

SYLLABUS BREAKUP (2026-27)
SUBJECT: APPLIED MATHEMATICS
CLASS-XII

FIRST CYCLE TEST: MAY 11, 2026

SECOND CYCLE TEST: JULY 27, 2026

FIRST PRE- BOARD EXAM: NOVEMBER 13, 2026 ONWARDS

SECOND PRE- BOARD EXAM: DECEMBER 14, 2026 ONWARDS

MONTH	CONTENT	No. of Periods
	UNIT- 2: ALGEBRA	
	TOPIC: MATRICES & DETERMINANTS	
APRIL NO.OF DAYS = 18 No. of Periods (app) = 24	Introduction and Types of Matrices	2
	Operation on Matrices	2
	Transpose of a Matrix, Symmetric & Skew Symmetric Matrices.	2
	Determinants (Minors & Co- factors)	3
	Adjoint and inverse of a Matrix	2
	Problems on Determinants and Matrices	3
	Solving system of simultaneous equations using matrix method and Cramer's rule	4
	UNIT – 3: CALCULUS	
	(I) DIFFERENTIATION, APPLICATION OF DERIVATIVES	
	Higher Order Derivatives	2
	Rate of change	2
	Marginal Cost and Marginal Revenue using derivatives	2
MAY NO. OF DAYS =19 No. of Periods (app) = 28	Increasing and Decreasing Function	2
	Maxima & Minima	2
	Problem Discussion	2
	(II) INTEGRATION	
	Introduction, formulae, Basic Direct Problem	1
	Integration by substitution	2
	Integration by part	2
	Partial Fractions	3
	Definite integration	3
	Properties of definite integral	2
	Application of integration (Area under the curve, Producer surplus, Consumer Surplus)	3
	(III) DIFFERENTIAL EQUATIONS	
	Definition	2
	Formation of differential equation whose general solution is given	2
	Solution of differential equation (Variable separable only)	2
JULY NO. OF DAYS = 22 No. of Periods (app) = 28	UNIT: 1 (I) MODULO ARITHMETIC	
	Definition of modulus of an integer and apply arithmetic operations using modular arithmetic rules	1
	Definition of congruence modulo and apply the definition in various problems	1
	(II) ALLIGATION AND MIXTURE	
	Understand the rule of alligation to produce a mixture at a given price	1
	Determine the mean price of a mixture	1
Apply rule of alligation	1	

	(III) NUMERICAL PROBLEMS	
	Boats and Streams (upstream and downstream)	1
	Pipes and Cisterns	1
	Races and Games	2
	Numerical Inequalities	2
	UNIT – 8 LINEAR PROGRAMMING	
	Familiarize with terms related to Linear Programming Problem	1
	Formulate Linear Programming Problem. Draw the Graph for a system of linear inequalities involving two variables and to find its solution graphically.	3
	UNIT - 7 FINANCIAL MATHEMATICS	
	Perpetuity, Sinking Funds	2
	Valuation of Bonds	2
	Calculation of EMI	3
	Compound Annual Growth Rate	3
	Linear method of Depreciation	3
AUGUST NO. OF DAYS = 19	UNIT – 4 PROBABILITY DISTRIBUTION	
No. of Periods (app) = 28	Understand the concept of Random Variables and its Probability Distributions	2
	Finding the probability distribution of discrete random variable	3
	Apply arithmetic mean of frequency distribution to find the expected value of a random variable	2
	Calculate the Variance and S.D. of a random variable	3
	Identify the Bernoulli Trials and apply Binomial Distribution	3
	Evaluate Mean, Variance and S.D of a binomial distribution	3
	Understand the Conditions of Poisson Distribution	3
	Evaluate the Mean and Variance of Poisson distribution	3
	Understand normal distribution is a Continuous distribution	3
	Evaluate value of Standard normal variate (NORMAL DISTRIBUTION)	3
	Area relationship between Mean and standard Deviation	
SEPTEMBER & OCTOBER	UNIT – 6 TIME BASED DATA	
NO. OF DAYS = 39	Identify time series as chronological data	3
No. of Periods (app) = 46	Distinguish between different components of time series	3
	Solve practical problems based on statistical data and Interpret the result	3
	Understand the long term tendency	3
	Methods of Measuring trend	3
	UNIT - 5 INFERENCE STATISTICS	
	Define Population and Sample, Differentiate between population and sample	3
	Define a representative sample from a population Differentiate between a representative and non-representative sample	3
	Draw a representative sample using simple random sampling	4
	Draw a representative sample using and systematic random sampling	
	Parameter and Statistics and Statistical Interferences	5
	t-Test (one sample t-test and one groups t-test)	5
	REVISION	11

