Govt. Polytechnic Hamirpur

Department of APPLIED Sciences&Humanities

Lesson Plan (Theory)

Branch : IT

Subject : Applied Mathematics-II

Teacher: Kirandeep Bala

Semester : Second

Session : 27th January 2024- 25May2024

Class Room:

Proposed Lesson Plan:

Period:27/01/24 to 25/05/24				Total Lectures Planned: 72		
S. No.	Week	No. of Lectures	Chapter/ Unit Description	Detail of Contents	Reference Resources	Remarks
1	5th Jan.	2	Algebra	Introduction to Mathematics-II	R1,R2 & R3	
				Introduction to determinants		
	1st Feb.	2		Elementary properties of determinants upto 3rd order		
	2nd Feb.	4		Consistency of equations & Crammer's rule.		
	3rd Feb.	5		Algebra of matrices, Inverse of a matrix, Matrix inverse method to solve a system of linear equations in 3 variables.		
2	4th feb.	5	Integral calculus	Simple Integration by substitution method,	R1,R2 & R3	
	5th Feb.	3		by parts, by partial fractions		
	1st Mar.	2		(for linear factors only).		
	2nd Mar.	3		Use of formulas: $$\int_0^{\frac{\pi}{2}} \sin^n x\, dx \quad \int_0^{\frac{\pi}{2}} \cos^n x\, dx \quad \int_0^{\frac{\pi}{2}} \sin^n x \cos^m x\, dx$$		
	3rd Mar.	5		Class Test -I		
	4thMar.	5		Applications of integration: Simple problem on evaluation of area bounded by a curve and axes.		
	5th Mar.	3		Calculation of Volume of a solid formed by revolution of an area about axes.		
	1st April	5		Equations of straight line in various standard forms (without proof), inter section of two straight lines,		
	2nd April	3		angle between two lines, Perpendicular distance formula.		

3	3rd April	3	Co-Ordinate Geometry	General equation of a circle and its characteristics, To find the equation of a circle, given: Centre and radius. Class Test -II	R1,R2 & R3
	4th April	5		Three points lying on it , Coordinates of end points of diameter.	
	5th April	1		Definition of conics (Parabola, Ellipse, Hyperbola) their standard Equations without proof.	
	1st May	4		Problems on conics when their foci, directrices and vertices are given.	
4	2nd May	3	Differential Equations	Solution of first order and first degree, differential equation by variable separable method (simple problems).	R1,R2 & R3
	3rd	5			
	4th May	4		Revision of Whole syllabus.	

Reference Resources

R1   Eagle Prakashan by Satish Kumar Sharma

R2   Dr. RD Sharma Applied mathematics

R3   B.S. Grewal Higher Engineering Mathematics

Signature of Teacher

Signature of HOD

Govt. Polytechnic Hamirpur

Department of APPLIED Sciences&Humanities

Lesson Plan (Theory)

Branch : Mechanical
Subject : Applied Mathematics-II
Teacher: Kirandeep Bala

Semester : Second
Session : 27th January 2024- 25May2024
Class Room:

Proposed Lesson Plan:

Period:27/01/24 to 25/05/24 — Total Lectures Planned: 77

S. No.	Week	No. of Lectures	Chapter/ Unit Description	Detail of Contents	Reference Resources	Remarks
1	5th Jan.	3	Algebra	Introduction to Mathematics-II	R1,R2 & R3	
				Introduction to determinants		
	1st Feb.	2		Elementary properties of determinants upto 3rd order		
	2nd Feb.	5		Consistency of equations & Crammer's rule.		
	3rd Feb.	4		Algebra of matrices, Inverse of a matrix, Matrix inverse method to solve a system of linear equations in 3 variables.		
2	4th feb.	4	Integral calculus	Simple Integration by substitution method,	R1,R2 & R3	
	5th Feb.	3		by parts, by partial fractions		
	1st Mar.	2		(for linear factors only).		
	2nd Mar.	4		Use of formulas: $\int_0^{\frac{\pi}{2}} \sin^n x\, dx$ $\int_0^{\frac{\pi}{2}} \cos^n x\, dx$ $\int_0^{\frac{\pi}{2}} \sin^n x \cos^n x\, dx$		
	3rd Mar.	5		Class Test -I		
	4thMar.	5		Applications of integration: Simple problem on evaluation of area bounded by a curve and axes.		
	5th Mar.	3		Calculation of Volume of a solid formed by revolution of an area about axes.		
3	1st April	5	Co-Ordinate Geometry	Equations of straight line in various standard forms (without proof), inter section of two straight lines,	R1,R2 & R3	
	2nd April	4		angle between two lines, Perpendicular distance formula.		
	3rd April	4		General equation of a circle and its characteristics, To find the equation of a circle, given: Centre and radius,		
				Class Test -II		

3	3rd April	3	Co-Ordinate Geometry	General equation of a circle and its characteristics, To find the equation of a circle, given: Centre and radius, Class Test -II	R1,R2 & R3	
	4th April	5		Three points lying on it , Coordinates of end points of diameter.		
	5th April	1		Definition of conics (Parabola, Ellipse, Hyperbola) their standard Equations without proof.		
	1st May	4		Problems on conics when their foci, directrices and vertices are given.		
4	2nd May	3	Differential Equations	Solution of first order and first degree, differential equation by variable	R1,R2 & R3	
	3rd	5		separable method (simple problems).		
	4th May	4		Revision of Whole syllabus.		

Reference Resources

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Signature of HOD

Govt. Polytechnic Hamirpur

Department of APPLIED Sciences&Humanities

Lesson Plan (Theory)

Branch : ~~Comp~~. *Civil* Engg.

Subject : Applied Mathematics-II

Teacher: Kirandeep Bala

Semester : Second

Session : 27th January 2024- 25May2024

Class Room:

Proposed Lesson Plan:

Period:27/01/24 to 25/05/24

Total Lectures Planned: 75

S. No.	Week	No. of Lectures	Chapter/ Unit Description	Detail of Contents	Reference Resources	Remarks
1	5th Jan.	3	Algebra	Introduction to Mathematics-II	R1,R2 & R3	
	1st Feb.	2		Introduction to determinants		
				Elementary properties of determinants upto 3rd order		
	2nd Feb.	5		Consistency of equations & Crammer's rule.		
	3rd Feb.	4		Algebra of matrices, Inverse of a matrix, Matrix inverse method to solve a system of linear equations in 3 variables.		
2	4th feb.	4	Integral calculus	Simple Integration by substitution method,	R1,R2 & R3	
	5th Feb.	4		by parts, by partial fractions		
	1st Mar.	1		(for linear factors only).		
	2nd Mar.	4		Use of formulas: $\int_0^{\frac{\pi}{2}} \sin^n x \, dx$ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx$ $\int_0^{\frac{\pi}{2}} \sin^n x \cos^m x \, dx$		
	3rd Mar.	5		Class Test -I		
	4thMar.	4		Applications of integration: Simple problem on evaluation of area bounded by a curve and axes.		
	5th Mar.	4		Calculation of Volume of a solid formed by revolution of an area about axes.		
3	1st April	5	Co-Ordinate Geometry	Equations of straight line in various standard forms (without proof), inter section of two straight lines,	R1,R2 & R3	
	2nd April	4		angle between two lines, Perpendicular distance formula.		
	3rd April	3		General equation of a circle and its characteristics, To find the equation of a circle, given: Centre and radius,		
				Class Test -II		
	4th April	5		Three points lying on it , Coordinates of end points of diameter.		

	5th April	2		Definition of conics (Parabola, Ellipse, Hyperbola) their standard Equations without proof.		
	1st May	3		Problems on conics when their foci, directrices and vertices are given.		
4	2nd May	4	Differential Equations	Solution of first order and first degree, differential equation by variable	R1,R2 & R3	
	3rd	5		separable method (simple problems).		
	4th May	4		Revision of Whole syllabus.		

Reference Resources

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R2   Dr. RD Sharma Applied mathematics

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Signature of Teacher

Signature of HOD

Govt. Polytechnic Hamirpur

Department of APPLIED Sciences&Humanities

Lesson Plan (Theory)

Branch : Comp Engg.

Subject : Applied Mathematics-II

Teacher: Kirandeep Bala

Semester : Second

Session : 27th January 2024- 25May2024

Class Room:

Proposed Lesson Plan:

Period:27/01/24 to 25/05/24

Total Lectures Planned: 72

S. No.	Week	No. of Lectures	Chapter/ Unit Description	Detail of Contents	Reference Resources	Remarks
1	5th Jan.	2	Algebra	Introduction to Mathematics-II	R1,R2 & R3	
	1st Feb.	2		Introduction to determinants / Elementary properties of determinants upto 3rd order		
	2nd Feb.	4		Consistency of equations & Crammer's rule.		
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	3rd Mar.	5		Class Test -I		
	4thMar.	5		Applications of integration: Simple problem on evaluation of area bounded by a curve and axes.		
	5th Mar.	3		Calculation of Volume of a solid formed by revolution of an area about axes.		
	1st April	5		Equations of straight line in various standard forms (without proof), inter section of two straight lines,		
	2nd April	3		angle between two lines, Perpendicular distance formula.		

3	3rd April	3	Co-Ordinate Geometry	General equation of a circle and its characteristics, To find the equation of a circle, given: Centre and radius,	R1,R2 & R3	
				Class Test -II		
	4th April	5		Three points lying on it , Coordinates of end points of diameter.		
	5th April	1		Definition of conics (Parabola, Ellipse, Hyperbola) their standard Equations without proof.		
	1st May	4		Problems on conics when their foci, directrices and vertices are given.		
4	2nd May	3	Differential Equations	Solution of first order and first degree, differential equation by variable	R1,R2 & R3	
	3rd	5		separable method (simple problems).		
	4th May	4		Revision of Whole syllabus.		

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