



Aggarwal College Ballabgarh

LESSON PLAN
17 WEEKS (JAN-APRIL)-2025

Name of Faculty: Ms. Neelam Sharma
Designation/ Department: Assistant Professor

CLASS: B. Sc. (Hons.)		SEMESTER: II	SECTION:
SUBJECT: Elementary Probability Theory			
Week			
	1-2-2025	Introduction of syllabus & pattern of Question Paper	
	2-2-2025	S. U. N. D. A. Y/BASANT PANCHAMI	
5	3-2-2025	No Lecture	
	4-2-2025	No Lecture	
	5-2-2025	Unit1: Probability: Introduction, Random Experiment, Sample Space, Events and Algebra of Events.	
	6-2-2025	Definitions of Probability: Classical, Statistical and Axiomatic. Conditional Probability	
	7-2-2025	Law of Addition for dependent and independent Events	
	8-2-2025	Doubt Class	
	9-2-2025	S. U. N. D. A. Y	
6	10-2-2025	No Lecture	
	11-2-2025	No Lecture	
	12-2-2025	HOLIDAY: GURU RAVIDAS JAYANTI	
	13-2-2025	Law of Multiplication for Independent Events	
	14-2-2025	Conditional Probability & Law of Multiplication for Dependent Events	

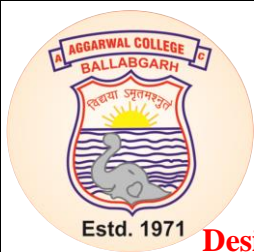
	15-2-2025	Doubt Class
	16-2-2025	S. U. N. D. A. Y.
1	17-2-2025	No Lecture
	18-2-2025	No Lecture
	19-2-2025	Combined examples of addition & Multiplication Probability
	20-2-2025	Combined examples of addition & Multiplication Probability continued
	21-2-2025	Doubt Class
	22-2-2025	Group Discussion
	23-2-2025	S. U. N. D. A. Y.
2	24-2-2025	No Lecture
	25-2-2025	No Lecture
	26-2-2025	HOLIDAY: MAHA SHIVRATRI
	27-2-2025	Assignment: 1
	28-2-2025	Unit: II - Theorem of Total Probability: Bayes' Theorem (Statement & its proof)
	1-3-2025	Applications of Baye's theorem
	2-3-2025	S. U. N. D. A. Y.
3	3-3-2025	No Lecture
	4-3-2025	No Lecture
	5-3-2025	Continued
	6-3-2025	Random Variables: Discrete and Continuous Random Variables, Probability Mass Function
	7-3-2025	Probability Density Function and Cumulative Distribution Function
	8-3-2025	Doubt Class

	9-3-2025	S. U. N. D. A. Y.
4	10-3-2025	HOLI - BREAK
	11-3-2025	HOLI -BREAK
	12-3-2025	HOLI - BREAK
	13-3-2025	HOLI - BREAK
	14-3-2025	HOLI - BREAK
	15-3-2025	HOLI - BREAK
	16-03-2025	S. U. N. D. A. Y.
5	17-3-2025	No Lecture
	18-3-2025	No Lecture
	19-3-2025	PDF & CDF
	20-3-2025	Properties of CDF with illustrations
	21-3-2025	Two Dimensional Random Variables- Joint, Marginal Distributions.
	22-3-2025	Continued
	23-3-2025	S. U. N. D. A. Y.
6	24-3-2025	No Lecture
	25-3-2025	No Lecture
	26-3-2025	Continued
	27-3-2025	Conditional Distributions
	28-3-2025	Continued
	29-3-2025	Doubt Class
	30-3-2025	S. U. N. D. A. Y.
7	31-3-2025	HOLIDAY: ID-UL-FITR
	1-4-2025	No Lecture

	2-4-2025	Test-I
	3-4-2025	Unit-III: Mathematical Expectations
	4-4-2025	Continued
	5-4-2025	Expectation of Single Random Variables and Its Properties
	6-4-2025	S. U. N. D. A. Y.
8	7-4-2025	No Lecture
	8-4-2025	No Lecture
	9-4-2025	Doubt Class
	10-4-2025	HOLIDAY: MAHAVIR JAYANTI
	11-4-2025	Probability Generating Function
	12-4-2025	Moment Generating Function & its Properties
	13-4-2025	S. U. N. D. A. Y.
9	14-4-2025	HOLIDAY: AMBEDKAR JAYANTI
	15-4-2025	No Lecture
	16-4-2025	Characteristic Function & its Properties
	17-4-2025	Examples based on Characteristic Function
	18-4-2025	
	19-4-2025	TEST
	20-4-2025	S. U. N. D. A. Y.
10	21-4-2025	No Lecture
	22-4-2025	No Lecture
	23-4-2025	Discrete Probability Distributions: Bernoulli, Binomial
	24-4-2025	Binomial distribution Continued
	25-4-2025	Applications of binomial distribution

	26-4-2025	Doubt class
	27-4-2025	S. U. N. D. A. Y.
11	28-4-2025	No Lecture
	29-4-2025	No Lecture
	30-4-2025	HOLIDAY: AKSHAY TRITYA
	01-05-2025	Poisson, Geometric Along with Their Properties
	02-05-2025	Limiting/Approximation Cases
	03-05-2025	Doubt Class
	04-05-2025	S. U. N. D. A. Y.
12	5	No Lecture
	6	No Lecture
	7	Continuous Probability Distributions: Uniform
	8	Normal
	9	Continued
	10	Doubt Class
	11	S. U. N. D. A. Y.
13	12	No Lecture
	13	No Lecture
	14	Exponential Along with Their Properties
	15	Limiting/Approximation Cases.
	16	Doubt Class & TEST- II
	17	Revision based on PYQ'S

Signature



Aggarwal College Ballabgarh

LESSON PLAN
17 WEEKS (JAN-APRIL)-2025

Name of Faculty: Ms. Neelam Sharma

Designation/ Department: Assistant Professor (Department of mathematics)

CLASS: M.Sc. (Mathematics)		SEMESTER: III	SECTION:
SUBJECT: Theory of Field Extension			
Week			
1	7-1-2025	No Lecture	
	8-1-2025	Introduction of syllabus & pattern of Question paper, discussion on preliminaries	
	9-1-2025	Unit1: Introduction of fields, elementary properties	
	10-1-2025	Simple extensions	
	11-1-2025	Doubt class	
	12-1-2025	S. U. N. D. A. Y.	
2	13-1-2025	No Lecture	
	14-1-2025	No Lecture	
	15-1-2025	Algebraic extensions	
	16-1-2025	Continued	
	17-1-2025	Transcendental extensions	
	18-1-2025	Continued	
	19-1-2025	S. U. N. D. A. Y.	
3	20-1-2025	No Lecture	

	21-1-2025	No Lecture
	22-1-2025	Factorization of polynomials
	23-1-2025	Continued
	24-1-2025	Unit-II: Splitting field
	25-1-2025	Examples based on splitting fields
	26-1-2025	REPUBLIC DAY /S. U. N. D. A. Y.
4	27-1-2025	No Lecture
	28-1-2025	No Lecture
	29-1-2025	Splitting field continue
	30-1-2025	Mixed examples
	31-1-2025	Doubt class
	1-2-2025	Assignment-I
	2-2-2025	S. U. N. D. A. Y/BASANT PANCHAMI
5	3-2-2025	No Lecture
	4-2-2025	No Lecture
	5-2-2025	Closed fields
	6-2-2025	Examples based on closed fields
	7-2-2025	continued
	8-2-2025	Doubt Class
	9-2-2025	S. U. N. D. A. Y
6	10-2-2025	No Lecture
	11-2-2025	No Lecture
	12-2-2025	HOLIDAY: GURU RAVIDAS JAYANTI
	13-2-2025	Seperapble extensions


	14-2-2025	No-separable extensions
	15-2-2025	Perfect field
	16-2-2025	S. U. N. D. A. Y.
7	17-2-2025	No Lecture
	18-2-2025	No Lecture
	19-2-2025	Perfect field continued
	20-2-2025	Combined examples
	21-2-2025	Galois field
	22-2-2025	Group discussion-I
	23-2-2025	S. U. N. D. A. Y.
8	24-2-2025	No Lecture
	25-2-2025	No Lecture
	26-2-2025	HOLIDAY: MAHA SHIVRATRI
	27-2-2025	Test-I
	28-2-2025	Unit-III: Automorphism of fields
	1-3-2025	continued
	2-3-2025	S. U. N. D. A. Y.
9	3-3-2025	No Lecture
	4-3-2025	No Lecture
	5-3-2025	Monomorphisms
	6-3-2025	linear independence of Monomorphisms
	7-3-2025	continued
	8-3-2025	Doubt Class
	9-3-2025	S. U. N. D. A. Y.

10	10-3-2025	HOLI BREAK
	11-3-2025	HOLI BREAK
	12-3-2025	HOLI BREAK
	13-3-2025	HOLI BREAK
	14-3-2025	HOLI BREAK
	15-3-2025	HOLI BREAK
	16-03-2025	S. U. N. D. A. Y.
11	17-3-2025	No Lecture
	18-3-2025	No Lecture
	19-3-2025	Fixed fields
	20-3-2025	Fixed fields continued
	21-3-2025	Fixed fields continued
	22-3-2025	Doubt class
	23-3-2025	S. U. N. D. A. Y.
12	24-3-2025	No Lecture
	25-3-2025	No Lecture
	26-3-2025	Assignment-II
	27-3-2025	Unit: IV - Normal extensions
	28-3-2025	continued
	29-3-2025	Doubt class
	30-3-2025	S. U. N. D. A. Y.
13	31-3-2025	HOLIDAY: ID-UL-FITR
	1-4-2025	No Lecture
	2-4-2025	Normal closure of an extension

	3-4-2025	continued
	4-4-2025	continued
	5-4-2025	Doubt class
	6-4-2025	S. U. N. D. A. Y.
14	7-4-2025	No Lecture
	8-4-2025	No Lecture
	9-4-2025	The fundamental theorem of Galois theory
	10-4-2025	HOLIDAY: MAHAVIR JAYANTI
	11-4-2025	Continued
	12-4-2025	Doubt class
	13-4-2025	S. U. N. D. A. Y.
15	14-4-2025	HOLIDAY: AMBEDKAR JAYANTI
	15-4-2025	No Lecture
	16-4-2025	Examples based on the fundamental theorem of Galois theory continued
	17-4-2025	Examples based on the fundamental theorem of Galois theory continued
	18-4-2025	Examples based on the fundamental theorem of Galois theory continued
	19-4-2025	TEST-II
	20-4-2025	S. U. N. D. A. Y.
16	21-4-2025	No Lecture
	22-4-2025	No Lecture
	23-4-2025	Revision of unit I based on PYQ 2024
	24-4-2025	Revision of unit I based on PYQ 2023
	25-4-2025	Revision of Unit II based on PYQ 2024
	26-4-2025	Revision of Unit II based o3 PYQ 2024

	27-4-2025	S. U. N. D. A. Y.
17	28-4-2025	No Lecture
	29-4-2025	No Lecture
	30-4-2025	HOLIDAY: AKSHAY TRITYA
	01-05-2025	Revision of unit III, IV based on PYQ's 2024, 2023
	02-05-2025	Revision of Complete Syllabus based on PYQ's 2022
	03-05-2025	Revision of complete syllabus based on 2021
	04-05-2025	S. U. N. D. A. Y.

Signature

 <p>Aggarwal College Ballabgarh</p> <p>LESSON PLAN</p> <p>17 WEEKS (JAN-APRIL)-2025</p> <p>Name of Faculty: Neelam Sharma</p> <p>Designation/ Department: Assistant Professor (Department of Mathematics)</p>		
CLASS: M. Sc. Mathematics	SEMESTER: IV	SECTION:
SUBJECT: Classical Mechanics		
Week		
1	7-1-2025	Introduction of Syllabus and pattern of question paper
	8-1-2025	Unit 1: Introduction of moment of inertia
	9-1-2025	Introduction: product of inertia with examples
	10-1-2025	Different cases to find moment of inertia and product of inertia

	11-1-2025	MOI and Product of inertia Continued
	12-1-2025	S. U. N. D. A. Y.
2	13-1-2025	Doubt class
	14-1-2025	Introduction : Angular momentum of a rigid body with illustrations
	15-1-2025	Different problems on angular momentum
	16-1-2025	Principal axis : perpendicular axis with examples
	17-1-2025	Parallel axis with examples
	18-1-2025	Difference between parallel axis and perpendicular axis with different problems
	19-1-2025	S. U. N. D. A. Y.
3	20-1-2025	Doubt class
	21-1-2025	Introduction Kinetic energy of a rigid body with examples
	22-1-2025	Kinetic energy of a rigid body rotating about a fixed point
	23-1-2025	Momental Ellipsoid
	24-1-2025	Equimomental Systems
	25-1-2025	Doubt class
	26-1-2025	REPUBLIC DAY /S. U. N. D. A. Y.
4	27-1-2025	Coplanar Mass Distribution
	28-1-2025	Doubt class
	29-1-2025	Group Discussion-I
	30-1-2025	Assignment -1
	31-1-2025	Constraints : meaning, examples and types
	1-2-2025	Free & constrained systems, Holonomic constraints
	2-2-2025	S. U. N. D. A. Y/BASANT PANCHAMI

5	3-2-2025	Free & constrained systems, Holonomic constraints
	4-2-2025	Non-Holonomic Systems with Illustrations
	5-2-2025	Degree of Freedom and Generalised coordinates
	6-2-2025	Virtual displacement and virtual work
	7-2-2025	Examples of nonholonomic systems, Degree of freedom and generalised coordinates, Virtual displacement and virtual work
	8-2-2025	Continued
	9-2-2025	S. U. N. D. A. Y
6	10-2-2025	Continued
	11-2-2025	Doubt class
	12-2-2025	HOLIDAY: GURU RAVIDAS JAYANTI
	13-2-2025	Doubt class
	14-2-2025	Statement of principle of virtual work (PVW), Possible velocity and possible acceleration
	15-2-2025	Ideal constraints with examples
	16-2-2025	S. U. N. D. A. Y.
7	17-2-2025	General equation of dynamics for ideal constraints
	18-2-2025	Lagrange equations of the first kind
	19-2-2025	D' Alembert principle
	20-2-2025	Independent coordinates and generalized forces, Lagrange equations of the second kind
	21-2-2025	Langrange,s equations of 2nd kind continued
	22-2-2025	Generalized velocities and accelerations & Uniqueness of solution
	23-2-2025	S. U. N. D. A. Y.

8	24-2-2025	Doubt class
	25-2-2025	Variation of total energy for conservative fields
	26-2-2025	HOLIDAY: MAHA SHIVRATRI
	27-2-2025	Continued
	28-2-2025	Lagrange variable and Lagrangian function $L(t, Q_i, \dot{Q}_i)$
	1-3-2025	Assignment
	2-3-2025	S. U. N. D. A. Y.
9	3-3-2025	Langrange equation for potential fôrces
	4-3-2025	Continued
	5-3-2025	Generalized Momenta
	6-3-2025	Continued
	7-3-2025	Doubt class
	8-3-2025	Test -1
	9-3-2025	S. U. N. D. A. Y.
10	10-3-2025	Holi Break
	11-3-2025	Holi Break
	12-3-2025	Holi Break
	13-3-2025	Holi Break
	14-3-2025	Holi Break
	15-3-2025	Holi Break
	16-03-2025	S. U. N. D. A. Y.
11	17-3-2025	Unit-3: Hamiltonian variable and Hamiltonian function
	18-3-2025	Donkin Theorem
	19-3-2025	Hamilton canonical equation and ignorable coordinates

	20-3-2025	Routh variables and Routh function
	21-3-2025	Routh equation
	22-3-2025	Poisson Bracket
	23-3-2025	S. U. N. D. A. Y.
12	24-3-2025	Properties of Poisson Bracket
	25-3-2025	Continued
	26-3-2025	Poisson Identity
	27-3-2025	Group Discussion-II
	28-3-2025	Jacobi Poisson Theorem
	29-3-2025	Hamilton action and Hamilton Principle
	30-3-2025	S. U. N. D. A. Y.
13	31-3-2025	HOLIDAY: ID-UL-FITR
	1-4-2025	Poincare – Carton Integral Invariant
	2-4-2025	Continued
	3-4-2025	Continued
	4-4-2025	Whittaker Equation
	5-4-2025	Jacobi Equation
	6-4-2025	S. U. N. D. A. Y.
14	7-4-2025	Lagrangian Action and the Principle of least action
	8-4-2025	Continued
	9-4-2025	Lagrangian action and the principle of least action
	10-4-2025	HOLIDAY: MAHAVIR JAYANTI
	11-4-2025	Doubt class
	12-4-2025	Doubt class(Questions discussed based on PYQ's(2022,2021)

	13-4-2025	S. U. N. D. A. Y.
15	14-4-2025	HOLIDAY: AMBEDKAR JAYANTI
	15-4-2025	Assignment: 2
	16-4-2025	Unit-4: Canonical transformation
	17-4-2025	Necessary and sufficient condition for a canonical transformation
	18-4-2025	Univalent Canonical transformation
	19-4-2025	Free canonical transformation
	20-4-2025	S. U. N. D. A. Y.
16	21-4-2025	Hamilton-Jacobi Equation
	22-4-2025	Continued
	23-4-2025	Jacobi theorem
	24-4-2025	Method of separation of variables in HJ equation
	25-4-2025	Lagrange brackets& its examples
	26-4-2025	Necessary and sufficient conditions of canonical character of a transformation in terms of Lagrange brackets
	27-4-2025	S. U. N. D. A. Y.
17	28-4-2025	Jacobian matrix of a canonical transformation
	29-4-2025	Conditions of canonicity of a transformation in terms of Poison brackets,
	30-4-2025	HOLIDAY: AKSHAY TRITYA
	01-05-2025	Invariance of Poisson Brackets under canonical transformation.
	02-05-2025	Doubt class & Test-II
	03-05-2025	Revision based on pyq's (2024, 2023)
	04-05-2025	S. U. N. D. A. Y.

Signature