Ideal Gas Behaviour	9	16.36%
			Liquification of Gases and Liquid State	9	16.36%
			Thermodynamic Terms	5	4.72%
Thermodynamics	3.65%	1.09	First Law of Thermodynamics and Applications of Work Done	17	16.04%
			Enthalpy Change, ΔH of a Reaction & Enthalpies for Different Types of Reactions	57	53.77%
			Spontaneity, Entropy Gibbs Energy Change and Equilibrium	27	25.47%

Equilibrium	4.44%	1.33	Equilibrium in Physical and Chemical Processes	2	1.55%
			Law of Chemical Equilibrium, Equilibrium Constant and Applications of Equilibrium Constants	41	31.78%
			Relationship Between Equilibrium Constant (K), Reaction Quotient (Q) and Gibbs Energy (G)	11	8.53%
			Factors Affecting Equilibrium and Acids, Bases & Salts	8	6.20%
			Ionization of Acids & Bases, Buffer Solutions and Solubility Equilibria of Sparingly Soluble Salts	67	51.94%
			Oxidation Number and Its Application	13	25.49%
			Types of Redox Reactions and Balancing of Redox Reactions	12	23.53%
			Redox Reactions, Electrode Processes and titrations	26	50.98%
			Preparation, Properties of Dihydrogen & Hydrides	33	40.24%
			Preparation, Properties of H ₂ O & Heavy Water	22	26.83%
			Preparation & Properties of H ₂ O ₂	27	32.93%
Redox Reaction	1.75%	0.53	Group 1: Alkali Metals & Their Properties	44	36.36%
			Some Important Compounds of Na and Biological Importance of Na and K	12	9.92%
			Group 2: Alkaline Earth Metals & Their Properties	46	38.02%
			Some Important Compounds of Ca and Biological Importance of Mg and Ca	19	15.70%
			Group 13 Elements: The Boron Family	19	36.54%
			Some important compounds of Group-13 elements	13	25.00%
			Group 14 Elements (Carbon Family)	16	30.77%
			Allotropes of Carbon	2	3.85%
			Some Important Compounds of Carbon & Silicon	2	3.85%
			Classification, Nomenclature & Isomerism	12	11.76%
Hydrogen	2.82%	0.85	Fundamental Concepts of Organic Reactions	30	29.41%
			Methods of Purification of Organic Compounds	15	14.71%
			Qualitative and Quantitative Analysis of Organic Compounds	45	44.12%
			Alkanes	14	15.91%
			Alkenes	34	38.64%
			Alkynes	12	13.64%
			Aromatic Hydrocarbons	28	31.82%

			Environmental and Atmospheric Pollution	59	67.82%
			Water Pollution	22	25.29%
			Soil Pollution & Industrial Waste	4	4.60%
			Strategies to Control Environmental Pollution & Green Chemistry	2	2.30%
			Amorphous & Crystalline Solids and Classification of Crystalline Solids	4	8.00%
The Solid State	2.99%	0.9	Crystal Lattices, Unit Cells & Number of Atoms in a Unit Cell	15	30.00%
			Packing Efficiency, Closed packed structure & Calculations Involving Unit Cell Dimensions	23	46.00%
			Imperfections in Solids	7	14.00%
			Electrical and Magnetic Properties	1	2.00%
			Expressing concentrations of solutions	37	28.03%
Solutions	1.72%	0.52	Solubility and Vapour Pressure of Liquid Solutions	26	19.70%
			Ideal and Non-ideal Solutions	1	0.76%
			Colligative Properties and Abnormal Molar Mass	68	51.52%
			Electrochemical Cells and Galvanic Cells	19	19.79%
Electrochemistry	4.54%	1.36	Nernst Equation	31	32.28%
			Conductance of Electrolytic Solutions, Electrolytic Cell and Electrolysis	43	44.79%
			Batteries and Fuel Cells	3	3.13%
			Rate of Reaction & Integrated Rate Equation	61	58.10%
			Temperature Dependence of The Rate of a Reaction and Order & molecularity of Reactions	44	41.90%
Chemical Kinetics	3.61%	1.08	Adsorption	28	32.18%
			Catalysis	2	2.30%
			Colloids and Classification of Colloids	57	65.52%
			Occurrence of Metals and Concentration of Ores	37	37.76%
General Principles and Processes of Isolation of Elements	3.37%	1.01	Extraction of Crude Metal from Concentrated Ore	13	13.27%
			Thermodynamic & Electrochemical Principles of Metallurgy and Oxidation Reduction	26	26.53%
			Refining & Uses of Al, Cu, Zn, Fe	22	22.45%
			Group-15 (Nitrogen Family)	49	45.79%
			Group-16 (Oxygen Family)	18	16.82%
			Group-17 (Halogen Family)	31	28.97%
			Group-18 (Noble Gases)	9	8.41%
The p Block Elements (Group 15 to 18)	3.68%	1.1	Position in Periodic Table and Electronic Configuration of d-block Elements	1	0.66%
			General Properties of Transition Elements	67	44.37%
			Compounds of Transitional Elements	34	22.52%
The d and f-Block Elements	5.19%	1.56	Lanthanoids and Actinoids	31	20.55%
			Some Applications of d-and f-block Elements	4	2.65%
			Qualitative Analysis of inorganic Salts	14	9.27%

Coordination Compounds	5.33%	1.6	Werner's Theory of Co-ordination Compounds & Definitions of Some Important Terms Nomenclature & Isomerism Bonding In Coordination Compounds & Bonding in Metal Carbonyls Importance and Applications of Coordination Compounds
Haloalkanes and Haloarenes	2.65%	0.79	Classification & Nomenclature of Haloalkanes and Haloarenes Methods of Preparation of Haloalkanes and Haloarenes Physical and Chemical Properties of Haloalkanes and Haloarenes Polyhalogen Compounds
Alcohols, Phenols and Ethers	3.54%	1.06	Structures of Functional Groups (Alcohols, phenols and ethers) Alcohols and Phenols Ethers
Aldehydes, Ketones and Carboxylic acids	5.95%	1.79	Nomenclature and Structure of Carbonyl Group Preparation of Aldehydes and Ketones Physical and Chemical Properties of Aldehydes and Ketones Nomenclature and Structure of Carboxyl Group Methods of Preparation of Carboxylic Acids Physical and Chemical Properties of Carboxylic Acids
Amines	4.40%	1.32	Structure of Amines, Classification and Nomenclature Preparation of Amines Physical and Chemical Properties of Amines Preparation and Chemical Reactions of Diazonium salts Preparation and Chemical Reactions of Aniline
Biomolecules	3.99%	1.2	Carbohydrates Proteins Enzymes and Hormones Vitamins Nucleic Acids
Polymers	2.06%	0.62	Polymers and It's Classification Important Polymers & Their Reactions Biodegradable Polymers Polymers of Commercial Importance
Chemistry in Everyday Life	2.20%	0.66	Drugs and Their Classification Chemicals in Food and Dyes Cleansing Agents

JEE MAIN 5 Years PYQs Analysis - Physics

(Based on 104 JEE Main Paper)

Chapter Wise Weightage-Percentage of Questions asked in 5 Years of JEE Main Exam from a Particular Chapter

Question Count- Number of Questions from each topic asked in past 5 Years of JEE Main Exam

Topicwise Weightage-Percentage Weightage of topic as compared to other topics of the same chapter

Chapter_Names	Chapter_Wise Weightage	No. of Question per paper	Topic_Names	Question Count	Topicwise Weightage
Units and Measurements	4.24%	1.27	Units, System of Units Dimension, Finding Dimensional Formula Application of Dimensional Analysis Errors in Measurement Measuring Instruments	4 26 29 32 25	3.00% 22.00% 25.00% 28.00% 22.00%
Vector and Calculus	1.17%	0.35	Addition and Subtraction of Two Vectors Unit Vector, Magnitude of Vector, Angle Made by Vectors Dot Product Cross Product Function, Differentiation as a Rate Measurement	6 5 16 4 1	19.00% 16.00% 50.00% 13.00% 3.00%
Motion in a Straight Line	2.63%	0.79	Position, Distance and Displacement Speed and Velocity Constant Acceleration Motion Under Gravity Graphs Variable Acceleration	2 14 12 26 14 4	3.00% 19.00% 17.00% 36.00% 19.00% 6.00%
Motion in 2D	1.75%	0.53	Projectile Motion: Ground to Ground Projection Projectile Thrown from Some Height Above Ground Projectile Motion on an Inclined Plane, Kinetic Energy of a Projectile One Dimensional Relative Motion Two Dimensional Relative Motion Rain Man Problem Relative Motion Between Two Projectile	1 26 3 6 10 1 1	2.00% 54.00% 6.00% 13.00% 21.00% 2.00% 2.00%
Newton's Laws of Motion	2.05%	0.61	Laws of Motion Application of Force/Impulse, Statics and Dynamics Involving Single System Constraint Relation, Dynamics of Multi System, Springs Non Inertial Reference Frame and Pseudo Force	25 24 3 4	45.00% 43.00% 5.00% 7.00%
Friction	1.24%	0.37	Static Friction Kinetic Friction Two and Three Blocks Problems Inclined Plane Problems	5 8 6 15	15.00% 24.00% 18.00% 44.00%
Work, Power and Energy	2.37%	0.71	Work Done by Constant Force, Variable Force Work Energy Theorem Power Idea of Potential Energy Equilibrium Kinematics of Circular Motion Centripetal/Tangential/Net Acceleration	12 38 11 4 14	18.00% 58.00% 17.00% 6.00% 33.00%
Circular Motion	1.57%	0.47	Dynamics of Circular Motion Vertical Circular Motion Calculation Of Com Displacement, Velocity and Acceleration of COM	2 4 15 8	5.00% 9.00% 21.00% 11.00%
System of Particles and centre of mass	2.56%	0.77	Impulse, Conservation of Momentum Collisions (Oblique and Head on) Variable Mass Systems	12 34 1	17.00% 49.00% 1.00%

			Angular Displacement, Velocity and Acceleration	6	5.00%
			Torque, Moment of Inertia and its Theorems	58	49.00%
			Fixed Axis Rotation, Toppling	4	3.00%
			Energy Analysis of Rolling Motion	19	16.00%
			Angular Momentum	22	19.00%
			Combined Rotation And Translation	9	8.00%
			Gravitational Force and Field	14	11.00%
			Variation of g	71	58.00%
			Satellite Motion	20	16.00%
			Kepler's Laws	18	15.00%
			Elastic Behaviour, Longitudinal Stress, Young Modulus	46	33.00%
			Tangential Stress and Strain, Shear Modulus	1	1.00%
			Volumetric Strain, Bulk Modulus of Elasticity	7	5.00%
			Elastic Potential Energy	3	2.00%
			Measurement and Calculation of Pressure	5	4.00%
			Pascal's Law	4	3.00%
			Archimedes Principle and Force of Buoyancy	6	4.00%
			Continuity Equation, Bernoulli's Theorem and Their Application	21	15.00%
			Surface Tension, Surface Energy	12	9.00%
			Capillary Rise	6	4.00%
			Excess Pressure in Drop and Bubble	8	6.00%
			Viscosity and Viscous Force	20	14.00%
			Thermal Expansion	15	26.00%
			Calorimetry	24	42.00%
			Conduction	13	23.00%
			Radiation Stefan's Law and Wein's Law, Newton's Law of Cooling	5	9.00%
			First Law of Thermodynamics and Work Done	19	12.00%
			Different Types of Thermodynamics Process	32	20.00%
			Second Law of Thermodynamics	33	20.00%
			Gas Laws	13	8.00%
			Different Types of Speed of Gas Molecules	27	17.00%
			Kinetic Interpretation of Temperature: Energy and Pressure	13	8.00%
			Internal Energy, Specific Heat of Gas and Degrees of Freedom	19	12.00%
			Mean Free Path	7	4.00%
			SHM: Characteristic, Phase Velocity and Acceleration	37	42.00%
			Energy in SHM	14	16.00%
			Spring Mass Systems	19	21.00%
			Pendulum	19	21.00%
			Wave Equation	7	13.00%
			Velocity of Wave, Energy and Power	13	25.00%
			Interference of Wave	5	9.00%
			Reflection of Waves and Standing Waves	14	26.00%
			Velocity of Sound Wave, Energy and Intensity	1	2.00%
			Vibration in Air Column and Beats	12	23.00%
			Doppler's Effect	1	2.00%
			Coulomb Force	27	31.00%
			Electric Field and Field Lines	20	23.00%
			Electric Dipole	13	15.00%
			Motion of Charged Particle in Uniform Electric Field	17	20.00%
			Gauss Law and Application, Electric Flux	10	11.00%

			Electrostatic Potential and Potential Energy	25	20.00%
			Relation Between Field And Potential	6	5.00%
			Electric Dipole	5	4.00%
Electrostatic Potential and Capacitance	4.49%	1.35	Capacitance, Parallel Plate Capacitor, Spherical Capacitor	25	20.00%
			Combination of Capacitors	22	18.00%
			Energy Stored in Capacitors	20	16.00%
			Sharing of Charge, Capacitor Circuits	20	16.00%
Current Electricity	6.57%	1.97	Microscopic Analysis, Drift Velocity, Ohm's Law and Conductivity	26	14.00%
			Series and Parallel Combination of Resistance	44	24.00%
			Power and Heat Dissipated in Electric Circuits	24	13.00%
			Kirchhoff's Law and Equivalent E.M.F.	14	8.00%
			Current Measuring Instrument	60	33.00%
			RC Circuit	12	7.00%
			Biot Savart Law	27	34.00%
Moving Charges and Magnetism	2.89%	0.87	Amperes Law And Its Applications	4	5.00%
			Motion of Charged Particle in Magnetic Field, Magnetic Force, Cyclotron	41	52.00%
			Magnetic Force on Current Carrying Wire	5	6.00%
			Torque and Potential Energy of Coil in External Magnetic Field	2	3.00%
Magnetism and Matter	1.90%	0.57	Magnetic Moment, Magnetisation, Magnetic Intensity and Magnetic Properties of Material	32	62.00%
			Terrestrial Magnetism	7	13.00%
			Bar Magnet	7	13.00%
			Vibration Magnetometer	6	12.00%
			Magnetic Flux and Faraday's Laws of EMF, Lenz's Law	17	19.00%
Electromagnetic Induction	3.25%	0.98	Induced emf in a Moving Rod in Uniform Magnetic Field	17	19.00%
			Induced emf in a Rod, Ring, Disc Rotating in a Uniform Magnetic Field	13	15.00%
			Fixed Loop in a Time Varying Magnetic Field & Induced Electric Field	7	8.00%
			Self Induction, Self Inductance, Self Induced emf & Magnetic Energy Density	15	17.00%
			Circuit Containing Inductance, Resistance & Battery, Growth	20	22.00%
			Average, Peak and RMS Value	8	8.00%
			A.C. Across Pure Resistor, Inductor and Capacitor	13	13.00%
			A.C. Across L-R, L-C and R-C	10	10.00%
			Ac Source With RLC Connected in Series	46	45.00%
			Power Consumed on an AC Circuit	10	10.00%
			L-C Oscillator	6	6.00%
			Transformer	9	9.00%
			Displacement Current and Properties of EM Wave	19	23.00%
Electromagnetic Waves	2.96%	0.89	Maxwell's Equations & Magnetic Field Between Parallel Plate Capacitor	3	4.00%
			Relation Between B And E	29	36.00%
			Momentum and Radiation Pressure	1	1.00%
			Energy Density and Intensity of EM Wave	20	25.00%
			Types of waves	9	11.00%

Ray Optics and Optical Instruments	5.04%	1.51	Plane Mirror	11	8.00%
			Spherical Mirrors	12	9.00%
			Refraction From Plane Surface	21	15.00%
			Total Internal Reflection and Critical Angle	12	9.00%
			Prism	17	12.00%
			Refraction at Curved Surface	11	8.00%
			Lens	37	27.00%
			Optical Instrument	17	12.00%
			Huygen's Wave Theory and Interference	0	0.00%
			Normal YDSE and White Light	35	56.00%
Wave Optics	2.30%	0.69	Modified Ydse Problems & Optical Path	9	14.00%
			Diffraction of Light, Polarisation of Light, Malus Law and R.P. of Telescope	19	30.00%
			Energy of Photon	5	5.00%
			Photoelectric Effect	51	46.00%
			Radiation Pressure	1	1.00%
Dual Nature of Radiation and Matter	4.05%	1.22	De-Broglie Wavelength	54	49.00%
			Atomic Model and Hydrogen Atom	28	41.00%
			Hydrogen Spectrum	34	50.00%
			Atomic Collision	4	6.00%
Atoms	2.48%	0.75	X-ray	2	3.00%
			Properties of Nucleus	8	9.00%
			Mass Defect and Binding Energy	16	19.00%
Semiconductor Electronics: Materials, Devices and Simple Circuits	4.75%	0.94	Radioactive Decay	62	72.00%
			Semiconductor, PN Junction and its Applications	64	49.00%
			Transistor	28	22.00%
			Logic Gates	38	29.00%
			Elements of Communication System, Propagation of EM Waves	27	38.00%
Communication Systems	2.59%	0.78	Modulation of Signal	44	62.00%