

2.6.1-SSR: PO, PSO, CO FOR SSR

2.6.1 Program outcomes, Program Specific outcomes, for all program offered by the institute are started and displayed on website

There are 3 programs in undergraduate level-B.A., B..Sc. and B.Com. Following are the program outcomes:

Program Outcomes

Program outcomes of Bachelor of Arts:

O1. Knowledge and understanding of arts field: To develop a detailed knowledge and understanding of arts field as core disciplines in humanities, social sciences and languages.

O2. Reading and writing skills: Students can interpret with an awareness and curiosity for other perspectives. They will be able to write effectively for a variety of professional and social setting. They will develop an awareness and confidence in their own voice as a writer and analyze complex social and natural problems with the help of their degree specialization.

O3. Critical Approaches: Students will develop an ability to read works of literary, and cultural criticism and develop idea with the help of their specialization. They will express their own ideas as informed opinions, small projects and practical and understand how their own approach compares to variety of critical and theoretical approaches.

O4. Environment Awareness: Understand the issues and problems of environmental context and develop environmental awareness in the mind.

Program outcomes of Bachelor of Commerce

PO1. To apply basic mathematical and statistical skills necessary, which is necessary for analysis of a range of problems in economics actuarial studies, Accounting, Marketing, Management and Finance etc.

PO2. Sound knowledge of various laws: Impart the knowledge of basic concepts, terms & provisions of company law, Mercantile law, Income Tax and other laws affecting business, trade and commerce..

PO3.Environment Awareness: Understand the issues and problems of environmental context and develop environmental awareness in the mind.

PO4.Consumer Movement: Make people aware about consumer movement, rights & duties, laws relating to consumers.

PO5. Analysis Organizational problems and generate realistic solutions based on current academic behavior.

Program outcomes of Bachelor of Science

PO1. Understand the methods of science, and can explain why scientific knowledge is both contestable testable by future inquiry.

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PO2. Apply appropriate methods to solve problem in science, mathematics, technology including the planning and conduct of a significant project problem or investigation.

PO3. Articulate the relationship between different science branches of practice, the international scope of science, mathematics, technology and engineering knowledge and methods and the contributions to their development that have been made by people with diverse perspectives, culture and backgrounds.

Program Specific Outcomes

Program Specific Outcomes for Sociology

S1. To understand the core doctrines of each of the ideologies and to make sense of sociology through different ideological perspectives.

S2. Understand social structure and preliminary facts of castes and jatis, from language, religion, ethic and Economic determinants and critically assesses its impact on the society.

S3. Understand legacy of the thinkers is explained with the view to establish the continuity.

Program Specific Outcomes for Economics

S1. Understand the difference between Micro Economics & Macro Economics.

S2. Understand the techniques and diagrams related to employment theory.

S3. To study the international policies of economics, and politics for economic strengthen.

S4. Understand the concept of Foreign Exchange, International Banking & Euro Currency Market.

Program Specific Outcomes for Hindi

S1. Understand basic concepts of Hindi

S2. To Known in depth Knowledge of Literature of Hindi

S3. To know the great writers.

Program Specific Outcomes for Geography

S1. Understand the nature and basic concept of geography

S2. Understand the applied and professional nature of geography such as fields of surveying

S3. Understand the application of modern geography techniques such as geographical information system in society as well as environmental and settlement geography, hazards, language land cover etc.

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Program Specific Outcomes for Political science

- S1. To understand the core doctrines of each of the ideologies and to make sense of politics through different ideological perspectives.
- S2. Understand social structure and preliminary facts of castes and jatis, from language, religion, ethic and Economic determinants and critically assesses its impact on the political processes.
- S3. Understand legacy of the thinkers is explained with the view to establish the continuity.

Program Specific Outcomes for Chemistry

- S1. Inorganic chemistry: Introduction to molecular symmetry, co-ordination of compounds and Bio-inorganic chemistry.
- S2. Physical chemistry: Review of conventional processes, recent advance techniques. Surface properties, ionic properties and other special characteristics of substances,
- S3. Organic chemistry: Introduction to fundamental concepts and principles of process synthesis. Proficiency in Synthetic skill, Characterization by various analytical techniques, Micro-techniques and in-depth knowledge in subject is evaluated by allotting synthetic scheme.

Program Specific Outcomes for Zoology

- S1. To study application of Zoology for benefit of mankind.
- S2. To serve as a valuable foundation for understanding human anatomy, physiology, genetics, molecular biology and entomology.
- S3. To study the range from diversity to Molecular Biology.

Program Specific Outcomes for Botany

- S1. To study the variation of plants life at all levels of biological organization.
- S2. To Study biotechnological process, use of various plants resources at commercial level.
- S3. To understand the physiological process in plants

Program Specific Outcomes for Mathematics

- S1. To study the method of solving in mathematics.
- S2. To develop the calculating abilities and analyzing abilities in students.

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S3. The students acquire an understanding of basic object oriented concepts and the issues involved in mathematics, e.g., example solving, proving technique, analyze the concept.

Program Specific Outcomes for Computer

S1. To develop Problem Solving abilities using computers.

S2. To understand creations, manipulation and querying of data in databases.

S3. To teach fundamental concepts of DBMS.

Course Outcomes

Course Outcomes of Sociology Department

S.N.	Name of Paper	Learning outcome
1	CLASSICAL SOCIOLOGICAL TRADITION	❖ Historical Background of the Emergence of Sociology. Auguste Comte, Emile Durkheim, Vilfredo Pareto, Herbert Spencer,
2	PHILOSOPHICAL AND CONCEPTUAL FOUNDATION OF RESEARCH METHODOLOGY	❖ Philosophical Roots of Social Research; Values and Theories in Sociology; Nature of Social Reality and Approaches to It; Qualitative Methods in Social Research; Issues in Social Research
3	SOCIAL CHANGE IN INDIA	❖ Conceptual and Theoretical Frame work, Factors of Social change; Trends and Processes of Change in Modern India; Changes in Tribal and Rural India; Changes in Urban and Industrial India
4	RURAL SOCIOLOGY	❖ Characteristics and Approaches; Agrarian Institutions; Planned Change; Rural Development and Change; Welfare measures and consequent Changes
5	PRACTICAL-I	❖ Practical based on Field Work & Preparation of tools ❖ Interview Guide and case study
6	CLASSICAL SOCIOLOGICAL THINKERS	❖ Karl Marx; Thurstein Veblen; Max Weber; Talcott Parsons; Robert K. Merton;
7	QUANTITATIVE RESEARCH TECHNIQUES IN SOCIOLOGY	❖ Sampling; Quantitative method and survey Research; Measurement and Scaling Techniques; Statistics in Social Research; Qualitative and Quantitative research method
8	SOCIOLOGY OF DEVELOPMENT	❖ Perspectives on Development; Changing Conception of Human Development; Indian Experience on Development; Consequences of Development; Issues and development in Contemporary India (Social Exclusion, Gender Discrimination, Privatization and unfavorable Service condition, Sustainability)
9	INDIAN RURAL SOCIETY	❖ Tribal Society as Agrarian Society; Social Issues; Contemporary Issues; Peasant Movement; Naxlite movement in Contemporary India.
10	PRACTICAL-II	❖ Practical based on Field Work & Preparation of tools ❖ Questionnaire, Interview Schedule Preparation and Tabulation
11	CLASSICAL SOCIOLOGICAL THEORIES	❖ Positivism; Functionalism; Conflict theory; Structuralism; Exchange Theory
12	SOCIAL MOVEMENTS IN INDIA	❖ Nature and Types; Basis of Social Movement; Theoretical Perspectives; Traditional Social Movements; New Social Movements (Dalit, Women, ethnic, environmental)
13	PERSPECTIVES OF STUDY TO	❖ Indological / Textual; Structural Functionlism; Marxism; Subaltern

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	INDIAN SOCIETY	Perspective; Civilization
14	INDUSTRY AND SOCIETY IN INDIA	❖ Industrial Sociology and Classical Sociological Tradition; Industrial Organizations; Problems through Industrialization process; Subjective Experience of Work; Technological Change and Automation;
15	CRIMINOLOGY	❖ Conceptual and Theoretical Approaches; Type of Criminals and Crime; Changing Profile of Crime and Criminals; Theories of Punishment; Terrorism
16	MODERN SOCIOLOGICAL THEORIES	❖ Symbolic Interactionism; Phenomenology; Ethno methodology, Critical Theory; Post Modernism
17	COMPARATIVE SOCIOLOGY	❖ Historical and Social Context of Emergence of Sociology in the West; Central Themes in Comparative sociology; Theoretical Concerns in Comparative sociology; Current Debates; Debate on "For Sociology of India";
18	CONTEMPORARY ISSUES IN INDUSTRY	❖ Industrial Relation; Trade Union and Industrialization; Industry and Society; Industrialization in Third world Countries in the Era of Globalization; Contemporary Issues
19	CRIMINOLOGY: CORRECTIONAL AND ADMINISTRATION	❖ Roots of Correction to prevent Crime; Correction and Its Forms; Problem of Correctional Administration; Victimological Perspective; Community Policing
20	PROJECT REPORT	❖ On Rural and Urban Problems

Course Outcomes of Economics Department

S.N.	NAME OF PAPER	LEARNING OUTCOMES
1	Micro economics -1 paper-1	❖ Introduction; indifference curve; theory of production; theory of cost and revenue analysis; monopolistic competition
2	Macro economics-1 paper-2	❖ National income and accounts; classical theory of employment; consumption function; investment function; demand for money.
3	Quantitative methods paper-3	❖ Skewness, simple correlation; regression analysis; interpolation and extrapolation; association of attributes, index number, time series analysis; meaning and types of functions. Differentiation and integration
4	Indian economy paper-4	❖ Indian economy: meaning, basic characteristics and major issues of development of Indian economy; demographic features of India; agricultural development in Indian economy; industrial development in India; infrastructure and economic development.
5	Industrial economics paper-5	❖ Concept and organization of a firm; industrial productivity, owned, external and other components of funds; structure of industrial labour; large scale industries;
6	Micro economics-ii paper-1	❖ Full cost pricing theory; theory of distribution; linear programming and game theory; concept of equilibrium; welfare economics.
7	Macro economics paper-2	❖ Theory of inflation; business cycles; monetary policy; IS-LM model; the rational expectation hypothesis.
8	Research methodology and computer application-paper 3	❖ Research methodology and research methods; sampling; classification and tabulation of data; testing of hypothesis; elementary knowledge of internet and ms office, role of computer in economic research.
9	Indian economic policy-paper-4	❖ Planning in India; problem of poverty and inequality, problem of unemployment in India; Indian finance system; foreign trade of India; WTO and its impact on the different sector of economy.
10	Labour economics-paper-5	❖ Labour economics - definition, nature, scope & importance; theories of labour market; theories of labour movement; labour legislation in Indian labour; labour welfare in India, rural and agricultural labour in India.
11	Economics of growth-paper-1	❖ Economic growth and development; the concept of capital output ratio, theories of growth; approaches to growth; steady state growth, growth accounting.
12	International trade-paper-2	❖ Theory of international trade; modern theory of international trade; the theory of intervention; balance of payments; income adjustment.

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13	Public finance-paper-3	❖ Nature and scope of public finance; public expenditure; public revenue; public debt; budget – meaning, objectives, different forms of budget, budgetary process in India,
14	Environmental economics-paper-4	❖ The economics of environment; economic theory of environmental issues; population, agriculture and the environment; ecological economics; environmental value and methods
15	Demography-paper-5	❖ Theories of population; migration; mortality, fertility; women empowerment
16	Economics of development and planning-paper-1	❖ Economic planning; theories of development; approaches to development; development models; investment criteria in economic development
17	International economics-paper-2	❖ Foreign trade and economic development regionalism of European Union; theory of short term & long term capital movement and international trade; international monetary system; international organizations
18	Public economics-paper-3	❖ Role of public finance in economic development; federal finance; Indian tax system; analysis of centre & state government, budget; financial responsibilities and budget management act
19	Economics of social sector-paper-4	❖ Pollution- classification of pollution; development and environment; economics of resources; economics of education; health economics.
20	Viva-voce examination-paper-5	❖ To appear for a viva-voce examination before the external examiner appointed by the university

Course Outcomes of Political Science Department

S.N.	Name of paper	Learning outcome
1	Indian Political Thought	Kautilya, Swami Vivekanand And Bal Gangadhar Tilak; Thought Of Dr. Bhimrao Ambedkar, Mahatma Gandhi And Gopal Krishna Gokhle, Thought Of Raja Ram Mohan Roy, Ram Manohar Lohia, Manendra Nath Roy, Jaiprakash Narayan, Thought Of JawarLal Nehru, Dindyal Upadhyay, Moulana Abul Kalam Azad
2	Indian Government and Politics	Background of Indian constitution, organization ideological basis source, preamble, features of Indian constitution; fundamental rights and duties; union legislature; union judiciary.
3	Comparative Politics	Comparative Politics Meaning, Nature, Scope and Problems, Political System Concept, Features and Importance; Approaches to the Study of Political System, Characteristics of Traditional and Modern Political Studies Political culture, Political Socialisation, Political Communication
4	International Organization	Nature and Evolution of International Organization Coordination among Nations, Nation State, and International System; League of Nation-Formation, Function, Achievements, Merits and Demerit and evaluation; United Nation-Formation Structure, Peace and Coercive Measures to Settle the Disputes in United Nations The role of UN to Social and Economic Development; Regional Organization-SAARC, ASEAN, EUROPEAN UNION, BRICS
5	Western Political Thought	Plato, Aristotle, Machiavelli; Jean Bodin, Thomas Hobbes, John Lock, Jean Jacques Rousseau; Bentham, J.S. Mill, T.H. Green Hegel, Marx, Lenin, Mao
6	State Politics in India	State Executive: GOVERNOR, CHIEF MINISTER and Council of Ministers; state Legislature: Vidhan Sabha and Vidhan Parishad State Judiciary: High Court and Subordinate Courts; Demand for State Autonomy, Demand For the Creation of New State, Inter State River Water Disputes, Factors influencing State Politics in India; state Planning commission, State Finance Commission State Election Commission, Major Trends in State Politics of India
7	Comparative Politics of Development Countries	Classification of Government- Unitary, Federal, Parliamentary, Presidential, Federalism; Political Institutions- Legislature, executive and Judiciary, Theory of

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		Separation of Powers; political Parties and Pressure Groups Bureaucracy-Structure Function and Role; Political Development, Political Elites, Political Socialisation, political Modernization
8	Indian Foreign Policy	Foreign Policy: Meaning, Nature and Determinants Determinants of Indian Foreign Policy: Internal and External Principles and Objectives of Indian Foreign Policy; India and the USA, India and Russia; India and Pakistan, India and China, India and Srilanka; India and the U.N.O India and Nuclear Disarmament
9	Principal of International Politics	Evolution of International Politics as discipline, Nature, Scope, Method of Study-Traditional and Scientific; Theories of International Politics, Realism Idealism, Equilibrium, Decision making, Game, communication & System Theory; Concept of Power-Elements and limitations of National Power-Balance of Power-Collective Security, New colonialism. National Interest and International Ideology and Morale; Disarmament, Nuclear Non Proliferation-CTBT NPT. Regional Organization- SAARC, ASEAN, OPEC
10	Public Administration Part-I	Public Administration-Definition, Nature, Scope, Difference between Private Administration; Approaches to Study- Behaviouralism, Comparative, Decision Making, Development Administration, New Public Administration; Theory of Organization:-Hierarchy,Unity of Command Span of Control, Delegation of Power, Coordination; Centralisation and Decentralisation, Chief Executive- Types and Role. Line and Staff Agencies, Departmental Organization, Independent Regulatory Commission; Public Corporation, Recruitment, Promotion and Training, Retirement, Union Public Service Commission, Bureaucracy
11	Research Methodology Part-I	Nature of Social Research, Importance and uses, Difference between Pure and Applied Research, Identification of Research Problem Research Design, Hypotheses Formulation and testing; Social Survey- Amis, Importance, process, Data Collection, Primary and Secondary Source of Facts; Observational Method, Interview Method, Questionnaire and Schedules; Types of Study- Panel , Case and Field Study
12	Government and Politics of Chhattisgarh	National Movement in Chhattisgarh from, 1885 to 1947; Major Social Reformist and Political Leaders; Local Self Govt. In Chhattisgarh; Tribal Area Administration in Chhattisgarh; Main Determining Factors and Features of State Politics in Chhattisgarh
13	Contemporary issues of International Politics	Non-Alignment in International Politics Basis, Role, Importance and Relevance; Cold War and End of Cold War- Cause and results. New World Order Important issues in post cold war era- Globalisation Human Rights, Environment, Terrorism; Foreign Policy of Important Countries India, USA, China and Russia.
14	Public Administration Part-II	Personnel Administration- System to Solve the Problem of Personnel; Finance Administration; Administration Behaviour; Corruption in Administration.
15	Research Methodology Part-II	Sampling, Scaling Techniques, Projections Techniques; Research Team, Problems of Research, Classification of Facts and Tabulation ; analysis and Interpretation of Facts. Report writing Reprographic Presentation of Data; The use and limitation of Statistics. Mean Mode, Medium, and Use of computer
16	Political Ideologies and Modern Political Thought	<u>Individualism and Liberalism</u> –Concept, Main Theories Merits and Demerits. Contemporary Liberalism, Main Thinkers; <u>Existentialism</u> – Concept, Jean Paul Sartre. Fascism – Concept, Main Features. <u>Karl Popper</u> Totalitarianism – Concept – Main Features. Contemporary Liberty – Isaiah Berlin And Milton Friedman. Leo Straus – Criticism of Democracy, Defence of Classical Political Theory. <u>Feminism</u> – Concept, Features <u>Contemporary Marxism</u> – Antonio Gramsci- Concept of Hegemony, Role of

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		Intellectuals. <u>Frankfurt School</u> – Introduction, Criticism of All Kinds of Hegemony. <u>Socialism</u> – Concept, Features. <u>Multiculturalism</u>
17	Project work VIVA-VOCE	A project work of 100 marks

Course Outcomes of Hindi Department

पृष्ठ	छंदम विचंचमत	स्मंतदपदह वनजबवउम
1	प्रथम सेमेस्टर प्रनपत्र – प्रथम हिन्दी साहित्य का इतिहास (आदिकाल एवं पूर्व मध्यकाल)	इकाई-1 हिन्दी साहित्य का इतिहास: परम्परा और पद्धति: इकाई-2 आदिकाल: इकाई-3 पूर्व मध्यकाल (भक्ति काल), भक्ति आंदोलन इकाई-4 भक्तिकाल की विभिन्न काव्यधाराएँ
2	प्रथम सेमेस्टर प्रन पत्र – द्वितीय प्राचीन एवं मध्यकालीन काव्य (रासो काव्य, लौकिक काव्य एवं निर्गुण काव्य)	1. चंदबरदाई 2. विद्यापति पदावली 3. कबीर ग्रंथावली: 4. मलिक मोहम्मद जायसी
3	प्रथम सेमेस्टर प्रश्न पत्र – तृतीय आधुनिककाव्य-1 (द्विवेदीयुगीन एवं छायावादी काव्य)	इकाई 1. मैथिलीशरण गुप्त – साकेत इकाई 2. जयशंकर प्रसाद इकाई 3. सूर्यकांत त्रिपाठी निराला इकाई 4. महादेवी वमा
4	प्रथम सेमेस्टर प्रश्न पत्र – चतुर्थ आधुनिक गद्य साहित्य (नाटक, एकांकी एवं चरितात्मक तथा आत्मकथात्मक कृति)	इकाई –1. नाटक इकाई –2. एकांकी इकाई – 3. चरितात्मक कृति इकाई – 4. आत्मकथात्मक कृति
5	द्वितीय सेमेस्टर प्रश्न पत्र – पंचम (उत्तर मध्यकाल से आधुनिक काल तक)	इकाई 1. उत्तर मध्यकाल (रीतिकाल) इकाई 2. आधुनिक काल इकाई 3. द्विवेदी युग इकाई 4. हिन्दी गद्य का विकास
6	द्वितीय सेमेस्टर प्रश्न पत्र – षष्ठ मध्यकालीन काव्य	इकाई –1. सूरदास –भ्रमरगीत सार इकाई – 2. तुलसीदास इकाई – 3. बिहारी इकाई – 4. द्रुत पाठ हेतु निम्नांकित 5 कवियों एवं उनकी रचनाओं का (विषय एवं शिल्पगत) ज्ञान अपेक्षित है केशव, भूषण, पद्माकर, देव, घनानंद
7	द्वितीय सेमेस्टर प्रश्न पत्र – सप्तम आधुनिककाव्य-2 (प्रगतिवाद, प्रयोगवाद, नई कविता एवं समकालीन कविता)	स.ही.वात्स्यायन अज्ञेय ग.मा. मुक्तिबोध नागार्जुन रघुवीर सहाय
8	द्वितीय सेमेस्टर प्रश्न पत्र – अष्टम आधुनिक गद्य साहित्य (उपन्यास, निबंध एवं कहानी)	उपन्यास – 1. गोदान निबंध कहानी
9	तृतीय सेमेस्टर प्रश्न पत्र – प्रथम साहित्य के सिद्धांत तथा आलोचना शास्त्र	इकाई-1 भारतीय काव्य शास्त्र इकाई-2 अलंकार सिद्धांत रीति सिद्धांत, इकाई-3 पाश्चात्य काव्य शास्त्र प्लेटा इकाई-4 मैथ्यू आर्नल्ड
10	तृतीय सेमेस्टर प्रश्न पत्र – द्वितीय (भाषा विज्ञान)	इकाई-1 भाषा और भाषा विज्ञान इकाई-2 स्वन प्रक्रिया इकाई-3 व्याकरण : रूप विज्ञान का स्वरूप और शाखाएँ इकाई-4 अर्थ विज्ञान : अर्थ की अवधारणा,
11	तृतीय सेमेस्टर प्रश्न पत्र – तृतीय (कामकाजी हिन्दी एवं पत्रकारिता)	इकाई-1 हिन्दी के विभिन्न रूप- इकाई-2 पारिभाषिक शब्दावली इकाई-3 इंटरनेट संपर्क उपकरणों का परिचय इकाई-4 पत्रकारिता का स्वरूप एवं प्रकार
12	तृतीय सेमेस्टर प्रश्न पत्र – चतुर्थ भारतीय साहित्य पू	इकाई-1 भारतीय साहित्य का स्वरूप, इकाई-2 हिन्दीतर साहित्य का इतिहास इकाई-3 उपन्यास इकाई- 4 नाटक – हयवदन
13	चतुर्थ सेमेस्टर प्रश्न पत्र – पंचम (हिन्दी आलोचना तथा समीक्षा शास्त्र)	इकाई 1 मनोविश्लेषण वाद इकाई 2 हिन्दी कवि आचार्यों का काव्य शास्त्रीय चिंतन इकाई 3 आधुनिक हिन्दी आलोचना का विकास एवं उसकी प्रमुख प्रवृत्तिय इकाई 4 व्यावहारिक समीक्षा : काव्यांश की स्वविवेक के अनुसार व्याख्या
14	चतुर्थ सेमेस्टर प्रश्न पत्र – षष्ठ (हिन्दी भाषा)	इकाई-1 हिन्दी की ऐतिहासिक पृष्ठभूमि इकाई-2 हिन्दी का भौगोलिक विस्तार इकाई-3 हिन्दी के विविध रूप- इकाई-4 हिन्दी में कम्प्यूटर सुविधाएँ
15	चतुर्थ सेमेस्टर प्रश्न पत्र – सप्तम (मीडिया-लेखन एवं अनुवाद)	इकाई-1 मीडिया लेखन जनसंचार इकाई-2 दृश्य-श्रव्य माध्यम इकाई-3 अनुवाद – सिद्धांत एवं व्यवहार इकाई-4 व्यावहारिक अनुवाद अभ्यास
16	चतुर्थ सेमेस्टर प्रश्न पत्र – अष्टम जनपदीय भाषा और साहित्य (छत्तीसगढ़ी)	इकाई-1 छत्तीसगढ़ी भाषा-भौगोलिक सीमा इकाई-2 छत्तीसगढ़ी साहित्य की युग प्रवृत्तियों एवं इतिहास इकाई-3 छत्तीसगढ़ी कविता एवं कवि इकाई-4 छत्तीसगढ़ी नाटक एवं उपन्यास

Course Outcomes of Mathematics Department

S.N.	Name of paper	LEARNING OUTCOME
1	Advanced Abstract Algebra (I)	Unit-I Groups, Unit-II Field theory, Unit-III Perfect fields, Unit-IV Automorphisms of extensions, Unit-V Solution of polynomial equations by radicals
2	Real Analysis	Unit-I Sequences and series of functions, Unit-II Power series, Unit-III

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		Functions of several variables, Unit-IV Jacobians, Unit-V Partitions of unity
3	Topology	Unit-I Countable and uncountable sets., Unit-II Alternate methods of defining a topology in terms of Kuratowski, Unit-III Separation axioms, Unit-IV Compactness, Unit-V Compactness in metric spaces
4	Advanced Complex Analysis (I)	Unit-I Complex integration, Unit-II Maximum modulus principle, Unit-III Residues, Unit-IV Definitions and examples of conformal mapping, Unit-V Spaces of analytic functions
5	Advanced Discrete Mathematics (I)	Unit-I Formal Logic, Unit-II Homomorphism of semigroups and monoids Unit-III Lattices, Unit-IV Direct Products and Homomorphisms, Unit-V Grammars and Languages
6	Advanced Abstract Algebra (II)	Unit-I Modules, Unit-II Linear Transformations -, Unit-III Canonical Forms, Unit-IV Smith normal form, Unit-V Rational canonical form
7	Real Analysis (II)	Unit-I Riemann-Stieltjes integral, Unit-II Lebesgue outer measure, Unit-III Measures and outer measures, Unit-IV The Four derivatives, Unit-V Functions of Bounded variation
8	General and Algebraic Topology	Unit-I Tychonoff product topology, Unit-II Product spaces, Unit-III Embedding and metrization, Unit-IV Nets and filter, Unit-V The fundamental group and covering spaces
9	Advanced Complex Analysis (II)	Unit-I Weierstrass' factorisation theorem, Unit-II Analytic Continuation, Unit-III Harmonic functions on a disk, Unit-IV Canonical products., Unit-V The range of an analytic function
10	Advanced Discrete Mathematics (II)	Unit-I Graph Theory, Unit-II Spanning Trees, Unit-III Directed Graphs, Unit-IV Introductory Computability, Unit-V Finite Automata
11	(Third Semester) PAPER -I Integration Theory and Functional Analysis (I)	Unit-I Signed measure, Unit-II Lebesgue-Stieltjes integral, Unit-III Baire sets, Unit-IV Normed linear spaces, Unit-V Weak convergence and bounded linear transformations
12	(Third Semester) PAPER -II Partial Differential Equations and Mechanics (I)	Unit-I Examples of PDE. Classification, Unit-II Heat Equation, Unit-III Generalized coordinates, Unit-IV Poisson's Bracket, Unit-V Attraction and potential
13	(Third Semester) PAPER-III (C) Fuzzy Set Theory and Its Applications (I)	UNIT-I Fuzzy sets-Basic definitions, UNIT-II The Extension Principle, UNIT-III Fuzzy Relations on Fuzzy sets, UNIT-IV Fuzzy equivalence relations, UNIT-V Possibility Theory
14	(Third Semester) PAPER -IV (A) Operations Research (I)	Unit-I Operations Research and its Scope, Unit-II Other Algorithms for Linear Programmng, Unit-III Parametric Linear Programming, Unit-IV Transportation and Assignment Problems, Unit-V Network Analysis
15	(Third Semester) PAPER-V (B) Graph theory (I)	Unit-I: Operations on graphs, Unit-II: Matrices and vector spaces, Unit-III: Colouring packing and covering, Unit-IV: Combinational formulations, Unit-V: Perfect Graphs
16	Functional Analysis (II)	Unit-I Uniform boundedness theorem, Unit-II Hahn-Banach theorem, Unit-III Inner product spaces., Unit-IV Structure of Hilbert spaces, Unit-V Self-adjoint operators
17	Partial Differential Equations & Mechanics	Unit-I Non-linear First Order PDE-, Unit-II Representation of Solutions, Unit-III Asymptotics, Unit-IV Hamilton's Principle, Unit-V Hamilton-Jacobi equation

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18	Fuzzy Set Theory & Its Applications	Unit-I Fuzzy Logic, Unit-II Approximate Reasoning, Unit-III An introduction to Fuzzy Control, Unit-IV Defuzzification and the various defuzzification methods, Unit-V Decision Making in Fuzzy Environment
19	Operations Research (II)	Unit-I Dynamic Programming, Unit-II Game Theory, Unit-III Integer Programming, Unit-IV Applications to Industrial Problems, Unit-V Nonlinear Programming
20	Graph Theory (II)	Unit-I: Ramsey Theory, Unit-II: Groups Unit-III: Polynomials and Graph Enumeration, Unit-IV: Graph Enumeration, Unit-V: Digraphs & Networks