

PVCNSSK Govt. Polytechnic Bilaspur
Planning Theory and Coverage Detail

Department : Applied Sciences and Humanities

Branch & Sem. : First Sem. (Mech. Engg. 1st)

Session: October2021- January2022

Subject : Applied Mathematics –I

		Course – Mech. Engg. 1st		Duration _ 14 weeks		
Theory						
Sr. No.	Period No.	Topics	Details	Instruction Reference	Additional Study Recommended	Remark
1	6/10/21 7/10/21 7/10/21 8/10/21 12/10/21 13/10/21 14/10/21 14/10/21	Algebra	Complex numbers: Definition, real and Imaginary part of complex number, conjugate, modulus, amplitude, Addition, Subtraction, Multiplication and Division of complex numbers, Polar and Cartesian representation of a complex number and its conversion,	Applied Mathemati cs-I by S.K.Sharma	Applied Mathematics- I by SS Sabharwal and Sunita Jain,	
2	19/10/21 21/10/21 21/10/21 22/10/21 26/10/21 27/10/21	Algebra	De-movier's theorem and its application Partial fractions (linear factors, repeated and non-repeated linear factors),			
3	28/10/21 28/10/21 29/10/21 2/11/21 9/11/21 10/11/21 11/11/21	Algebra	Permutations and combinations, Binomial theorem for positive integral index and any index, first and second binomial approximation with applications			
4	11/11/21 12/11/21 16/11/21 17/11/21 18/11/21 18/11/21	Trigonometry	concepts of angles and measurements of angles in degrees, grades and radians and their conversions			
5	19/11/21 23/11/21 24/11/21 25/11/21 25/11/21 26/11/21 30/11/21	Trigonometry	T-ratios of allied, multiple & submultiple angles, sum, difference formulae and their applications, product formulae graphs of $\sin x$, $\cos x$, $\tan x$, $\exp(x)$			

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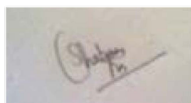
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6	30/11/21 01/12/21 02/12/21 02/12/21 03/12/21 07/12/21 08/12/21 09/12/21 09/12/21 10/12/21	Differential calculus	Definition of function, concept of limits, four standard limits Differentiation by definition: $\sin x$, $\cos x$, $\tan x$, $\log x$, $\exp(x)$,			
7	14/12/21 15/12/21 16/12/21 16/12/21 17/12/21 21/12/21 22/12/21	Differential calculus	differentiation of sum, product and quotient of functions, differentiation of function of a function			
8	23/12/21 23/12/21 24/12/21 28/12/21 29/12/21 30/12/21 30/12/21 31/12/21	Differential calculus	differentiation of trigonometric and inverse trigonometric functions, logarithmic differentiation, exponential differentiation			
9	01/01/22 06/01/22 07/01/22 07/01/22 08/01/22 12/01/22 15/01/22	Differential calculus	Applications of derivatives: maxima and minima, equation of tangent and normal to a curve , calculation of small errors and rate measures			



Date:

Signature of Teacher

HOD/OIC

Applied Sciences and Humanities