

XI Mathematics and Statistics (Part I) for Arts and Science

Sr. No	Area	Topic	Competency Statement
1	Angle and Its measurement	Angle	<p>The student will be able to -</p> <ul style="list-style-type: none"> • understand angle of any measure. • understand different systems of measurement of angle and relations between them. • convert an angle from one system to the other.
2	Trigonometric Functions	Trigonometric Functions	<ul style="list-style-type: none"> • understand definitions of trigonometric functions of angle of any measure. • find the values of trigonometric functions of certain angles. • draw graphs of trigonometric functions.
3	Trigonometric Functions of compound angles and factorization formulae	Trigonometric Functions of compound angles	<ul style="list-style-type: none"> • find the trigonometric functions of sum or difference of the angles. • find the trigonometric functions of multiple and sub-multiple angles. • express the sum or difference of two trigonometric functions as product • learn some rules of trigonometric ratios of angles of a triangle.
4	Determinants and Matrices	Determinant	<ul style="list-style-type: none"> • find value of a determinant. • reduce determinant to simple form. • solve linear equations in 2 or 3 variables • find area of triangle using determinants.
		Matrices	<ul style="list-style-type: none"> • understand types of matrices. • Perform algebraic operations of the matrices.

5	Straight Line	Straight Line	<ul style="list-style-type: none"> • understand locus and its equation. • find equation of a straight line in different forms. • find angle between given two straight lines and the distance of a point from given line.
6	Circle	Circle	<ul style="list-style-type: none"> • find equation of circle satisfying given conditions. • learn and use the properties of circle. • find the equation of tangent to the circle.
7	Conic Section	Parabola, Ellipse, Hyperbola	<ul style="list-style-type: none"> • find the equations of conic sections satisfying given conditions. • learn and use the properties of conics. • find the equation of tangent to the conic.
8	Measures of dispersion	Measures of dispersion	<ul style="list-style-type: none"> • calculate range, standard deviation and variance from given data.
9	Probability	Probability	<ul style="list-style-type: none"> • calculate probability of an event and learn conditional probability • learn and use Baye's theorem and its applications

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