

THE AIR FORCE SCHOOL : SUBROTO PARK : DELHI CANTT-110010

Class – XI

Sub: MATHEMATICS

Weekly Syllabus (Tentative)

Academic Session 2024-25

Month	Week	Dates		Days	No of Periods	Chapter	Contents	Syllabus
Apr-24	I	01-06	06-Working Saturday (Staff)	05				
	II	08-12	11 – Id-ul-Fitr	04				
	III	15-19	14 - Ambedakar Jayanti 17 – Ram Navami 21 - Mahavir Jayanti	04	06	<u>Chapter 1</u> Sets	Sets & their Representations, Empty Sets, Finite & Infinite Sets, Equal Sets, Subsets, Subsets of a set of real numbers especially intervals, Universal Set	
	IV	22-27	27-Working Saturday (Student)	06	08	<u>Chapter 1</u> Sets	Venn Diagrams, Operations on Sets, Difference of sets, Complement of a set	
	V	29-30		02	02	<u>Chapter 1</u> Sets	Properties of Complement	
May-24	I	01-03	01-03 : ES-1 (XII)/ CT-1 (X)	03	04	<u>Chapter 5</u> Linear Inequalities	Inequalities, Algebraic Solutions of Linear Inequalities in One Variable and their representation on the number line	ES-1 (XII)/ CT-1 (X) Date: 01-07 May
	II	06-10	06-07 : ES-1 (XII)/ CT-1 (X) 09,10 – The Quest	05	08	<u>Chapter 5</u> Linear Inequalities	Algebraic Solutions of Linear Inequalities in One Variable	
	III	13-18	18- Working Saturday	06	08	<u>Chapter 5</u>	Algebraic Solutions of Linear	

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			(Open House X & XII)			Linear Inequalities	Inequalities in One Variable	
***** SUMMER BREAK 20 MAY -30 JUN 2024 *****								
Jul-24	I	01-06	01- School reopens for staff 06-Working Saturday (Student)	05		Chapter 5 Linear Inequalities Chapter 1 Sets	Recapitulation	PT-I Class VI-X Date: 05 Jul – 12Jul ES-2 (XII): 05 Jul – 12Jul
	II	08-12		05	08	Chapter 2 Relations and Functions	Ordered pairs, Cartesian Product of Sets, number of elements in cartesian product of 2 finite sets, Cartesian product of the set of reals with itself (upto $R \times R \times R$) Relations- Definition, pictorial diagram, Relation as a Subset of Cartesian Product of Sets, Domain and Range of Relation	
	III	15-19	17-Muharram	04	06	Chapter 2 Relations and Functions	Functions- Introduction as a Special Type of Relation, Pictorial representation of a function, Domain & Range of Special Types of Functions with graphs. Sum, difference, product and quotient of functions	
	IV	22-27	27 – Working Saturday (Students)	06	08	Chapter 2 Relations and Functions Chapter 3 Trigonometric Functions	Types of Functions with graphs. Sum, difference, product and quotient of functions Positive & negative angles, Radian measure, Domain & Range of Trigonometric Functions and their graph	

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	V	29-31		03	05	Chapter 3 Trigonometric Functions	Signs of trigonometric functions, Trigonometric Functions of Sum & Difference of Two Angles.	
Aug-24	I	01-03	03 – Working Saturday (Open House (VI-X), XII)	03	02	Chapter 3 Trigonometric Functions	Trigonometric Functions of Sum & Difference of Two Angles. Identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ & $\tan 3x$	
	II	05-09		05	08	Chapter 3 Trigonometric Functions	Identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ & $\tan 3x$	
	III	12-16	15 – Independence Day	04	06	Chapter 4 Complex Numbers and Quadratic Equations	Definition, Algebra of Complex Numbers, Modulus and Conjugate of Complex number, Argand plane	
	IV	19-23	19-Raksha Bandhan	04	06	Chapter 8 Sequences and Series	Sequences & Series, Geometric Progression, A.M.	ES-1 (XI): Chapter 3 Trigonometric Functions Chapter 5 Linear Inequalities
	V	26-31	26-Janmashtami 31-Working Saturday (Students) 31-Annual Prize Distribution	05	06	Chapter 8 Sequences and Series	Relationship between A.M. & G.M Infinite G.P. and its Sum	
Sep-24	I	02-06		05	08		REVISION	
	II	09-14	14 – Working Saturday (Students)	06		Mid Term/ HYE Exam		Mid Term (PT-II)/ HYE Date 09-24 Sep
	III	16-21	16-Milad-un-Nabi 21 – Working Saturday (Students)	05				

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	IV	23-27		05	05	Chapter 6 Permutations & Combinations	Fundamental principle of counting, factorial $n(n!)$, derivation of the formula for ${}^n P_r$ and ${}^n C_r$, Permutations	Chapter 1 Sets Chapter 2 Relations and Functions Chapter 3 Trigonometric Functions Chapter 4 Complex Numbers and Quadratic Equations Chapter 5 Linear Inequalities Chapter 8 Sequences and Series
	V	30		01	01	Chapter 6 Permutations & Combinations	Combinations	
Oct-24	II	01-05	02-Mahatma Gandhi's Birthday 05-Annual Prize Distribution	04	06	Chapter 6 Permutations & Combinations	Combinations Simple applications	
	III	07-12	09-13- Autumn Break 12- Dussehra	02	02	Chapter 7 Binomial Theorem	Statement and proof of binomial theorem for positive integral indices	
	IV	14-19	17-Maharishi Valmiki's Birthday 19 – Working Saturday (Open House VI-XII)	05	07	Chapter 7 Binomial Theorem Chapter 9 Straight Lines	Pascals Triangle, simple applications Slope of a Line, Angle between two lines & a Line	
	V	21-25	20- Karwa Chouth	05	08	Chapter 9 Straight Lines	Various Forms of the Equations of a Line	
	VI	28-31	30-03 Nov – Diwali Break	02	03	Chapter 9 Straight Lines	Various Forms of the Equations of a Line	
*** Autumn Break 09-13 Oct 2024 ***								

Month	Week	Dates		Days	No of Periods	Chapter	Contents	Syllabus
Nov-24	I	04-09	09 – Working Saturday (Students)	06	08	Chapter 9 Straight Lines	Distance of a Point from a Line	
	II	11-15	12 – Annual Day 15 – Guru Nank's Birthday	04	06	Chapter 11 Introduction to Three Dimensional Geometry	Introduction, Coordinate Axes and Coordinate Planes in Three Dimensional Space, Coordinates of a Point in Space, Distance between Two Points	
	III	18-22		05	08	Chapter 12 Limits and Derivatives	Introduction, intuitive idea of limits, limits of polynomial & rational functions, Limits of trigonometric functions	PT-II (VI-VIII): 19 Nov-10 Dec PT-III (IX): 19 Nov-10 Dec PT-III (X): 14 Nov-25 Nov MPB (XII): 14 Nov-25 Nov
	IV	25-30	29,30 – Annual Athletic Meet	06	06	Chapter 12 Limits and Derivative	Limits of trigonometric functions, Limits of exponential and logarithmic functions	
Dec-24	I	02-07	07 – Sports Day	06	08	Chapter 12 Limits and Derivatives	Definition of derivative, derivative of sum, difference, product and quotient of functions	
	II	09-13		05	08	Chapter 12 Limits and Derivatives Chapter 10 Conic Sections	Derivative of sum, difference, product and quotient of functions Introduction, Section of a Cone, Standard equation of a Circle,	
	III	16-21	21-Working Saturday, Open House (X & XII)	06	08	Chapter 10 Conic Sections	Standard equation and simple properties of an Ellipse, Hyperbola	
	IV	23	24,25 – Christmas Holidays	01	02	Chapter 10 Conic Sections	Standard equation and simple properties of an Ellipse, Hyperbola	

***** Winter Break from 26 Dec to 04 Jan 2025 *****

Month	Week	Dates		Days	No of Periods	Chapter	Contents	Syllabus
Jan-25	I	06-10		05	08	Chapter 13 Statistics	Measures of Dispersion, Range, Mean Deviation	
	II	13-18	18-Working Saturday, Open House (VI-IX, XI)	06	08	Chapter 13 Statistics Chapter 14 Probability	Variance and Standard Deviation of grouped or ungrouped data Events, occurrence of events, 'not', 'and' and 'or' events	
	III	20-25	25-Citation Ceremony 25-Open House XII 26-Republic Day	06		Chapter 14 Probability	Exhaustive events, mutually exclusive events, Types of Experiments Axiomatic Approach to Probability	
	IV	27-31		05		Chapter 14 Probability	Probability of events, 'not', 'and' and 'or' events	
Feb-25	I	01	01 – Farewell XII 01- Open House X	01				Annual Exam Class IX & XI – 05 Feb-19 Feb 2025
	II	03-07		05				
	III	10-14		05				
	IV	17-22	22-Working Saturday (students)	06				
	V	24-28	26-Maha Shivratri	04				
Mar-25	Annual Exam Classes VI-VIII – 25 Feb-10 Mar 2025							

Note: The examination syllabus as mentioned above is to be considered Tentative. The final syllabus for each exam will be uploaded on the website along with the Date Sheet at the time of the examination.