

Maths study plan (6 pm to 7:30 Pm)				
DAY	Date	Topic Name	Lecture Number	Lecture Details
TUESDAY	1-Mar	Basic Math	1	Number System, sets : Introduction, Sets and their Representations, Empty Set, Finite and Infinite Sets, Equal Sets
WEDNESDAY	2-Mar		2	Subsets, Power Set, Universal Set. Venn Diagrams, Operations on Sets, Complement of a Set
THURSDAY	3-Mar		3	Different properties of inequalities & Wavy Curve Method & its application, Miscellaneous Problems on inequalities.
MONDAY	7-Mar		4	Modulus & its properties,
TUESDAY	8-Mar		5	Problems based on Modulus & its Applications
WEDNESDAY	9-Mar		6	Introduction of Logarithms and its properties
THURSDAY	10-Mar		7	Problems on Logarithms & logarithmic equations
MONDAY	14-Mar		8	logarithmic inequalities.
TUESDAY	15-Mar		9	REMAINDER THEOREM &FACTORIZATION
WEDNESDAY	16-Mar		10	Evaluation of Determinants & its basic properties.
THURSDAY	17-Mar	TRIGONOMETRY (TRI) :	1	Introduction, Angles, fundamental relations between trigonometric ratios. Trigonometric Ratios for complementry, supplementry and allied angles.
MONDAY	21-Mar		2	Trigonometric Ratios of Compound Angles. Product/sum of the Sines/Cosines in Terms of sum/Product.
TUESDAY	22-Mar		3	Trigonometry Ratio of the Multiple and sum Multiple. Problems on multiple and submultiple angles
WEDNESDAY	23-Mar		4	Maximum and Minimum Values of the Trigonometric Functions & related problems.
THURSDAY	24-Mar		5	Identities, Conditional Identities and Some Important series.
MONDAY	28-Mar		6	Trigonometric Series.
TUESDAY	29-Mar	TRIGONOMETRIC EQUATION :	1	General Solution of Trigonometric Equation, special cases.
WEDNESDAY	30-Mar		2	Type of Trigonometric Equations Part - 1
THURSDAY	31-Mar		3	Type of Trigonometric Equations Part - 2
MONDAY	4-Apr		4	Extreme Values problems, Trigonometric Inequations, Simultaneous trigonometric Equations.
TUESDAY	5-Apr	RELATION AND FUNCTION	1	Definition of relation & types of relation.
WEDNESDAY	6-Apr		2	Examples on Relations & Its classification
THURSDAY	7-Apr		3	Introduction of Function. & categorization & Number of possible functions
MONDAY	11-Apr		4	Type of Functions (G.I.F. & F.P.F)
TUESDAY	12-Apr		5	Sign(x), logrithmic function & other basics functions
WEDNESDAY	13-Apr		6	Graphs of basic functions and its applications
THURSDAY	14-Apr		7	Algebra of functions & methods to determine domain of function
MONDAY	18-Apr		8	Methods to determine range of functions
TUESDAY	19-Apr		9	Identical function, Classification of Function,
WEDNESDAY	20-Apr		10	Composite functions with examples.
THURSDAY	21-Apr		11	Odd & Even Functions & application,
MONDAY	25-Apr		12	Periodic Functions
TUESDAY	26-Apr		13	Inverse of a Function.
WEDNESDAY	27-Apr		14	Elementary transformations on graphs
THURSDAY	28-Apr		15	Problems based on elementary transformations
MONDAY	2-May		16	Functional Equation.
WEDNESDAY	4-May	INVERSE TRIGONOMETRIC	1	Introduction of existence of inverse of a function to define domain & range of $\sin^{-1}x$, $\cos^{-1}x$, $\tan^{-1}x$, $\sec^{-1}x$, $\operatorname{cosec}^{-1}x$, $\cot^{-1}x$., Graph of Inverse Trigonometric Functions, Properties-I and Properties-II
THURSDAY	5-May		2	Properties of ITF Part - 1

MONDAY	9-May	FUNCTIONS	3	Properties- Part - 2
TUESDAY	10-May		4	Properties-Part - 3
WEDNESDAY	11-May		5	Properties- Part - 4
THURSDAY	12-May		6	Equation and series Involving ITF,
MONDAY	16-May	LIMIT, CONTINUTY DIFFERENTIABILITY	1	Definition & Existence of Limit with examples
TUESDAY	17-May		2	Algebra and properties of limits with examples & introduction of indeterminate forms
WEDNESDAY	18-May		3	Methods of evaluation of limits by
THURSDAY	19-May		4	Limit of forms $(f(x))^{g(x)}$ & related indeterminate forms
MONDAY	23-May		5	Use of Sandwich Theorem & Newton-leibnitz rule to decide limit,
TUESDAY	24-May		6	Introduction of continuity, continuity at a point, Continuity in an interval
WEDNESDAY	25-May		7	Properties of continuity, Geometrical meaning of continuity, and problems. Algebra of continuous function, continuity of composite function, Intermediate value theorem.
THURSDAY	26-May		8	Practice of Miscellaneous questions on Limit and Continuity,
MONDAY	30-May		9	Introduction of Differentiability, Geometrical meaning of the derivative.
TUESDAY	31-May		10	Relation between differentiability and continuty, Algebra of differentiable function.
WEDNESDAY	1-Jun		11	Functional Equation & mixed problems.
THURSDAY	2-Jun	MOD	1	Different method of Differentiation.
MONDAY	6-Jun		2	Rules of Differentiation, Differentiation of Inverse function and the Derivatives, Differentiation of Function Parametrically. Logarithmic Differentiation, Implicit function, Newton Leibniz Rule.
TUESDAY	7-Jun		1	Derivatives as a Rate Measure.
WEDNESDAY	8-Jun	APPLICATION OF DERIVATIVES	2	Tangent, Normal
THURSDAY	9-Jun		3	Angle Between curves length of tanget normal & Subtangent & Subnormal
MONDAY	13-Jun		4	Rolle's Theorem and means value theorem,
TUESDAY	14-Jun		5	Monotonacity of function, Monotonacity in an interval.
WEDNESDAY	15-Jun		6	Miscellanious problem on Monotonacity,
THURSDAY	16-Jun		7	Greatest and least value of function, establishing inequiatly and concavity.
MONDAY	20-Jun		8	General Introduction of Local Maxima, Local Minima. Global Maxima, Global Minima
TUESDAY	21-Jun		9	Miscellanious problem on Maxima and minima
WEDNESDAY	22-Jun		10	Miscellanious Problems.
THURSDAY	23-Jun	INDEFINITE INTERGRAL	1	Introduction Indefinite Integration as inverse of differentiation. (Basic Direct Method)
MONDAY	27-Jun		2	Rules of I.I., Integration by substitution method (Direct & Indirect).
TUESDAY	28-Jun		3	Discussion of DPP-2, Integration by Partial Fraction
WEDNESDAY	29-Jun		4	Integration by parts & its application
THURSDAY	30-Jun		5	Problems based on all methods of integration
MONDAY	4-Jul		6	Integration of Algebraic rational and irrational functions,
TUESDAY	5-Jul		7	Integration of different Trigonometric functions
WEDNESDAY	6-Jul		8	Discussion of problems based on
THURSDAY	7-Jul		9	Successive Reduction in Integration.
MONDAY	11-Jul	DEFINITE INTEGRAL	1	Definite Integration using indefinite integral.
TUESDAY	12-Jul		2	General Properties of DI.
WEDNESDAY	13-Jul		3	Definite Integral of Piecewise Continuous Function.
THURSDAY	14-Jul		4	Properties of 4,5,6,7,
MONDAY	18-Jul		5	Periodic Properties of DI, Differentiation of definite integral
TUESDAY	19-Jul		6	Approximation of definite integral
WEDNESDAY	20-Jul		7	Definite integral limit as a sum,
THURSDAY	21-Jul		1	Area of region without use of Definite integration.

MONDAY	25-Jul	AREA UNDER CURVE	2	Curves Sketching.
TUESDAY	26-Jul		3	Inequality in a Area and area bounded by the curve itself.
WEDNESDAY	27-Jul		4	Application of concept of Area,
THURSDAY	28-Jul	DIFFERENTIAL EQUATION	1	Order & Degree & Formation of the differential equation.
MONDAY	1-Aug		2	Solution of the differential equation by different method, Variable Separation.
TUESDAY	2-Aug		3	Homogeneous Differential Equation & Linear Differential Equation.
WEDNESDAY	3-Aug		4	4, General form of Variable separation & Applications of first-order differential equation.
THURSDAY	4-Aug		5	Orthogonal Trajectory & Geometrical Application.
MONDAY	8-Aug		6	Other applications of differential equation
TUESDAY	9-Aug	QUADRATIC EQUATION :	1	Roots, relavtion between roots & coefficients
WEDNESDAY	10-Aug		2	Properties and nature of roots of quadratic equations
TUESDAY	16-Aug		3	Condition of two roots/one root common of two quadratic equations
WEDNESDAY	17-Aug		4	Quadratic Expression,
THURSDAY	18-Aug		5	Location of the roots
MONDAY	22-Aug		6	Quadratic Inequations, interval of roots
TUESDAY	23-Aug		7	Theory of Polynomial Equation& Miscellaneous Problems.
WEDNESDAY	24-Aug	Sequence & series	1	Arithmetic Progression (A.P) sum and Properties of A.P,
THURSDAY	25-Aug		2	Geometric Progression (G.P), Sum and Properties G.P
MONDAY	29-Aug		3	Introduction of A.M.,G.M. & H.M Insertion of different Means Between two Numbers. Discussion of
TUESDAY	30-Aug		4	Arithmetic-Geometric Series. & its application
WEDNESDAY	31-Aug		5	Sum of Miscellaneous Series. (Method of difference and Vn method)
THURSDAY	1-Sep		6	Inequalities based on A.M., G.M. & H.M, nth mean, weighted A.M, G.M, H.M.
MONDAY	5-Sep		7	Misl. Problems on Seq and series
TUESDAY	6-Sep	BINOMIAL THEOREM	1	Binomial Expansion & it's General Term, Greatest Bnomial Coefficient.
WEDNESDAY	7-Sep		2	Terms free of radicals, Terms free of variables, Terms with absolute maximum value, Standard Expansions, Questions related with integral and fractional part.
THURSDAY	8-Sep		3	Series of binomial Coefficient, Sum of the series by the use of Differentiation, Integration.
MONDAY	12-Sep		4	Sum of the series of coefficients by comparing the coefficients of some power of x in an expansion
TUESDAY	13-Sep		5	Checking Divisibility & Finding Remainder and, Binomial Theorem for any Rational Index, Multinomial Expansion
WEDNESDAY	14-Sep	Permutation & combination	1	Fundamental Principle of Counting, Definition of Permutation & combination,
THURSDAY	15-Sep		2	Permutation of things under different conditions,
MONDAY	19-Sep		3	Circular Permutation & General Selection, Restricted Selection, Problems based on above concepts
TUESDAY	20-Sep		4	All possible selections, Number of Divisors
WEDNESDAY	21-Sep		5	Exponent of Prime p in $N!$, & related concepts
THURSDAY	22-Sep		6	Division and distribution of Different and Identical things.
MONDAY	26-Sep		7	Multinomial Theorem, , Problems on derrangement
TUESDAY	27-Sep		8	Basic Probability, Set Theory Approaches to Probability
WEDNESDAY	28-Sep		9	Misc. problems on P&C
THURSDAY	29-Sep	COMPLEX NUMBER:	1	Argument, Modulus Conjugate of a C.N. And its Different forms
MONDAY	3-Oct		2	Algebra of Complex Number and it's Geometrical Representation,
TUESDAY	4-Oct		3	Properties of Argument, Modulus, Conjugate and its Application.
THURSDAY	6-Oct		4	Square Root of a Complex Number,
MONDAY	10-Oct		5	DE-Moiver's Theorem, Cube roots, Nth Roots of unity and its application

TUESDAY	11-Oct		6	Concept of Rotation, Geometrical Application in Complex Plane.
WEDNESDAY	12-Oct		7	Problems based on Geometrical Application
THURSDAY	13-Oct		8	Misc. Problems on complex number
MONDAY	17-Oct		1	Defination & Types, algebra of the matrices.
TUESDAY	18-Oct		2	Special Matrices
WEDNESDAY	19-Oct		3	Special Matrices , Determinants & Properties of Determinant.
THURSDAY	20-Oct		4	Special Determinants
THURSDAY	27-Oct	MATRICES & DETERMINANTS	5	Differentiation and Integration on determinants, Cramer's rule, Solution of Linear Equation& Mixed Problems.
MONDAY	31-Oct		6	Adjoint & inverse of a Square Matrix,
TUESDAY	1-Nov		7	Evaluation of inverse of a matrix by basic transformations , System of Linear Simultaneous Equations
WEDNESDAY	2-Nov		8	Orthogonal, unitary,idempotant & nilpotant matrices
THURSDAY	3-Nov		1	Introduction of Vectors and Algebra Vectors.
MONDAY	7-Nov		2	Linear Combinations, Collinearity and coplanarity, Section formula.
TUESDAY	8-Nov		3	Scalar Product of two vectors (Dot Product), Projection of a Vector.
WEDNESDAY	9-Nov	VECTOR	4	Vector Product (Cross), Properties, Scalar triple product & Properties.
THURSDAY	10-Nov		5	Vector Triple product, Reciprocal system of vectors, Vector Equation
MONDAY	14-Nov		1	Point, Direction Ratio, Direction cosine of a directed line segment.
TUESDAY	15-Nov		2	Angle Between two lines, Projection of line segment
WEDNESDAY	16-Nov		3	Equation of straight line in different forms,
THURSDAY	17-Nov		4	Equation of plane in different forms, Angle between to forms
MONDAY	21-Nov		5	Perpendicular distance, Family of planes, Bysectot plane
TUESDAY	22-Nov	THREE DIMENSIONAL GEOMETRY	6	Intersection of line & plane, Equation of straight line intersecting two given line,
WEDNESDAY	23-Nov		7	Shortest distance between two skew line and Miscellaneous problem on 3D,
THURSDAY	24-Nov		1	Co-ordinates of a Point, Distance Formulae, Section formule
MONDAY	28-Nov		2	related problems
TUESDAY	29-Nov		3	Centroid, circumcentre, orthocentre, incentre, excentres & Area of a triangle whose vertices are given
WEDNESDAY	30-Nov		4	Related problems
THURSDAY	1-Dec		5	Locus, Slope of a straight lines, Intercepts on axes made by a straight line and angle between straight lines
MONDAY	5-Dec		6	Different forms of straight lines, Length of perpendicular from a point to a straight line
TUESDAY	6-Dec	STRAIGHT LINE :	7	Foot of perpendicular form a point to a line, Image of a point about a line
WEDNESDAY	7-Dec		8	Equation of reflected ray, Concurrency of line and Family of Lines, Introduction of angle Bisectors & problems
THURSDAY	8-Dec		9	Problem on Angle Bisector, Shifting of origin & Rotation of Axes
MONDAY	12-Dec		10	Pair of Straight Lines, Second Degree General Equation, angle between pair of lines,
TUESDAY	13-Dec		11	Second Degree Homogeneous Equation and Homogenization.
WEDNESDAY	14-Dec		1	Equation of Circle in Different Forms
THURSDAY	15-Dec		2	Parametric Equation of a Circle, Intercepts made by a circle on axes.
MONDAY	19-Dec		3	Position of a point w.r.t a Circle and position of a line wrt a circle. Tangent & Normal- different forms,
TUESDAY	20-Dec		4	Power of point, Length of Tangent, Director Circle.

WEDNESDAY	21-Dec	CIRCLE:	5	Chords of Contact, Chord Bisected at a Given Point, Pair of Tangents,
THURSDAY	22-Dec		6	Position of Two Circles w.r.t each other, Common Tangents (Geometry) & Common Chord, Length of Common Chord.
MONDAY	26-Dec		7	Problems based on above concepts
TUESDAY	27-Dec		8	Angle Between two Circles, Orthogonal Circles & Radical Axis. Radical centre. Family of Circles & Related problems
WEDNESDAY	28-Dec	PARABOLA	1	Introduction of Conic & Standard Forms of the Parabola. Vertex focus, Directrix and Latus Rectum.
THURSDAY	29-Dec		2	Position of a Point, Parametric Form and Focal Distance, Length of Focal Chord.
MONDAY	2-Jan		3	Position of a line w.r.t. Parabola.
TUESDAY	3-Jan		4	Tangents at a Point, Properties related with different forms of tangent to a parabola.
WEDNESDAY	4-Jan		5	Pair of Tangents, Chord of Contact, Equation of the Chord whose MID-Point is given.
THURSDAY	5-Jan		6	Equation of Normal to the Parabola and It's Application
MONDAY	9-Jan		7	Condition for Normals to a parabola and problems based on properties of normals.
TUESDAY	10-Jan		8	More Properties of the Parabola & Problems based on its properties
WEDNESDAY	11-Jan	ELLIPSE	1	Standard equation of Ellipse and it's related discussions, General Equation of Ellipse.
THURSDAY	12-Jan		2	Parametric Equation, Auxiliary circle, Eccentric angle, Equation of Chord, Focal Distance, Focal Chord.
MONDAY	16-Jan		3	Position of a point and a line w.r.t. Ellipse and Different form of Tangents, Director Circle.
TUESDAY	17-Jan		4	Equation of Chord of Contact, Chord with Mid Point & Pair of Tangents.
WEDNESDAY	18-Jan		5	Equation of Normal and Related Properties.
THURSDAY	19-Jan		6	Special properties of Ellipse, (Optional),
MONDAY	23-Jan	HYPERBOLA	1	Standard equation of Hyperbola & it's Conjugate Hyperbola.Parametric form, Auxiliary circle, Parametric angle, Equation of Chord, Focal Distance, Focal Chord.
TUESDAY	24-Jan		2	Position of a point and a line w.r.t. Hyperbola and Different form of Tangents, Director Circle.
WEDNESDAY	25-Jan		3	Tangent & Normal. Chords of Contact, Chord with given Midpoint and pair of Tangents.
MONDAY	30-Jan		4	Asymptotes & Rectangular Hyperbola.
TUESDAY	31-Jan	PROBABILITY	1	Definition & Problems based on permutation and combination
WEDNESDAY	1-Feb		2	Odds in favour and odds against. Set Theoretic Principles
THURSDAY	2-Feb		3	Conditional Probability & independent events
MONDAY	6-Feb		4	Total Probability , Bay Theorem
TUESDAY	7-Feb		5	Binomial Distribution for successive events.
WEDNESDAY	8-Feb	PROPERTY OF TRIANGLES:	1	Elementary formula related to sides and angles of Triangle, Sine Rule, Cosine Rule, Projection formula, Napier's Analogy, Half Angle formula, Area of triangle , m-n theorem
THURSDAY	9-Feb		2	Circum circle, Excribed circle, Orthocentre, Incircle,
MONDAY	13-Feb		3	centroid and medians of a triangle, Bisector of angles of triangles, Excentral Triangles, Pedal
TUESDAY	14-Feb		4	Triangles, Distance between special points,
WEDNESDAY	15-Feb		5	solution of triangle, Inscribed & Circumscribed polygons
THURSDAY	16-Feb	STATISTICS & MATHEMATICAL REASONING	1	MEASURE OF CENTRAL TENDENCY
MONDAY	20-Feb		2	MEASURE OF DISPERSION
TUESDAY	21-Feb		3	Mathematical Reasoning Started
WEDNESDAY	22-Feb		4	Mathematical Reasoning Completed