


SYLLABUS 2022-23

SUBJECT MATHEMATICS		CLASS XII	
TERM I			
MONTH	TEXT BOOK - TOPIC	E LIBRARY TOPIC	ACTIVITY PROJECT/READING/ASL
APRIL	Inverse Trigonometric functions , Matrices	Inverse Trigonometric functions , Matrices	To explore the principal value of the function $\sin^{-1}x$ using a unit circle.
MAY	Determinants, Continuity and differentiability	Determinants, Continuity and differentiability	To find analytically the limit of a function $f(x)$ at $x=c$ and also check the continuity of the function at that point.
JULY	Application of derivatives, Integration (indefinite)	Application of derivatives, Integration (indefinite)	To understand the concepts of decreasing and increasing functions. To understand the concepts of local maxima, local minima and point of inflection.
AUGUST	Integration (Definite)	Integration (Definite)	Formation of differential equation to explain the process of cooling of boiled water to a given room temperature.
SEPTEMBER	Application of integration, Differential equations	Application of integration, Differential equations	Estimation of the population of a particular region/country under the assumptions that there is no migration in or out of the existing population in a particular year.
TERM II			
OCTOBER	Vectors, Three dimensions, Linear programming	Vectors, Three dimensions, Linear programming	To demonstrate the equation of a plane in normal form.
NOVEMBER	Probability, Relation and functions	Probability, Relation and functions	To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \parallel m\}$ is an equivalence relation.
DECEMBER	Revision for all chapters	Revision for all chapters	<p style="text-align: center; margin: 0;">THEOREM 5.17 INTEGRALS INVOLVING INVERSE TRIGONOMETRIC FUNCTIONS</p> <p style="margin: 0;">Let u be a differentiable function of x, and let $a > 0$.</p> <p style="margin: 0;">1. $\int \frac{du}{\sqrt{a^2 - u^2}} = \arcsin \frac{u}{a} + C$ 2. $\int \frac{du}{u^2 + a^2} = \frac{1}{a} \arctan \frac{u}{a} + C$</p> <p style="margin: 0;">3. $\int \frac{du}{u\sqrt{u^2 - a^2}} = \frac{1}{a} \operatorname{arcsec} \frac{ u }{a} + C$</p>

JANUARY	Revise for all chapters	Revise for all chapters	
FEBRUARY	Revise for all chapters	Revise for all chapters	