

The Orchid School
Weekly Syllabus Overview 2015- 2016
Std : XII
Subject : Math

Month	Lesson / Topic	Expected Learning Objective	Activities/ FAs Planned	Remark
JUNE	Continuity and differentiability, exponential differentiation	Most students will be able to understand the concept of exponential differentiation and solve sample examples based on the same	ex 6.4 and 6.5 NCERT	
	Continuity and differentiability, logarithmic differentiation	Most students will be able to understand the concept of logarithmic differentiation and solve sample examples based on the same	Ex 6.6 and 6.7 NCERT	
	Continuity and differentiability, derivatives of functions in parametric form.	Most students understand will be able to understand the concept of parametric differentiation and solve sample examples	Ex 6.7 and 6.8 NCERT	
	Second order derivatives, Rolle's and Lagrange's theorem	Most students understand the concept of Rolle's and Lagrange's theorem and solve sample examples	Miscellaneous exercises NCERT	
JULY	Applications of derivatives, rate of change of quantities, tangents and normals	Most students will be able to understand the concept of applications of derivatives, rate of change of quantities, tangents and normals and solve numericals	NCERT 6.1 AND 6.2	
	Applications of derivatives, maxima and minima, increasing/decreasing functions	Most students will be able to understand the concept of applications of derivatives, maxima and minima, increasing/decreasing functions solve sample examples based on the same	NCERT 6.2 AND 6.3	

	Applications of derivatives, approximation	Most students will be able to understand the concept of and solve the numericals based on applications of derivatives ,approximation	NCERT EX 6.3 AND 6.4	
UT 1				
JULY	Integration of a variety of functions by substitution Integration of a variety of functions by trigonometric functions,	Most students will be able to understand the concept of and solve the numericals based on integration of a variety of functions by substitution Integration of a variety of functions by trigonometric functions,	EX 7.1 , 7.2 , 7.3	
	Integration,integrals of particular functions,integration by partial fractions,integration by parts	Most students will be able to understand the concept of and solve the numericals based on integration,integrals of particular functions,integration by partial fractions,integration by parts	ex 7.4,7.5,7.6 NCERT	
AUG	Definite integrals,D.I by substitution,properties of the same	Most students will be able to understand the concept of and solve the numericals based on definite integrals,D.I by substitution,properties of the same	ex 7.7,7.8,7.9,7.10,7.11 NCERT	
	Applications of integrals,Applications in finding the area under simple curves, especially lines, arcs of circles/parabolas/ellipses (in standard form only),	Most students will be able to understand the concept of and solve the numericals based on applications of integrals,Applications in finding the area under simple curves, especially lines, arcs of circles/parabolas/ellipses (in standard form only),	ex 8.1 NCERT	
	Applications of integrals, area between the two above said curves.	Most students will be able to understand the concept of and solve the numericals based on applications of integrals, area between the two above said curves.	ex 8.2 NCERT	
	Relations and functions,Types of relations: Reflexive, symmetric, transitive and equivalence relations	Most students will be able to understand the concept of and solve the numericals based on relations and functions,Types of relations: Reflexive, symmetric, transitive and equivalence relations		

SEPT	Relations and functions, One to one and onto functions, composite functions, inverse of a function. Binary operations.	Most students will be able to understand the concept of and solve the numericals based on relations and functions,. One to one and onto functions, composite functions, inverse of a function. Binary operations.		
	Differential equations,order and degree of DE, general and particular solutions of DE	Most students will be able to understand the concept of and solve the numericals based on differential equations,order and degree of DE ,general and particular solutions of DE	ex 9.1,9.2 NCERT	
	Differential equations,formation of DE,methods of solving first order first degree DE	Most students will be able to understand the concept of and solve the numericals based on differential equations,formation of DE,methods of solving first order first degree DE	ex 9.3,9.4 NCERT	
	Differential equations, s, homogeneous differential equations of first order and first degree. Solutions of linear differential equation	Most students will be able to understand the concept of and solve the numericals based on differential equations, s, homogeneous differential equations of first order and first degree. Solutions of linear differential equation	ex 9.5,9.6 NCERT	
	Vectors,Vectors and scalars,	Most students will be able to understand the concept of and solve the numericals based on Vectors,Vectors and scalars, magnitude and direction of a vector. Direction cosines/ratios of vectors. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector	ex 10.1 , 10.2 NCERT	
Term 1 Exam				

OCT

<p>Vectors, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors, scalar triple product.</p>	<p>Most students will be able to understand the concept of and solve the numericals based on Vectors, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors, scalar triple product.</p>	<p>Ex 10.3 , 10.4 NCERT</p>	
<p>Three-dimensional Geometry, Direction cosines/ratios of a line joining two points. Cartesian and vector equation of a line, coplanar and skew lines, shortest distance between two lines</p>	<p>Most students will be able to understand the concept of and solve the numericals based on Three-dimensional Geometry, Direction cosines/ratios of a line joining two points. Cartesian and vector equation of a line, coplanar and skew lines, shortest distance between two lines</p>	<p>Ex 11.1 , 11.2 NCERT</p>	
<p>Three-dimensional Geometry, Cartesian and vector equation of a plane. Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane.</p>	<p>Most students will be able to understand the concept of and solve the numericals based on</p>	<p>ex 11.3 and miscellaneous NCERT</p>	
<p>Linear Programming, Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constrain</p>	<p>Most students will be able to understand the concept of and solve the numericals based on Linear Programming, Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constrain</p>	<p>ex 12.1 ,12.2 NCERT</p>	

NOV	Probability, Multiplications theorem on probability. Conditional probability, independent events, total probability, Baye's theorem.	Most students will be able to understand the concept of and solve the numericals based on Probability, Multiplications theorem on probability. Conditional probability, independent events, total probability, Baye's theorem.	ex 13.1 , 13.2 NCERT	
	Probability, Random variable and its probability distribution, mean and variance of haphazard variable	Most students will be able to understand the concept of and solve the numericals based on Probability, Random variable and its probability distribution, mean and variance of haphazard variable	ex 13.3 13.4	
	Probability, Repeated independent (Bernoulli) trials and Binomial distribution.	Most students will be able to understand the concept of and solve the numericals based on Probability, Repeated independent (Bernoulli) trials and Binomial distribution.	ex 13.5 and miscellaneous NCERT	
DEC	2. Inverse Trigonometric Functions Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.	Most students will be able to understand the concept of and solve the numericals based on 2. Inverse Trigonometric Functions Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.	NCERT EX 2.1	
	2. Inverse Trigonometric Functions Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.	most students will be able to understand the concept of and solve the numericals based on 2. Inverse Trigonometric Functions Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.	NCERT Miscellaneous	
UT 2				

JAN				
FEB				
Final Exam				