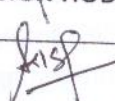


# PVCNSSK GOVT POLYTECHNIC BILASPUR at KALOL PLANNED SYLLABUS COVERAGE

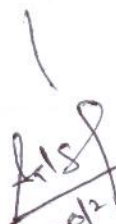
<b>GPB</b>		Department : Applied Sciences & Humanities.		Subject : Mathematics-II		
SYLLABUS COVERAGE		Course : Diploma in Electrical Engg.		Duration : 3 years		
SYLLABUS COVERAGE		Total Periods : 70		Theory : 70		Practical : .....
Sr No	Period Nos	Topic	Details	Instruction Reference	Additional Study Recommended	REMARKS
1.	1-6	ALGEBRA  Determinants & Matrices	<p><b>(1.1) Determinants:</b></p> <p>Definition, Value of determinant of the order of <math>2 \times 2</math>, Minors, Co-factors and De-Laplace's expansion Problems related to these. Properties of determinants up to 3rd order, applications of det. in solving a system of linear equations by Cramer's rule, consistency of equations. Problems related to the above topics.</p>	Applied Mathematics Eagle Prakashan	Elementary Engineering Mathematics by BS Grewal  Engineering mathematics by Reena Garg	
2.	7-15		<p><b>(1.2) Matrix:</b></p> <p>Definition, type of matrix, Algebra of matrices, Adjoint of a matrix, properties of Adjoints. Inverse of a matrix, properties of inverse, matrix inversion method to solve a system of linear equations in 3 variables, Problems related to above topics.</p>			
3.	16-20	INDEFINITE INTEGRATION	<p><b>(3.1) INTEGRATION BY DECOMPOSITION OF THE INTEGRAND:</b> Def, fundamental integrals, theorems and Problems.</p>			
4.	21-25		<p><b>(3.2) INTEGRATION BY SUBSTITUTION:</b> Method of substitution some standard integral, and its reducible form, Some special methods of integrating trigonometric functions. PROBLEMS</p>			
5.	26-30		<p><b>(3.3) INTEGRATION BY PARTS AND BY PARTIAL FRACTION:</b> Integration by parts Three standard Integrals, reducible form,</p>			

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6.	31-45	DEFINITE INTEGRATION	(linear factors only) <b>(3.4) DEFINITE INTEGRALS :</b> Definite integral, Standard formulae as per syllabus (simple problems) Area under the curve, Volume enclosed by rectilinear fig when revolve about axes Related Problem.
7.	46-50	Coordinate Geometry	<b>(2.1) Straight Line</b> Equation of straight line in various standard forms .Intersection of two straight lines, Angle between two lines. Parallel and perpendicular lines .Perpendicular distance formula .Problems related to these topics
8	51-55		<b>(2.2) Circles</b> Definition, Different type of circle Problems related to circle Equation of circle passing through the three points. Problems related to these topics
9	56-60		<b>(2.3) Conics :</b> Definition of conics (PARABOLA, ELLIPSE, HYPERBOLA) their standard forms. Problems on conics when their foci, directrices, vertices are given.
10	61-70	DIFFERENTIAL EQUATIONS	<b>(4.1) Differential Equations :</b> Solution of first order and first degree differential equation by variable separation method (simple problems)

APPROVED	SIGN HOD
DATE: 20.2.2023	

1.	CT-I	30% of the syllabus	2nd week of April, 2023
2.	CT-II	Next 30% of syllabus	2nd week of May, 2023
3.	H.T.	80% of syllabus	4 <sup>th</sup> week of May, 2023

  
20/2/2023