

2010-11
MATHEMATICS (Week wise syllabus)
COURSE STRUCTURE
Class – XII (Theory)

One Paper	Time : 3 Hours 100	100 Marks
Unit No.	Title	Marks
Unit I	Relation and Function	10
Unit II	Algebra	13
Unit III	Calculus	44
Unit IV	Vector and Three-dimensional Geometry	17
Unit V	Linear programming	06
Unit VI	probability	10
	Total	100

CLASS – XII
SUBJECT MATHEMATICS

Date	Days	Topic	Sub Topic
2.4.10 to 3.4.10 5.4.10 to 9.4.10	07	Unit II	Matrices:- Concept, notation, equality, types of matrices, Zero matrix, transpose of a matrix, symmetric, and skew symmetric matrices, addition multiplication, scalar multiplication of matrix, simple properties of addition, multiplication, scalar multiplicative, non-commutativity of matrix multiplication and existence of non Zero matrixes whose product is Zero restricted to square matrix? Matrix of order 2. Concept of elementary row and column operation. Invertible matrices and proof the uniqueness of inverse if it exists.
12.4.10 to 17.4.10	6	Unit II Algebra	Determinants :-Det of square matrix up to 3x3 matrix, properties of det, minors, cofactors and application of det in finding the area of triangle, adjoint and inverse, of square matrix. Det :-Consistency in Consistency and no solution of a system of linear = ns by example, solving system of linear equation in two and three variables (having unique solution) using of a matrix
19.4.10 to 24.4.10	6	Algebra	Relation and functions
26.4.10 to 1.5..10	6	Unit Inverse Trigonometrical functions	Trigonometrical function:-Definition, Range, Domain, Principle value branches, graphs of inverse trig fns.
3.5.10 to 7.5.10	5	Unit III	Calculus :- Continuity and Differentiability derivatives of composite function, chain rule derivative of inverse trig function, derivatives of implicit function.
10.5.10 to 25.6.10	SUMMER VACATIONS		
26.6.10 to 28.6.10 3.7.10	7	Unit III Calculus	concept and derivatives of exponential logarithmic functions and parametric functions
5.7.10 to 9.7.10	5	Unit III Calculus	second order derivatives, Roll 's and Langrage 's m ean values theorem (without proof)
12.7.10 to 17.7.10	06	Unit III Calculus	Calculus :- Application of derivatives, rate of change, increasing functions, tangents and normal, approximation of derivative.
19.7.10 to 24.7.10	06	Unit III Calculus	Maxima and minima (I st derivative test and II nd derivatives test Simple problem, Related to real life situations,
26.7.10 to 31.7.10	6	Unit III Calculus	Calculus:- (Integrals) Integration as inverse Calculus process of Differentiation. Integration of variety of function by substitution,
2.8.10 to 7.8.10	6	Unit III Calculus	Integration by partial fraction, by parts and Integration based on formulas.

9.8.10 to 13.8.10	5	Unit III Definite Integral	Definite Integral : - Def integral as a limit of sum fundamental theorem of calculus
16.8.10 to 21.8.10	6	Unit III Definite Integral	Def. Integral :- Basic properties and integration based on properties of definite integrals
23.8.10 to 28.8.10	5	Unit III	Application of Integrals:-Finding the area under simple curves especially lines, areas of circles, In standard form only,
30.8.10 to 4.9.10 {Janmashmi} (2.9.10 G.H.)	6	Unit III r	Finding the area under area between the above two said curves) (region should be clearly identified)
6.9.10 to 10.9.10	4	Revision	
8.9.10	1ST CCEP EXAM		
13.9.10 to 20.9.10	1ST TERMINAL EXAM		
21.9.10 to 22.9.10	2	Discussion 1 st term exam	Discussion of 1 st term exam
23.9.10 to 25.9.10	3	Unit III	Differential Equations : -definition, order and degree, general and particular solution of differential whose general solution is given, variable separable method
27.9.10 to 30.9.10	4		solution of homogenous differential equations of 1 st order and 1 st degree,
1.10.10 to 17.10.10	AUTUMN BREAK		
18.10.10 to 23.10.10	6		Solution of linear constant differential equations.
25.10.10 to 30.10.10	6	Unit IV Vectors	Vector:-Type 's vectors (equal, unit, zero parallel of a point, negative of a vector, component of a vector, Addition of vectors. Multiplication of vector by scalar, position vector of a point, dividing scale line segment in a given ratio, (dot) product of vectors Direction Cosines and direction ratio of vectors Projection of a vector on a line, cross product of vector,
1.11.10 to 6.11.10 {3.11.10 - Diwali}	5	3D Unit IV	Three dim geo: - Direction cosines, Direction Ratios of a line join two points. Cartesian and vector equation of a line, coplanar and skew lines.
8.11.10 to 12.11.10	5	3D	Three dimensional geometry: -Shortest distance between (i) two lines (ii) two planes Shortest distance between a line and a planes, Dist of a pt from a planes
15.11.10 to 20.11.10	6	3D	Subtopic Linear Prog:- Introduction definition of related terminology such as Constraints, objective function, Optimization, different type of linear Programming (L.P), Mathematical Formulation of L.P. Problems. Graphical method of solution for problems in two variable, feasible and Infeasible regions. Optimal feasible solutions (up to three non trivial constraints)
22.11.10 to 27.11.10	5	Unit IV Probability	Probability - multiplication theorem problems on probability and conditional probability Independent events, total probability, Bay's theorem
29.11.10 to 30.11.10	2	Unit IV Probability	Prob:- Random variable and its probability distribution mean and variance of probability distribution independent (Bernoulli) trials and Binomial Distribution.

1.12.10 to 4.12.10	4	Revision
6.12.10 to 9.12.10	4	Revision
10.12.10		CCEP EXAM
13.12.10 TO 22.12.10	10	2nd TERMINAL EXAMS
23 TO 24 Dec.	2	Discussion of 2 nd term exam
25.12.10 to 7.1.11	14	Winter Break
10.1.11 to 14.1.11	5	Revision
15.1.11 to 25.1.11	11	1 st PRE-BOARD
26.1.11 to 31.1.11	6	Question Bank & Revision of all topics
1.2.11 to 25.2.11	25	2 nd PRE-BOARD and Discussion of Sample Papers of CBSE & Revision.

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