2009-2010
Mathematics (week wise syllabus)
COURSE STRUCTURE
Class XII (Theory)

One Paper	Time 3 Hours	100 Mark

Unit No	Title	Mark
Unit I	Relation and Functions	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
April 09			
1- 04 06-11	06	Units 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-commutatively of matrix multiplication and existence of non Zero matrix 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.
13-18	06	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
27-30	04	Algebra	Continuation of Relation and functions
July 09			
1-4	04	Unit Inverse Trigonometical functions	Inverse trigonometrical function:- Definition, Range, Domain, Principle value branches, graphs of inverse trig fns, elementary

			properties of increasing function.
6-10	05	Unit III	Calculus :- Continuity and Differentiability derivatives of composite function, chain rule. derivatives of inverse trig function, derivatives of inverse trig function, derivatives of implicit function.
13-18	06	Unit III	concept and derivatives of exponential logarithmic functions and parametric functions second order derivatives, Rolle's and Langrage's mean values theorem (without proof)
20-25	06	Unit III Calculus	Calculus :- Application of derivatives, rate of change, increasing functions, tangents and normals, approximation maxima and minima (I^{st} derivative test and II^{nd} derivatives test Simple problem, Related to real life situations,
27 – 31 July 1 August	05 01	Unit III Calculus	Calculus:- (Integrals) Integration as inverse Calculus process of differentiation. Integration of variety of function by substitution, by partial fraction, by parts and integration based on formulas.
3-7	05	Unit III Definite Integral	Definite Integral :- Def integral as a limit of sum fundamental theorem of calculus
10-13 17-22	04 04		Def. Integral :- Basic properties and integration based on properties of definite integrals
24-29 31	06 01		Application of Integrals:- Finding the area under simple cures especially lines, areas of circles, parabolas ellipse (In standard from only, area between the above two said curves) (region should be clearly identified)

September 09			
1-5	4	Unit III	Differential Equations :- definition, order and degree, general and particular solution of differential whose general solution is given, solution of homogenous differential equations of Ist order and Ist degree, solution of linear .differential equations
4-09-09			Ist C.C.E.P
7-9	04		Revision
10-09-09 to 18-09-09		**1st Terminal Exam**	
19- 28			Autumn Break
October 09			
29-3	04	Vectors	Vector:- Type's vectors (equal, unit, zero parallel of a point, negative of a vector, component of a vector, addition of vectors.
5-9	05		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
12-16	05	Vectors Unit- IV 3 D	Projection of a vector on a line, cross product of vector, Three dim geo :- Direction cosines Ratios of a line joining two points. Cartesian and vector equation of a line, coplanar and skew lines.
19-24	06	3 D	Three dimensional geometry:- Shortest distance between (i) two lines (ii) two plans
26-31	06	3D	Shortest distance between a line and a plane, Dist of a pt from a plane

November 09			
3-7	06	Unite V Linear Programming	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)
9-13 16-21	05 06	Unit VI Probability	Probability - multiplication theorem problems on probability and conditional probability Independent events, total probability, Bay's theorem Prob:- Random variable and its prob distribution mean and variance of probability distribution independent (Bernoulli) trails and Binamial Distribution.
23rd Nov to 14 Dec			23-11-09 to 14-12-2009 Revision
		21-11-09	C.C.E.P
15-12-09 to 22-12-09		**2nd Terminal Exam**	
23 to 24 Dec	2		Discussion of II term exam
25 to 31 Dec			Winter Break
January 2010			
1-14			Revision
15-25			Ist Pre-Board Exam

26-31			Question Bank
February 2010			
1-25			IInd Pre-Board and discussion of sample papers of C.B.S.E

Mrs. Neelam Kapoor
PGT (Maths)
Sister Nivedita S.K.V
A-Block. Defence Colony
New Delhi

Mrs. Kapila
PGT (Maths)
S.S.V. Jangpura
Kamla Nehru, S.K.V
Jangpura, New Delhi