

SYLLABUS OF MATHEMATICS AS PER CCE GUIDELINES

CLASS X

FIRST TERM		MARKS : 80
UNITS		MARKS
I	NUMBER SYSTEMS Real Numbers	10
II	ALGEBRA Polynomials, Pair of Linear Equations in two variables	20
III	GEOMETRY Triangles	15
V	TRIGONOMETRY Introduction to trigonometry, Trigonometric Identity	20
VII	STATISTICS	15
TOTAL		80

CLASS X

SECOND TERM		MARKS : 80
UNITS		MARKS
II	ALGEBRA (contd.) Quadratic equations, Arithmetic progression	20
III	GEOMETRY (contd.) Circles Constructions.	16
IV	MENSURATION Areas Related to Circles, Surface Areas & Volumes	20
V	TRIGONOMETRY (contd.) Heights & Distances	08
VI	COORDINATE GEOMETRY	10
VII	PROBABILITY	06
TOTAL		80

WEEK WISE DISTRIBUTION OF 10TH CLASS MATHS
SYLLABUS FOR 2010-2011

Week / Dates	No. of working Day	Chapter/ Topic	Details
April 01-04-10 To 03-04-10	2	Chapter-1 Real Number	Euclid's division lemma-finding HCF & LCM of numbers Ex- 1.1
April 05-04-10 To 09-04-10	5	Chapter-1 Real Number Mental Maths	Fundamental Theorem of Arithmetic Ex1.2, Theorem 1.3 and proofs of results - irrationality of $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$ – Ex 1.3
April 12-04-10 To 17-04-10	6	Chapter -1 Real Numbers Mental Maths Chapter -2 Polynomials Mental Maths	Decimal expansion of rational number in terms of terminating / non-terminating recurring decimal – Ex.1.4 Zeroes of a Polynomial & Geometrical meaning of the Zeroes of a polynomial Ex-2.1
April	6	Chapter -2	Relationship between zeroes and co-efficient of a polynomial with real coefficient of a polynomial

19-04-10 To 24-04-10		Polynomials Mental Maths	Ex 2.2 Division algorithm with real coefficient. Ex. 2.3
April/ May 26-04-10 To 01-05-10	5	Chapter-3 Pair of Linear equations in two variables Mental Maths	Pair of Linear equations in two variables – Ex 3.1 Geometric representation of different possibilities of solution / inconsistency Graphical Method of solution of a pair of linear equations– Ex 3.2
May 03-05-10 To 07-05-10	5	Chapter - 3 Pair of Linear equations in two variables Mental Maths	Algebraic Method of solving of linear equations – substitution method – Ex 3.3, Elimination method – Ex 3.4
10-05-10 To 25-06-10			SUMMER VACATIONS
June/July 26-06-10 28-06-10 To 03-07-10	1+6 = 7	Chapter-3 Pair of Linear equations in two variables Mental Maths	Cross Multiplication Method- Ex 3.5, Equation reducible to a linear equations in two variables – Ex 3.6
July 05-07-10 To 09-07-10	5	Chapter-6 Triangles	Introduction, Examples of similar triangle, Basic Proportionality theorem (with proof) Ex 6.1, Ex 6.2

		Mental Maths	<p>(Motivate) If in two triangles, corresponding angles are equal, then their corresponding sides are in the same ratio (or proportion) and hence the two triangles are similar.</p> <p>(Motivate) If in two triangles, sides of one triangle are proportional to (i.e. in the same ratio of) the sides of the other triangle then their corresponding angle are equal and hence the two triangles are similar.</p> <p>(Motivate) If one angle of a triangle is equal to one angle of the other triangle and the sides including these angles are proportional, then the two triangles are similar. Ex 6.3</p>
July 12-07-10 To 17 -07-10	6	Chapter-6 Triangles Mental Maths	<p>Ex 6.3 (Continued), (With Proof) The ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides, Ex 6.4</p>
July 19-07-10 To 24-07-10	6	Chapter-6 Triangles Mental Maths	<p>(Motivate) If a perpendicular is drawn from the vertex of the right triangle to the hypotenuse then triangles on both sides of the perpendicular are similar to the whole triangle and to each other.</p> <p>(With Proof) In a right triangle the square of the hypotenuse is equal to the sum of the squares of the other two sides.</p> <p>(With Proof) In a triangle, if square of one side is equal to the sum of the squares of the other two</p>

			sides, then the angle opposite the first side is a right angle. Ex 6.5
July 26-07-10 To 31-07-10	6	Chapter 8 Introduction to Trigonometry Mental Maths	Trigonometric ratios of an acute angle of a right angled triangle Ex 8.1 Trigonometric Ratios of some specific angles, value (with proof) of the trigonometric ratios of 30° , 45° and 60° - Ex 8.2
August 02-08-10 To 07-08-10	6	Chapter 8 Introduction to Trigonometry Mental Maths	Ex 8.2 (Contd.), Trigonometric ratios of complementary angles – Ex 8.3
August 09-08-10 To 13-08-10	5	Chapter 8 Introduction to Trigonometry Mental Maths	Trigonometric Identities, Proof and application of the identity $\sin^2 A + \cos^2 A = 1$, Ex 8.4
August 16-08-10 To 21-08-10	6	Chapter 8 Introduction to Trigonometry	Ex 8.4 (Contd.)

		Chapter – 14 Statistics Mental Maths	Introduction, Mean of Grouped Data Ex 14.1,
August 23-08-10 To 28-08-10	6	Chapter – 14 Statistics Mental Maths	Mode of Grouped Data Ex 14.2, Median of Grouped Data Ex 14.3
August/ September 30-08-10 To 04-09-10	5	Chapter – 14 Statistics Mental Maths	Ex 14.3 (Contd.) Graphical representation of cumulative frequency distribution – Ex 14.4
September 06-09-10 To 11-09-10	3		REVISION
08-09-10			FIRST C C E P
September 13-09-10 To 18-09-10	6		REVISION
September 20-09-10 To 30-09-10			FIRST SEMESTER EXAM

October 01-10-10 To 17-10-10			AUTUMN BREAK
October 18-10-10 To 23-10-10	5	Chapter 4- Quadratic Equation Mental Maths	Standard form of quadratic equation – Ex4.1, Solution of a quadratic equation by factorization method- Ex 4.2
October 25-10-10 To 30-10-10	6	Chapter 4- Quadratic Equation Mental maths	Solution of a quadratic equation by completing the square, and by using quadratic formula, Relationship between discriminate & nature of roots – Ex 4.3 and Ex 4.4
November 01-11-10 To 06-11-10	5	Chapter-5 Arithmetic progression Mental Maths	Introduction to A.P. n^{th} term of an A.P. Ex 5.1, Ex 5.2.
November 08-11-10 To 12-11-10	5	Chapter-5 Arithmetic progression Mental Maths	Ex 5.2 (Contd.) Sum of first n terms – Ex 5.3

November 15-11-10 To 20-11-10	5	Chapter 10 Circles Mental Maths	Introduction, Tangents to a circle (With proof) The tangent at any point of a circle is perpendicular to the radius through the point of contact. (With Proof) The length of tangents drawn from an external point to a circle are equal – Ex 10.1, Ex 10.2
November 22-11-10 To 27-11-10	6	Chapter 10 Circles Chapter-11 Constructions Mental Maths	Ex 10.2 (Contd.) Division of a line segment in a given ratio (Internally), Tangent to a circle from a point outside it. Construction of a triangle similar to a given triangle Ex 11.1, Ex 11.2
November/December 29-11-10 To 04-12-10	6	Chapter-11 Constructions Chapter 12- Area related to circle Mental Maths	Ex 11.2 (Contd.), Perimeter and area of the circle – Ex 12.1 Area of sector and segment of a circle Ex 12.2
December 06-12-10 To 09-12-10	4	Chapter 12- Area related to circle	Area of combinations of plane figures – Ex 12.3

		Mental Maths	
10-12-10			SECOND C C E P
December 13-12-10 To 18-12-10	5	Chapter-7 Co-ordinate Geometry Mental Maths	Introduction, Distance formula, Section formula – Ex 7.1, Ex 7.2
December 20-12-10 To 24-12-10	5	Chapter-7 Co-ordinate Geometry Mental Maths	Ex 7.2 (Contd.) Area of Triangle Ex 7.3
27-12-10 To 7.01.11			WINTER BREAK
January 10-01-11 To 15-01-11	6	Chapter 9 Some applications of Trigonometry Mental Maths	Introduction, Heights and Distances, Simple and believable problems on height and distance, Problems should not involve more than two right triangles. Angle of elevation / depression should be only 30^0 , 45^0 , 60^0 – Ex 9.1

January 17-01-11 To 22-01-11	6	Chapter 13- Surface areas and Volumes Mental Maths	Introduction, Surface area of combinations of solids, volume of the combination of solids and conversion of solids from one shape to another- Ex 13.1, Ex 13.2
January 24-01-11 To 29-01-11	5	Chapter 13- Surface areas and Volumes Mental Maths	Ex 13.2 (Contd.), Ex 13.3
January/ February 31-01-11 To 05-02-11	6	Chapter 13- Surface areas and Volumes Chapter-15 Probability Mental Maths	Frustum of a cone Ex 13.4, Introduction of Probability
February 07-02-11 To 11-02-11	5	Chapter-15 Probability Mental Maths	Simple problems on single event Ex 15.1
February 14-02-11 To 19-02-11			REVISION
February 21-02-11 To 28-02-11			REVISION
March 01-03-11 To 31-03-11			SECOND SEMESTER EXAM AND RESULT

