Rajarshi Shahu Mahavidyalaya (Autonomous), Latur
Department of Mathematics
Academic Year : 2019-20
Term - First (June,2019 - Nov.,2019)

Name of Assistant Professor : Miss Ashwini Balajirao Kale

Subject : Mathematics

1. Details of Classes to be taught

Sr. No.	Class	Course Name	Course Code	(Theory / Practical)
1.	U.G-II	Group Theory	U-MAT-340	Theory
2.	U.G-II	Problems in Group Theory	U-MAT-140	Lab Work-IV
4.	P.G-I	Complex Analysis	P-COA-167	Theory
3.	P.G-I	Latex Typesetting	P-LAB-169	Lab Work-I

2. Summary of Lesson Plan for U.G-II

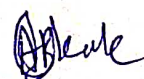| Sr.No.	Unit to be covered	Date	No.of Lectures	Academic activities to be organized	No.of Test / Assignment with topic and date
1.	**Unit-I : Groups and Subgroup**Definition of group,subgroups, Elementry properties of groups, finite groups, cyclic groups and its properties.	21/06/2019 to 06/08/2019	20	Classroom Seminars	Quiz 1
2.	**Unit- II Permutation groups and isomorphism** Symmetric groups, Permutations, Group isomorphism, Automorphism and their properties, Cayleys theorem,	06/08/2019 to 11/09/2019	17	Classroom Seminars	Assignment 1

Sr.No.	Unit to be covered	Date	No.of Lectures	Academic activities to be organized	No.of Test / Assignment with topic and date
3.	**Unit-III Coset and Lagrange's theorem** Definition of coset and properties, Lagrange's theorem and its consequences, an applications of cosets to permutation groups. External direct product, definition and examples of normal subgroups and factor groups.	12/0/2019 to 23/09/2019	13		Assignment 1

3. Summary of Lesson Plan for P.G-I

Sr.No.	Unit to be covered	Date	No.of Lectures	Academic activities to be organized	No.of Test / Assignment with topic and date
1.	**Unit I Complex Variables:**Complex Field, Modulus, Argument and Conjugate of complex numbers, Algebra of complex numbers, Rectangular and Polar representation of Complex numbers, Point sets in the plane, Sequences.	13/08/2019 to 16/09/19	16	Classroom Seminar	Assignment 1
2.	**Unit II Basic Mappings:** Stereographic Projection, Linear Fractional , Transformation, Other Mappings, The Exponential Function, Mapping Properties, The Logarithmic Function, Complex Exponents.	04/07/2019 to 26/07/2019	13	Classroom Seminar	Assignment 2

Sr.No.	Unit to be covered	Date	No.of Lectures	Academic activities to be organized	No.of Test / Assignment with topic and date
3.	**Unit III Cauchy–Riemann Equation:** Analyticity, Harmonic Functions, Sequences of Functions, Uniform Convergence, Maclaurin and Taylor Series, Operations on Power series.	13/08/2019 to 16/09/2019	25	Classroom Seminar	Assignment 3
4.	**Unit IV Cauchy's Integration:** Curves , Parameterizations, Line Integrals, Cauchy's Theorems.	20/09/2019 to 21/10/2019	13	Classroom Seminar	

Teaching Staff

Miss.A. B. Kale

HOD

Head,
Department of Mathematics,
Rajarshi Shahu
(Autonomous) Latur

Principal

PRINCIPAL
Rajarshi Shahu Mahavidyalaya, Latur
(Autonomous)

Rajarshi Shahu Mahavidyalaya (Autonomous), Latur
Department of Mathematics
Academic Year : 2019-20
Term - Second (Dec.,2019 - April.,2020)

Name of Assistant Professor :   Miss Ashwini Balajirao Kale

Subject :   **Mathematics**

1. Details of Classes to be taught

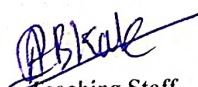| Sr. No.	Class	Course Name	Course Code	(Theory / Practical)
1.	U.G-II	Aptitute and Logical Reasonng	B.Voc-II	Theory
2.	P.G-I	Complex Analysis	P-COA-268	Theory
3.	P.G-I	Latex Typesetting	P-LAB-169	Lab Work-II
4.	P.G-II	Field Theory	P-FIT-464	Theory

2. Summary of Lesson Plan for U.G-II

Sr.No.	Unit to be covered	Date	No.of Lectures	Academic activities to be organized	No.of Test / Assignment with topic and date
1.	**Unit-I : Logical Reasoning I**	16/12/2019 to 15/01/2020	15	Classroom Seminar	
2.	**Unit-II: Logical Reasoning II**	20/01/2020 to 06/02/2020	15		Assihnment 1
3.	**Unit-III : Numerical Abilities I**	07/02/2020 to 15/03/2020	15	Classroom Seminar	
4.	**Unit-IV : Numerical Abilities II**	16/03/2020 to 31/03/2020	15		Assignment 2

3. Summary of Lesson Plan for P.G-I

Sr.No.	Unit to be covered	Date	No.of Lectures	Academic activities to be organized	No.of Test / Assignment with topic and date
1.	**Unit I Complex Variables:** Complex Field, Modulus, Argument and Conjugate of complex numbers, Algebra of complex numbers, Rectangular and Polar representation of Complex numbers, Point sets in the plane, Sequences.	09/12/2019 to 01/01/2020	20	Classroom Seminar	
2.	**Unit II Basic Mappings:** Stereographic Projection, Linear Fractional , Transformation, Other Mappings, The Exponential Function, Mapping Properties, The Logarithmic Function, Complex Exponents.	02/01/2020 to 29/01/2010	15	Classroom Seminar	Assignment 1
3.	**Unit III Cauchy–Riemann Equation:** Analyticity, Harmonic Functions, Sequences of Functions, Uniform Convergence, Maclaurin and Taylor Series, Operations on Power series.	22/01/2020 to 20/02/2020	17	Classroom Seminar	Assignment 2
4.	**Unit IV Cauchy's Integration:** Curves , Parameterizations, Line Integrals, Cauchy's Theorems.	21/02/2020 to 25/03/2020	20	Classroom Seminar	

4. Summary of Lesson Plan for P.G-II

Sr.No.	Unit to be covered	Date	No.of Lectures	Academic activities to be organized	No.of Test / Assignment with topic and date
1.	**Unit-I: Introduction**Definition and examples of fields, Minimal polynomial, adjoining elements, irreducible polynomial,The Schoneman-Eisenstein criterion,	09/12/2019 to 01/01/2020	20	Classroom Seminar	Assignment 1
2.	**Unit-II: Fields Extension**Prime radicals, the degree of extension, Finite Extensions, The Tower theorem, Algebraic extension	02/01/2020 to 25/01/2020	20	Classroom Seminar	Assignment 2
3.	**Unit-III Normal and Separable extension**Splitting fields Definition and examples, Uniqueness of splitting fields, Normal extensions, Separable extension, Fields of characteristic zero, Fields of characteristic p,Theorem of primitive element.	17/01/2019 to 09/02/2019	21	Classroom Seminar	Surprise Test
4.	**Unit-IV: The Galois Group** Definition of the Galois Group, Galois group of splitting fields, Permutations of the roots , The Universal Extension ,a polynomial of degree 5.	11/02/2020 to 12/03/2019	16	Classroom Seminar	

Teaching Staff

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Head,
Department of Mathematics,
Rajarshi Shahu Mahavidyalaya,
(Autonomous) Latur-413512

Principal

PRINCIPAL
Rajarshi Shahu Mahavidyalaya,Latur
(Autonomous)