

LESSON PLAN

SUBJECT: MATHEMATICS-II

BRANCH: COMMON

SEMESTER: 2ND (2025-26)

NAME OF THE FACULTY: SARAT CHANDRA ROUT (PRINCIPAL) &
MANAS KUMAR MAHALIK (LECTURER S-II, IN MATHEMATICS)



GOVERNMENT POLYTECHNIC, BHADRAK

Jahati
HOD,
Humanities & Sciences
H.O.D.
Humanities & Sciences
Govt. Polytechnic, Bhadrak

[Signature]
Academic Coordinator
Academic Co-ordinator

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Principal
Govt. Polytechnic, Bhadrak
Govt. Polytechnic, Bhadrak

GOVERNMENT POLYTECHNIC, BHADRAK

LESSON PLAN

SUBJECT-MATHEMATICS-II

ACADEMIC SESSION-2025-26 (SUMMER 2026)

Discipline: Humanities & Sciences	SEMESTER-2ND	NAME OF THE TEACHING FACULTY: Sri Sarat Chandra Rout, Principal Sri Manas Kumar Mahalik, Lecturer(STAGE-II) in Mathematics				
COURSE- MATHEMATICS-II	No of Days/weeks- 04	SEMESTER FROM DATE-09-01-2026 to 08-05-2026				
COURSE CODE-TH3	Total Class allotted-60					
MONTH	WEEK	DAY	UNIT	TOPICS		
Jan-26	3RD	1ST	UNIT-I	Concepts of determinant, Elementary properties of determinants up to 3rd order		
		2ND		Solving of Problems.		
		3RD		Evaluation of determinants by using properties.		
		4TH		Evaluation of determinants by using properties.		
	4TH	1ST		Solving of Problems.		
		2ND		Cramer's Rule & Consistency of equations.		
		3RD		Solving of Problems.		
		4TH		Concepts of Matrix & Types of Matrices, Algebra of matrices (Addition & Subtraction).		
	5TH	1ST		Solving of Problems.		
		2ND		Algebra of matrices (Multiplication).		
		3RD		Solving of Problems.		
		4TH		Inverse of a matrix.		
	Feb-26	1ST		1ST	UNIT-II	Solving of Problems.
				2ND		Matrix inverse method to solve a linear equation in three variables.
				3RD		Solving of Problems.
				4TH		Introduction to Integration and relation between Differentiation & Integration.
2ND		1ST	Integration by using properties.			
		2ND	Solving of Problems.			
		3RD	Integration by substitution .			
		4TH	Solving of Problems.			
3RD		1ST	Solving of Problems.			
		2ND	Integration by substitution .			
		3RD	Solving of Problems.			
		4TH	Solving of Problems.			
4TH		1ST	Integration by parts method.			
		2ND	Solving of Problems.			
		3RD	Solving of Problems.			
		4TH	Integration by partial fractions			
		1ST	Solving of Problems.			
		2ND	Integration by using formula.			

MONTH	WEEK	DAY	UNIT	TOPICS	
Mar-26	1ST	3RD		Solving of Problems.	
		4TH		Area bounded by a curve and axes, Calculation of volume of a solid formed revolution of an area about axes.	
	2ND	1ST		Solving of Problems.	
		2ND		UNIT-III	Straight Line (Equation), Slope, Various standard forms .
		3RD	Solving of Problems.		
		4TH	solving of Problems.		
	3RD	1ST	Intersection of two straight lines Angle between two lines.		
		2ND	Solving of Problems.		
		3RD	Parallel and perpendicular lines, Perpendicular distance formula.		
		4TH	Solving of Problems.		
	4TH	1ST	UNIT-III	Introduction to circle, Standard equation of circle, Diameter form.	
		2ND		Solving of Problems.	
		3RD		General Equation of Circle.	
		4TH		Solving of Problems.	
	5TH	1ST	UNIT-III	Equation of circle passing through three points.	
		2ND		Solving of Problems.	
	Apr-26	1ST	1ST		Definition of conic sections, Standard equation of conic sections
			2ND		Solving of Problems.
		2ND	1ST	UNIT-IV	Problems on conic section when their foci directories or vertices are given.
			2ND		Definition, notation and rectangular resolution of a vector. Addition and subtraction of vectors.
3RD			Solving of Problems.		
4TH			Scalar product of two vectors, Application to find work, moment, angular velocity.		
3RD		1ST	UNIT-IV	Solving of Problems.	
		2ND		Solving of Problems.	
		3RD		Vector Product of two vectors.	
		4TH		solving of Problems.	
4TH		1ST	UNIT-V	Introduction to Differential Equation, Solution by variable separation method.	
		2ND		Solving of Problems.	
		3RD		Solving of Problems.	
		4TH		MATLAB -Simple Introduction	

MONTH	WEEK	DAY	UNIT	TOPICS
	5TH	1ST	UNIT-I (REVISION)	Solving problems of determinant & matrix from question bank.
		2ND		Solving problems of determinant & matrix from question bank.
		3RD	UNIT-II (REVISION)	Solving problems of Integration from question bank.
		4TH		Solving problems of Integration from question bank.
May-26	1ST	1ST	UNIT-III (REVISION)	Solving problems of coordinate geometry from question bank.
		2ND		Solving problems of coordinate geometry from question bank.
	2ND	1ST	UNIT-IV (REVISION)	Solving problems of vector algebra from question bank.
		2ND		Solving problems of vector algebra from question bank.
		3RD	UNIT-V (REVISION)	Solving problems of Differential Equation from question bank.
		4TH		Solving problems of Differential Equation from question bank.

Tahakke
02/01/2024

SIGNATURE OF THE FACULTY

Tahakke
02/01/2024

Sign. of HOD

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