PVCNSSK GOVT POLYTECHNIC BILASPUR at KALOL
PLANNED SYLLABUS COVERAGE

GPB	Department : Applied Sciences & Humanities.	Subject : Mathematics-II
	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	**(1.1)Determinants:** Definition, Value of determinant of the order of 2*2,Minors, Co-factors and De-Laplace's expansion Problems related to these. Properties of determinantsup to 3rd order, applications of det.in solving a system of linear equations by Crammer's rule, .consistency of equations. Problems related to the above topics.	Applied Mathematics Eagle Prakashan	Elementary Engineering Mathematics by BS Grewal Engineering mathematics by Reena Garg	
2.	7-15		**(1.2) Matrix:** 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.			
3.	16-20	INDEFINITE INTEGRATION	**(3.1) INTEGRATION BY DECOMPOSITION OF THE INTEGRAND**: Def, fundamental integrals ,theorems and Problems.			
4.	21-25		(3.2) **INTEGRATION BY SUBSTITUTION:** Method of substitution some standard integral, and its reducible form,Some special methods of integrating trigonometric functions. PROBLEMS			
5.	26-30		**(3.3) INTEGRATION BY PARTs AND BY PARTIAL FRACTION:** Integration by parts Three standard Integrals, reducible form,			

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			(linear factors only)				
6.	31-45	DEFINITE INTEGRATION	**(3.4) DEFINITE INTEGRALS :** 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	**(2.1)Straight Line** Equation of straight line in various standard forms .Intersection of two straight lines,Angle between two lines. Parallel and perpendicular lines .Perpendiculardistance formula .Problems related to these topics				
8	51-55		**(2.2) Circles** Definition, Different type of circleProblems related to circleEquation of circle passing through the three points. Problems related to these topics				
9	56-60		**(2.3) Conics :** Definition of conics (PARABOLA,ELLIPSE,HYPERBOLA)their standard forms. Problems on conics when their foci, directrices, vertices are given.				
10	61-70	DIFFERENTIAL EQUATIONS	**(4.1) Differential Equations :** 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	4th week of May, 2023

20/2/2023