Mathematics

Recommended Time Table

Class-10

Chapter Names	Concepts
1. Mathematical Induction (5 hours)	• Introduction • Principles of mathematical induction • Applications of mathematical induction **(1 hour)** • Problems **(3 hours)** • Doubt Clarification **(1 hour)**
2. Progressions (8 hours)	• Introduction to sequences • Arithmetic progression definition • General term • Sum to 'n' terms of A.P. • Arithmetic mean • Properties of A.P. **(1 hour)** • Geometric progression definition • General term • Sum to 'n' terms of a G.P. • Sum to infinite of a G.P. • Geometric mean **(1 hour)** • Harmonic progression • Relation between A.M, G.M and H.M **(1 hour)** • Problems **(4 hours)** • Doubt Clarification **(1 hour)**
3. Functions (7 hours)	• Introduction • Definition of function • Notation for a function • Representation • Types of functions based on mapping • Types of functions based on definition **(1 hour)** • Composite function • Inverse of a function **(1 hour)** • Homogeneous, symmetric and cyclic • functions **(1 hour)** • Problems **(3 hours)** • Doubt Clarification **(1 hour)**
4. Limits (5 hours)	• Introduction • Definition of limits • Fundamental theorem of limits • Properties of limits **(1 hour)** • Methods to evaluate the limit of a function • Methods to evaluate functions which are • in indeterminate form **(1 hour)** • Problems **(2 hours)** • Doubt Clarification **(1 hour)**
5. Polynomial - III (6 hours)	• Introduction • Synthetic division **(1 hour)** • Remainder theorem • Factor theorem • Multinomial theorem **(1 hour)** • Problems **(3 hour)** • Doubt Clarification **(1 hour)**
Term 1	**Chapter 1 - 5 MCQ - 50 50 x 1 = 50**
6. Quadratic Equations - II (7 hours)	• Introduction • Definition of Quadratic Equations • Sum and product of root • Nature of roots • Conjugate pair of roots **(1 hour)** • Condition for common roots • Maximum and minimum values **(1 hour)** • Sum and product of cubic and • biquadratic equation **(1 hour)** • Problems **(3 hours)** • Doubt Clarification **(1 hour)**
7. Inequalities - III (7 hours)	• Introduction • Progressional inequalities • Geometrical inequalities • Trigonometrical inequalities **(2 hours)**

Chapter Names	Concepts	
	• Problems	**(4 hours)**
	• Doubt Clarification	**(1 hour)**
8. Probability (7 hours)	• Introduction • Fundamental principle of counting • Basics of probability	
	• Probability classical definition	**(1 hour)**
	• Addition theorem • Conditional Probability	**(1 hour)**
	• Problems	**(4 hours)**
	• Doubt Clarification	**(1 hour)**
9. Plane Geometry - III (7 hours)	• Introduction • Circles	
	• Tangent	**(1 hour)**
Term 2	**Chapter 1 - 9** **MCQ - 50**	**50 x 1 = 50**
	• Cyclic quadrilaterals • Collinearity • Concepts related to trignometry	
	• Theorems	**(3 hours)**
	• Problems	**(2 hours)**
	• Doubt Clarification	**(1 hour)**
10. Coordinate Geometry - III (9 hours)	• Introduction	
	• Area and collinearity	**(1 hour)**
	• Equation of straight lines • Slope • Condition for parallel and	
	• Perpendicular lines • Intercepts formulae	**(1 hour)**
	• Concurrent lines • Distance between a point and a line	
	• Various forms of staright lines	**(1 hour)**
	• Orthocentre, circumcentre • Foot of perpendicular	
	• Image of a point w.r.t a line	**(1 hour)**
	• Problems	**(4 hours)**
	• Doubt Clarification	**(1 hour)**
11. Trignometry - II (7 hours)	• Introduction • Transformations	
	• Trignometric equations	**(1 hour)**
	• Sine and cosine formulae • Heights and distances	**(1 hour)**
	• Problems	**(4 hours)**
	• Doubt Clarification	**(1 hour)**
12. Binomial Theorem (6 hours)	• Introduction • Basics of bionomial theorem • Statements of bionomial theorem	
	• General term	**(1 hour)**
	• Pascal's Triangle • Properties of binomial coefficient	**(1 hour)**
	• Problems	**(3 hours)**
	• Doubt Clarification	**(1 hour)**
Grand Test	**Chapter 1 - 12** **MCQ - 50**	**50 x 1 = 50**

Chapter	Concept	Problems	Total No.of hours
1. Mathematical Induction	1	4	5
2. Progressions	3	5	8
3. Functions	3	4	7
4. Limits	2	3	5
5. Polynomials - III	2	4	6
6. Quadratic Equations - II	3	4	7
7. Inequalities - III	2	5	7
8. Probability	2	5	7
9. Plane Geometry - III	4	3	7
10. Coordinate Geometry - III	4	5	9
11. Trigonometry - II	2	5	7
12. Binomial Theorem	2	4	6