



# Aggarwal College Ballabgarh

## LESSON PLAN 17 WEEKS (JAN-APRIL)-2025

Name of Faculty: Neha Goel

Qualification/ Department: Assistant Professor (Mathematics)

CLASS: Msc Mathematics		SEMESTER: 4th	SECTION: A
SUBJECT: Algebraic Number Theory			
Week			
1	7-1-2025	Introduction and Definition of Algebraic number and Integers	
	8-1-2025	More Definition	
	9-1-2025	Related Theorem	
	10-1-2025	More theorem	
	11-1-2025	Contd..	
	12-1-2025	S. U. N. D. A. Y.	
2	13-1-2025	Gaussian Integers and its properties	
	14-1-2025	Related Theorems	
	15-1-2025	More Theorem	
	16-1-2025	Contd..	
	17-1-2025	Contd..	
	18-1-2025	Primes in ring of Gaussian Integers	
	19-1-2025	S. U. N. D. A. Y.	
3	20-1-2025	Applications	
	21-1-2025	Theorem Discussed	
	22-1-2025	Fundamental Theorem in ring of Gaussian Integer	

	23-1-2025	Integers and Fundamental Theorem in $\mathbb{Q}(w)$
	24-1-2025	More theorems
	25-1-2025	Algebraic Fields
	26-1-2025	<b>REPUBLIC DAY /S. U. N. D. A. Y.</b>
4	27-1-2025	Related theorem
	28-1-2025	Primitive Polynomials
	29-1-2025	Related Theorems
	30-1-2025	General Quadratic Field $\mathbb{Q}(\sqrt{m})$
	31-1-2025	Contd..
	1-2-2025	Units of $\mathbb{Q}(\sqrt{2})$
	2-2-2025	<b>S. U. N. D. A. Y/BASANT PANCHAMI</b>
5	3-2-2025	Fields in which Fundamental theorem is false
	4-2-2025	Real and Complex Euclidean Fields
	5-2-2025	Contd..
	6-2-2025	Fermat Theorem in ring of Gaussian Integers
	7-2-2025	Primes of $\mathbb{Q}(\sqrt{2})$ and $\mathbb{Q}(\sqrt{5})$
	8-2-2025	Related Examples
	9-2-2025	<b>S. U. N. D. A. Y</b>
6	10-2-2025	Assignment
	11-2-2025	Class test
	12-2-2025	<b>HOLIDAY: GURU RAVIDAS JAYANTI</b>
	13-2-2025	Countability of set of Algebraic numbers
	14-2-2025	Liouville Theorem and Generalization
	15-2-2025	Applications

	16-2-2025	<b>S. U. N. D. A. Y.</b>
7	17-2-2025	Theorem Discussed
	18-2-2025	Transcendental Numbers
	19-2-2025	Related Examples
	20-2-2025	Algebraic Number fields
	21-2-2025	Related theorem
	22-2-2025	Lioville theorem of primitive elements
	23-2-2025	<b>S. U. N. D. A. Y.</b>
8	24-2-2025	Ring of Algebraic Integers
	25-2-2025	Theorem of primitive elements
	26-2-2025	<b>HOLIDAY: MAHA SHIVRATRI</b>
	27-2-2025	Class test
	28-2-2025	Norm and Trace of Algebraic numbers
	1-3-2025	Related Theorems
	2-3-2025	<b>S. U. N. D. A. Y.</b>
9	3-3-2025	Non Degeneracy of bilinear pairing
	4-3-2025	Related theorems
	5-3-2025	Existence of integral basis
	6-3-2025	Applications
	7-3-2025	Examples
	8-3-2025	Discriminant of an Algebraic number field
	9-3-2025	<b>S. U. N. D. A. Y.</b>
10	10-3-2025	<b>HOLI BREAK</b>
	11-3-2025	<b>HOLI BREAK</b>

	12-3-2025	<b>HOLI BREAK</b>
	13-3-2025	<b>HOLI BREAK</b>
	14-3-2025	<b>HOLI BREAK</b>
	15-3-2025	<b>HOLI BREAK</b>
	16-03-2025	<b>S. U. N. D. A. Y.</b>
11	17-3-2025	Ideals in the ring of Algebraic integers
	18-3-2025	Calculation of Quadratic and cubic basis
	19-3-2025	Explicit Construction of integral basis
	20-3-2025	Related theorems
	21-3-2025	Contd..
	22-3-2025	Sign of Discriminant
	23-3-2025	<b>S. U. N. D. A. Y.</b>
12	24-3-2025	Related theorems
	25-3-2025	Contd..
	26-3-2025	Cyclotomic Field
	27-3-2025	Related theorems
	28-3-2025	Integral closure
	29-3-2025	Related theorems
	30-3-2025	<b>S. U. N. D. A. Y.</b>
13	31-3-2025	<b>HOLIDAY: ID-UL-FITR</b>
	1-4-2025	More theorems
	2-4-2025	Doubt class
	3-4-2025	Assignment
	4-4-2025	Class test

	5-4-2025	Noetherian ring
	6-4-2025	<b>S. U. N. D. A. Y.</b>
14	7-4-2025	Related theorems
	8-4-2025	Contd..
	9-4-2025	Characterizing Dedekind Domains
	10-4-2025	<b>HOLIDAY: MAHAVIR JAYANTI</b>
	11-4-2025	Contd..
	12-4-2025	Contd..
	13-4-2025	<b>S. U. N. D. A. Y.</b>
15	14-4-2025	<b>HOLIDAY: AMBEDKAR JAYANTI</b>
	15-4-2025	Fractional Ideals and unique Factorization
	16-4-2025	Related question
	17-4-2025	Contd..
	18-4-2025	GCD and LCM of ideals
	19-4-2025	Related examples
	20-4-2025	<b>S. U. N. D. A. Y.</b>
16	21-4-2025	Chineses Remainder theorem
	22-4-2025	Dedkind theorem
	23-4-2025	Ramifield and Unremifield Extensions
	24-4-2025	Related theorem
	25-4-2025	More theorems
	26-4-2025	Some more theorems
	27-4-2025	<b>S. U. N. D. A. Y.</b>
	28-4-2025	Assignment

17	29-4-2025	Revision of important theorems
	30-4-2025	<b>HOLIDAY: AKSHAY TRITYA</b>
	01-05-2025	Revision of important theorems
	02-05-2025	Discussion of previous year question papers
	03-05-2025	Discussion of previous year question papers
	04-05-2025	<b>S. U. N. D. A. Y.</b>

Signature