Programme Outcomes: Commerce

- 1. Critical Thinking: Develop the ability to completely evaluate new ideas, and research findings in the evaluation of business and commerce-related issues.
- 2. Communication Skills: The ability to communicate ideas effectively in both written and oral forms develops communication business analysis to the static holder in and clean effective and appreciative manner.
- 3. Team Spirit: Work collaboratively and productively in the group.
- 4. Social Responsibility: Recognize and understand the ethical and moral responsibility of individuals and organizations in society.
- 5. Global Citizen: Evolve into a global citizen who understands the duties for the welfare of our society and country.
- 6. Managerial Skills: Ability to complete knowledge into performance make business decisions through the capability to interact and motivate and understand concepts, develop ideas and implement strategies.
- 7. Employability: Prepare students for employment in various fields like charted accountancy, company secretary, banking sector, business management etc.

Programme Outcomes: Science

- 1. Critical Thinking: The ability to gather and assess relevant information using abstract ideas to interpret it effectively.
- 2. Scientific Skills: Ability to understand scientific principles or concepts and demonstrate scientific knowledge and skills in scientific reasoning.
- 3. Communication Skills: Develop oral and written skills to develop communication and, Ability to work productively on team projects with team spirit.
- 4. Social Adaptability: Inculcate values which provide guidelines for social conduct and social interaction, communication skills are the key to building a strong social support network.
- 5. Effective Citizenship: Develop into an ideal citizen who performs the duties towards himself, his family, society, community and towards the country.
- 6. Environmental Awareness: Borders understanding of current national and global environmental problems.

7. Ethics: Moral and ethical values are at the development of the scientific temper of mind, and capacity to think and judge oneself.

Programme Outcomes: Arts

- 1. Critical Thinking: Ability to identify, construct and evaluate arguments, ability to engage in reflective and independent thinking, and integrate diverse sources of knowledge in solving problems.
- Communication Skills: Develop oral and written skills for effective Communication, active participation in group activities will improve active learning skills expressive skills and selfconfidence.
- 3. Social Adaptability Skills: Ability to communicate and share our thoughts & feelings with others, develop social interactions and become socially responsible individuals (human beings).
- 4. Ideal Citizen: Respect the values, and principal ethics and contribute to society and community engage in civic responsibility and participate in civic life through volunteering.
- 5. Ethical Value: Inculcate ethical, moral and human values.
- 6. Environmental Awareness: Border understands the local, national and global environmental issues.
- 7. Employability: Preparing students for job prospects in the organized sector.

Programme Outcomes: Law (LL.B.)

- 1. To develop positive thinking.
- 2. The ability to make decisions.
- 3. To develop global legal issues.
- 4. To write accurate and well-organized law-related documents.
- 5. To have a wide knowledge of law like legal concepts, legal problems and flow to solve legal issues.
- 6. To develop our responsibilities to society as citizens.
- 7. To develop ethical reasoning and professionalism.
- 8. To motivate legal research.

Eligible for Employment in

- 1. Courts & judiciary
- 2. Law firms
- 3. Multinational companies
- 4. Law officer in banking sectors.

Name of the Programme: -MA in Hindi

PSO (1)	Critical thinking / Scientific Temper	संप्रेषण कौशल का विकास, हिन्दी के विविध रूपों का अनुप्रयोगात्मक ज्ञान कराना, साहित्यिक अभिरूचि उत्पन्न करना ।
PSO (2)	Communication Skill	अपनी बॉडी लैग्वेंज को सही रखना, संचार कौशल की चारों तकनीक सुनना, बोलना, पढ़ना, लिखना इन सब की क्षमताओं का विकास
PSO (3)	Managerial Skill/ Team spirit and leadership	सामाजिक परिवेश परंपरा के प्रति जागरूकता उत्पन्न कराना, शब्द ज्ञान में वृद्धि कराना, सामान्य बोध में वृद्धि कराना ।
PSO (4)	Social responsibility /Ethics/ Professional ethics/ Human Values/ Gender Issues	सामाजिक समरसता, सौहार्द्र एवं लोकमंगल की भावना का विकास मानवीय मूल्यों का विकास, छात्रों में आत्मविश्वास का विकास ।
PSO (5)	Global Citizenship	नैतिक मूल्यों का विकास, साहित्य इतिहास के माध्यम से समाज का अनुशीलन, पारंपरिक ज्ञान, प्राचीन सभ्यता और आधुनिक प्रगति के बीच सेतु निर्माण ।
PSO (6)	Environment Awareness	सामाजिक परिवेश के अनुसार भाषा, साहित्य, संस्कृति से जोड़ना, साहित्य की विविध विधाओं से परिचय कराना, साहित्य लेखन की ओर उन्मुख कराना।
PSO (7)	Employability	राष्ट्रीय, अंतर्राष्ट्रीय स्तर पर हिन्दी भाषा के बढ़ते महत्व के कारण केन्द्र सरकार, राज्य सरकार के विभिन्न विभागों में, समाचार पत्र, पत्रिकाओं, समाचार चैनलों में रोजगार के अवसर, साहित्य लेखन के क्षेत्र में पत्रकारिता जगत और अनुवाद के क्षेत्र में रोजगार ।

Name of Programme: M.Com. (Master of Commerce)

PSO (1)	Critical Thinking / Scientific Temper	 Understanding finance principles, policies, budgeting processes, techniques and needs of finance can be followed by the student. The programme typically emphasizes research methodologies, data analysis, and evidence-based decision-making to address complex public sector challenges. Based on the thematic study, students are given the possibility of becoming a successful cost analyst and marketing manager.
PSO (2)	Communication Skill	 As per the Studies of Management and Planning Structure Students can cultivate leadership abilities, ethical decision-making, and effective business and office management. Understanding of Marketing Management Effective communication skills are emphasized in the M Com programme to enable graduates to convey complex information, engage with diverse audiences, and manage Business & Market.
PSO (3)	Managerial Skill/ Team spirit and leadership	 Students should develop skills in strategic planning, organizational management, and decision-making within public & private sector organizations or win office & business. By studying and teaching the specialities of planning, control, coordination, communication, organization and maximum profit under the subject of management, students gain proficiency in all points of managerial skills, thus the student will be able to establish himself as a successful manager and office assistant.

PSO (4)	Social responsibility /Ethics/ Professional ethics/ Human Values/ Gender Issues	
PSO (5)	Global Citizenship	With increasing globalization, the M Comprogramme often includes components that provide students with a global perspective on International Marketing, Financial administration issues, international Business, cross-commercial cultural competence, and the challenges of the global Economy.
PSO (6)	Environment Awareness	Given the increasing importance of sustainability and financial environmental conservation, the M Comprogramme should incorporate environmental awareness into its curriculum. B Comprogrammes should understand the Economic environmental implications of Business & Economic policies and advocate for economical environmentally sustainable practices.
PSO (7)	Employability	The task of making students successful entrepreneurs will be accomplished by studying important subjects like initial basic information, financial support, operation of business/industry, outline of new market and making them aware of practical aspects.

The graduate programme should equip graduates with the practical skills and knowledge required for successful employment in Govt. and Business sector organizations, non-profit agencies, international organizations, and consulting firms. This includes
organizations, and consulting firms. This includes
professional development opportunities, internships, and accounting, taxation, and business networking
activities to enhance employability prospects.

Name of the Programme: - M.A. in English

On completing this programme, a student will be able to:

PSO(1)	Critical Thinking/ Scientific Temper	 The students will demonstrate critical and analytical skills in close reading, interpretation and evaluation of texts of major literary writers. The students will be able to articulate a thesis present evidence
		in support of it and evaluate and use appropriate bibliographic methods in their texts.
PSO(2)	Communication Skills	 The students will attain and enhance competence in all four types of literary skills: listening, speaking, reading and writing by taking part in seminars, workshops and programmes of the PG association. Dissertation writing will also enhance academic writing skills and they will become proficient in the mechanics of writing and documentation.
PSO(3)	Managerial Skills/Team Spirit and Leadership	 By organizing various academic activities as members of the PG Association and the English Club, the students would imbibe managerial skills, team spirit and leadership qualities. The students would get exposure through collaborative activities with iSPELL (Indigenous Society for the Promotion of English Language and Literature) and other Universities and will get platforms to bring out their hidden talent.
PSO(4)	Social Responsibility/Ethics/Prof essional Ethics/Human Values/Gender Issues	 Learn the research methodology in English and become aware of professional and research Ethics while writing dissertations. Will learn to address gender issues by understanding theories of feminism and other critical theories. Shall learn plagiarism check using different software. Will be able to choose topics of public interest and exhibit social responsibility
PSO(5)	Global Citizenship	 The students will be able to meet the challenges of the ever- widening and ever-changing competitive world and become global citizens.
PSO(6)	Environmental Awareness	 Develop insights to view Nature from a new and healthy perspective through theories like Ecocriticism and applying it while studying the texts
PSO (7)	Employability	 Competency in the English language will increase their employability skills Interview skills will be enhanced through seminars, viva and inculcation of soft skills

Name of Programme: M.A. in History

PSO (1)	Critical Thinking / Scientific Temper	 Develop a basic understanding of historical methods and the ability to analyse historical sources critically. Identify and evaluate different interpretations of the past. Formulate research questions and engage in basic research projects. Apply logical reasoning and scientific principles to the study of ancient societies.
PSO (2)	Communication Skill	 Communicate historical information effectively in written and oral formats, tailored to various audiences. Participate actively in classroom discussions and presentations. Develop basic research writing skills, including proper citation and referencing. Articulate findings clearly and concisely in essays, reports, or presentations.
PSO (3)	Managerial Skill/ Team spirit and leadership	 Collaborate effectively in group projects and assignments, demonstrating teamwork and communication skills. Contribute to team decision-making processes and manage assigned tasks responsibly. Develop leadership skills through participation in group activities and presentations. Organize and manage research materials and data effectively.
PSO (4)	Social responsibility /Ethics/ Professional ethics/ Human Values/ Gender Issues	 Demonstrate basic cultural sensitivity and awareness of historical context when interpreting the past. Understand the importance of ethical conduct in academic pursuits. Recognize diverse perspectives and appreciate the need for inclusivity in historical narratives.

		Begin to critically analyze representations of gender and social structures in ancient societies.
PSO (5)	Global Citizenship	 Understand the basic relationship between ancient societies and their environment. Gain introductory knowledge of the impact of human activities on the environment in the past. Develop a foundation for critical thinking about environmental sustainability in a historical context. Appreciate the importance of responsible stewardship of cultural heritage and archaeological sites.
PSO (6)	Environment Awareness	 Understand the basic relationship between ancient societies and their environment. Gain introductory knowledge of the impact of human activities on the environment in the past. Develop a foundation for critical thinking about environmental sustainability in a historical context. Appreciate the importance of responsible stewardship of cultural heritage and archaeological sites.
PSO (7)	Employability	 Prepare for further studies in related fields like history, archaeology, or cultural studies. Develop transferable skills valuable in diverse workplaces, such as: Research and analytical skills Critical thinking and problem-solving Communication and interpersonal skills Teamwork and collaboration Information literacy and research skills

Name of the Programme: -M.A. in Economics

PSO (1)	Critical Thinking / Scientific Temper	 Develop a thorough knowledge of theories, concepts, and research methods in the field of economics Understand how the economy is influenced by economic policies, technological advances, demographic conditions, and the environment Develop an understanding of how markets for goods and services function and how income is generated and distributed Demonstrate the ability to conduct economic research and analysis, using equations and graphs as well as statistical tools of analysis such as formulating empirically testable hypotheses
PSO (2)	Communication Skills	 Enhance communication, writing and presentation skills through active participation in Seminars Demonstrate refined communication skills through written as well as oral presentation to analyse existing economic models and evaluate their relevance for theoretical and practical problem-solving
PSO (3)	Managerial Skills/Team Spirit and Leadership	 Engage constructively in team discussions, and offer insightful perspectives for informed decision-making Effectively coordinate and execute assigned tasks within the department and participate in college activities
PSO (4)	Social Responsibility/ Ethics/Professional Ethics/Human Values/Gender Issues	 Learn about the policies and programmes of the government for the welfare of society through welfare economics Critically analyse the representation of gender in the economy of India Recognise the role of ethical values in making economic decisions
PSO (5)	Global Citizenship	 Accept and appreciate diversity by examining the inter-relations of nations and their people through the study of international economics
PSO (6)	Environment Awareness	 Understand different concepts related to the environment, its inter-relations with the economy and the importance of sustainable development
PSO (7)	Employability	 To inculcate a deep understanding of economic theory in various areas like industrial economics, labour economics, development economics, international trade, environmental economics, rural economics, Indian Economy etc. An in-depth study of the above-mentioned fields of economics benefits students in various competitive exams like PSC, UPSC, SET, NET, Banking, Finance etc.

Name of Programme: - M.A. in Geography

PSO (1)	Critical Thinking / Scientific Temper	 Remote Sensing in UG and PG levels enables students to think & work following advanced techniques. It is also very useful in local and state-level planning related to resources and hazards. Research methodology enables them to accurately interpret the socio-economic survey report & comprehend the data. Career opportunities for the students increased.
PSO (2)	Communication skills	 Preparation of projects and seminars in PG classes enhances the analysing quality of students. Presentation of seminars helps them to improve communication skills. Proficiency in mapping properly and interpreting data.
PSO (3)	Management skills / Team Spirit and Leadership	 Survey, Excursion, and fieldwork enhance team spirit and leadership qualities effective coordination among the students is to be raised and they apply the knowledge in geographical studies.
PSO (4)	Social Responsibility / Ethics / Professional Ethics / Human Values / Gender issues	 Social geography and population geography provide knowledge of the changing cultural landscape. The students will have the ability to appreciate the nature and quality of the human landscape. Scientific study of social issues will enable them in policy making.
PSO (5)	Global Citizenship	 Learning GLOBAL 'areal – differentiation' is very essential for sustainable development. Understanding properly the world climate, vegetation, population, and economic activities in solving complex global issues.
PSO (6)	Environment Awareness	 Natural resource management is a global need. Students learn adaptation to the environment at the UG level and scientific regional development at the P.G. level to achieve the highest academic and professional standards to meet global competency. Apply this knowledge for sustainable development.
PSO (7)	Employability	Deep study about the state and nation enables quality study. Helpful in state & national level exams like PSC, and UPSC. NET. SET etc.

Name of the Programme: - Law (LL.M.)

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PSO (1)	Critical Thinking/Scientific Temper	 To Possess Professional Skills required for Legal Practice such as argument, advice, pleading, Drafting, Conveyancing etc. To acquire legal knowledge and to apply legal knowledge to complex socio-legal problems. Demonstrate understanding of substantive law as well as procedural law. Develop a thorough knowledge of theories, concepts and research methods in the field of law.
PSO (2)	Communication Skills	 Every Law graduate will become skilled in legal research, oral and written communication, advocacy, teamwork, Judgment and problem-solving. This demonstration should be done within a context such as a classroom learning setting. Learning outcomes refer to obvious and measurable knowledge, and skills. Interpret relevant facts and Conduct legal research Posses the Skills to Communicate in both oral and written forms.
PSO (3)	Managerial Skills/Team Spirit and Leadership	 To develop leadership qualities Be acquainted with the source of law and understand the difference between basic legal categories in countries with different legal cultures. Understand the principles of natural justice and theories for the interpretation of law and its significance in the judicial decision.
PSO (4)	Social Responsibility/Ethics /Professional Ethics/Human Values/Gender Issues	 To make awareness about current constitutional, Legislative and societal transformations in society and to develop clinical abilities. To Understand and apply Principles of Professional ethics in legal Profession at legal platform. Enter the Legal Profession in which knowledge is an advantage. Demonstrate capacity to assess how specific human rights may be asserted, enforced or violated.

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PSO (5)	Global Citizenship	 Understand the laws at the national and global levels. Analysing social problems and Understanding changing social dynamics. Understand and appreciate the role of the law in society Understand and exercise legal rights and remedies and be aware of one's duties within the legal framework. Acquire knowledge, skills and information needed to become a responsible member of society. Critically evaluate the relationship between international and domestic law.
PSO (6)	Environment Awareness	 Analyse advanced and integrated understanding of the complex body of knowledge in the field of environmental law Develop the capacity to identify new law and apply existing law in the rapidly evolving legal context of environmental law Understand in-depth knowledge of the specialised area of environmental law and associated disciplinary areas. Determine and analyse the different causes of population and legal remedies to control it on the national level. Analyse and evaluate laws relating to environmental aspects on a national level and their comparison with other countries.
PSO (7)	Employability	 To apply legal reasoning and legal skills during legal practice and advice. To develop an attitude of self-reflection and to have the ability to engage in independent learning in the changing legal contexts. To provide a platform of self-employability by developing Professional skills in legal industries /courts as an Advocate Judge, Advisor, Administrator or academician. To make law students eligible to Practice in Court, Industries, and companies as legal Practitioners and legal advisors. Use Skills in Civil, Criminal, Industries Clinical, Social and Counselling areas. Articulate the argumentation process and apply legal drafting abilities during the appearances before the Court and Tribunals.

Name of the Programme: - M.Sc. Mathematics

PSO (1)	Critical Thinking / Scientific Temper	Comprehend, analyse, model and solve given problems based on logical and structured reasoning.
PSO (2)	Communication Skill	• Explain the importance of mathematics and its techniques to solve real-life problems provide the limitations of such techniques and the validity of the results and develop analytical and computational skills.
PSO (3)	Managerial Skill/ Team spirit and leadership	• Use mathematical knowledge and skills appropriate in professional activities and demonstrate the highest standards of ethical issues in Mathematics.
PSO (4)	Social responsibility /Ethics/ Professional ethics/ Human Values/ Gender Issues	
PSO (5)	Global Citizenship	 Understand advanced areas of Pure and Applied Mathematics. Use logical thought to make deductions from advanced concepts.
PSO (6)	Environment Awareness	Solve environmental problems with the help of mathematical tools by converting them into mathematical modelling.
PSO (7)	Employability	 Pursue Research and Development in challenging areas of Pure and Applied Mathematics. Employ confidently in Computer-based fields with the knowledge of mathematical software and tools for treating complex problems and scientific investigations. Appear in several Government examinations. Get employability in the sectors of finance, statistics, Engineering, Computers, Teaching or Accountancy with success. Qualify for National-level eligibility tests like NET/ GATE etc. for Research and Teaching in the top Institutes.

Name of Programme: - M.A. in Political Science

PSO1		Understand the concept and principles of Political Science and the
	Critical Thinking/Scientific Temper	structure, powers and functions of the Government in India and other nations.
PSO2	Communication Skill	Political Science helps build both verbal and written communication skills in students preparing them for a successful career in national and global politics
PSO3	Managerial Skill/ Team Spirit and Leadership	Political competence and political astuteness are important management skills for a political science student to develop.
PSO4	Social Responsibility/ Ethics/Professional Ethics/ Human Values/ Gender Issues	In political science, social responsibility is an ethical framework in which a person or student works and cooperates with other people regarding mutual human values. Researchers of gender and politics study how people's political participation and experiences interact with their gender identity.
PSO5	Global citizenship	In political Science global citizenship is the umbrella term for social, political and economic actions of globally minded individuals and communities on a worldwide scale.
PSO6	Environmental awareness	The study of political theories and ideas is related to the environment. Public policymaking and implementation affect the environment at multiple geo-political levels.
PSO7	Employability	A Political Science graduate can find employment by cracking UPSC, and PSC, in the fields of law, journalism, teaching and marketing research.

Name of Programme: - Public Administration

PSO(1)	Critical	
	Thinking / Scientific Temper	Develop the capability to critically analyse a wide range of public policies, administrative procedures, and governance frameworks, utilizing evidence-based methodologies and critical thinking skills. This includes the ability to assess the effectiveness, efficiency, and equity implications of various policy options and administrative practices, and to propose informed recommendations for improvement.
PSO(2)	Communication Skills	 Master effective oral and written communication skills to convey complex ideas, policies, and recommendations to diverse audiences including policymakers, community members, stakeholders, and international organizations. This involves the proficiency to articulate ideas clearly, persuasively, and diplomatically, utilizing appropriate communication channels and platforms.
PSO(3)	Managerial Skills / Team Spirit and Leadership	 Acquire and demonstrate managerial skills essential for effective decision-making, resource allocation, and performance management within public organizations. This encompasses the ability to lead teams, foster collaboration, resolve conflicts, and motivate individuals towards common goals, while also nurturing a culture of accountability, transparency, and continuous improvement.
PSO(4)	Social Responsibility / Ethics /Professional Ethics / Human Values /Gender Issues	 Cultivate a strong sense of social responsibility, ethical conduct, and awareness of gender issues in public service. This entails upholding professional ethics and integrity, respecting human rights and dignity, promoting inclusivity and diversity, and advocating for gender equality and social justice in all aspects of administrative decision-making and policy implementation.
PSO(5)	Global Citizenship	 Develop a global perspective on governance, recognizing the interconnectedness of local, national, and international issues, and engaging with global challenges as a responsible citizen. This involves understanding international relations, global governance frameworks, and cross-cultural dynamics, and contributing to global efforts towards peace, sustainability, and development.

PSO(6)	Environment Awareness	Demonstrate environmental awareness and integrate sustainability principles into administrative practices and policy formulation processes.
		This includes recognizing the environmental impacts of public policies and programs, promoting environmentally sustainable practices within organizations, and contributing to the development and implementation of policies aimed at mitigating climate change, protecting natural resources, and promoting sustainable development.
PSO(7)	Employability	Acquire employability skills and readiness for diverse career opportunities in public administration, including government agencies, non-profit organizations, and international institutions.
		This involves gaining practical experience through internships, professional development activities, and networking opportunities, as well as developing the adaptability, resilience, and innovation mindset required to navigate dynamic and complex work environments.

Programme Specific Outcomes Name of the Programme:- M.A. in Philosophy

PSO(1)	Critical Thinking / ScientificTemper	 Acquire a comprehensive understanding of philosophical theories, concepts, and research methods. Grasp the fundamental principles and methodologies of Indian and Western logicaltraditions, enabling them to develop innovative ideas. Foster adeptness in philosophical logical reasoning. Gain insight into metaphysical, epistemological, and logical concepts, enriching their philosophical exploration and understanding.
PSO(2)	Communication Skills	 Proficient Written Communication: Students can effectively expressphilosophical ideas through essays and research papers. Strong Oral Communication: Students confidently engage in discussions, debates, and presentations on philosophical topics. Critical Analysis and Synthesis: Students analyze texts and synthesize complex concepts into coherent arguments. Interdisciplinary Communication: Students communicate philosophical insights across disciplines. Applied Communication Skills: Students apply communication skills in academic, public, and professional settings.
PSO(3)	anagerial Skill/ Team Spirit and Leadership	 Participate constructively in team discussions, offering insightful perspectives to facilitate informed decision-making. Efficiently coordinate and execute departmental tasks while actively engaging in college activities.
PSO(4)	Social Responsibility / Ethics / Professional Ethics / HumanValues / GenderIssues.	 Develop the ability to recognize various values, including moral dimensions, in decision-making, thereby strengthening their sense of responsibility. Acquire the capacity to choose a career path in diverse fields such as Judiciary, Education, Research, Social Work, Journalism, and others, equipped with the necessary skills and ethical awareness.
PSO(5)	Global Citizenship	 Equip and inspire students to pursue research studies in Western and Indian Philosophy, as well as other applied fields, fostering a culture of academic inquiry and intellectual exploration. Cultivate the skills and mindset necessary for conducting rigorous research, including critical thinking, analytical reasoning, and effective communication of findings.

PSO(6)	Environmental Awareness	 Engage in critical analysis of environmental issues, applying philosophical theories to assess the ethical implications and propose solutions for sustainable coexistence with the environment. Foster a deep appreciation for the interconnectedness of humans and nature, encouraging responsible stewardship of the environment through philosophical reflection and action.
PSO(7)	Employability	 Acquiring the capacity to develop new directions and new hypotheses while doing research. An in-depth study of the above-mentioned fields of Philosophy benefits students in various Competitive exams like CGPSC, UPSC, SET.NET etc. Employment at leading technical institutions as professor/lecturer of Philosophy (Elective)

Name of the Programme: - M.Sc Physics

PSO1	Critical Thinking/Scientific Temper	The master of science in physics programme provides the required knowledge, general competence, and analytical skills on an advanced level, consultancy, education, research
PSO2	Communication Skill	The students would gain substantial knowledge in various branches of physics: Electronics, Quantum, classical, statistical mechanics, condensed matter physics, nanophysics, particle, nuclear and mathematical physics, and atomic and molecular physics.
PSO3	Managerial Skill/ Team Spirit and Leadership	Students will learn the use of mathematical tools in solving complex physical problems and have the solid background and experience required for modelling, analyzing and solving advanced problems in physics.
PSO4	Social Responsibility/ Ethics/Professional Ethics/ Human Values/ Gender Issues	Students would be able to apply advanced theoretical and experimental methods, including the use of numerical methods and simulations.
PSO5	Global citizenship	This course would empower the student to acquire scientific skills and the required practical knowledge by performing, experiments in general physics and electronics.
PSO6	Environmental awareness	Would also get some research-oriented experience by doing, theoretical and experimental projects in the last semester under the supervision of faculty.
PSO7	Employability	Students may get job opportunities in higher education, research organizations, physics consultancy and many others. Some of the institutions where physics students can start their careers are: BARC, DRDO, NPTC, ISRO, ONGC, BHEL, PRL, NPL, SINP, VEC, IITs, NITs, IIPR etc

Name of the Programme: - M.Sc. Botany

PSO (1)	Critical Thinking / Scientific Temper	The critical thinking ability of students will be developed by designing experiments based on scientific principles and by testing hypotheses.
PSO (2)	Communication Skill	Scientific Skills will be developed, as students will learn how the plants are collected and preserved, the skill of herbarium preparation and its taxonomic treatment ability.
PSO (3)	Managerial Skill/ Team spirit and leadership	Oral and written skills of communication will be developed by writing projects on various problems and meaningful presentations before the other students in the class.
PSO (4)	Social responsibility /Ethics/ Professional ethics/ Human Values/ Gender Issues	Students will be able to learn, how to interact with society to spread the knowledge they have learned to conserve the plants
PSO (5)	Global Citizenship	Topics on various environmental issues will generate broad spectrum awareness about the environment and ways of sustainable development.
PSO (6)	Environment Awareness	Knowledge of genetically modified crops and related ethical issues will enable students to evaluate and interpret the ethical issues on merit.
PSO (7)	Employability	Students will also Come to know about the various avenues for higher education like PhD, Post-Doctorate and D.Sc. and also find ways to get employment in Research Institutes, Forest Department and other state and Central Govt bodies associated with Plant protection & conservation and quarantine.

Name of Programme: - M.A. in Sociology

PSO2	Critical Thinking/Scientific Temper Communication Skill	 Ability to analyze social phenomena critically from multiple perspectives. Proficiency in applying sociological theories and methodologies to understand complex social issues. Capacity to evaluate empirical evidence and research findings objectively. Commitment to questioning assumptions and exploring alternative explanations. Effective verbal and written communication skills for conveying sociological concepts and research findings. Ability to engage in constructive dialogue and discussion within academic and professional contexts. Skill in presenting sociological ideas clearly and persuasively to diverse audiences. Capacity to communicate sensitively and respectfully with individuals from diverse backgrounds.
PSO3	Managerial Skill/ Team Spirit and Leadership	 Competence in organizing and managing sociological research projects and initiatives. Ability to collaborate effectively with peers and colleagues in research teams and academic settings. Potential for leadership roles in academic, research, and community-based organizations. Skill in fostering teamwork, cooperation, and inclusivity in sociological research and practice.
PSO4	Social Responsibility/ Ethics/Professional ethics/ Human Values/ Gender Issues	 Commitment to upholding ethical standards and principles in sociological research and practice. Recognition of the importance of social responsibility and advocacy for social justice. Respect for human rights, dignity, and diversity in sociological inquiry and intervention. Critical understanding of gender dynamics and inequalities, with a commitment to promoting gender equality in sociological research and practice.
PSO5	Global citizenship	 Awareness of global social issues and their interconnectedness across societies and regions. Understanding of sociological perspectives on globalization, migration, and transnationalism. Commitment to promoting global citizenship, cross-cultural understanding, and solidarity with marginalized populations. Capacity to engage critically with global sociological debates and contribute to international sociological scholarship.
PSO6	Environmental awareness	 Understanding of the social dimensions of environmental issues and sustainability. Recognition of the interconnectedness between social structures and environmental challenges.

		• Commitment to integrating environmental considerations into sociological analysis and research.
		• Capacity to contribute to sociological discussions on environmental justice and advocacy for sustainable practices.
PSO7	Employability	 Acquisition of analytical, research, and communication skills relevant to various sectors, including academia, research institutes, government agencies, non-profit organizations, and private companies. Adaptability and flexibility to pursue diverse career paths in fields such as social research, policy analysis, community development, education, advocacy, and consultancy. Demonstration of professional competence and readiness for employment through internships, research projects, and practical experiences during the Master's Programme.

Name of the Programme: - M.S.W.

PSO1	Critical Thinking/Scientific Temper	Ability to analyze social issues and problems from multiple perspectives. Skill in developing and evaluating research questions and methodologies. Capacity to critically assess data and evidence to support interventions. Openness to new ideas and willingness to challenge assumptions.
PSO2	Communication Skill	Effective communication with diverse individuals and groups, both verbally and in writing. Ability to actively listen and build rapport with clients. Proficiency in conveying complex information clearly and understandably. Skilled in facilitating productive dialogues and resolving conflict.
PSO3	Managerial Skill/ Team Spirit and Leadership	Competence in planning, organizing, and implementing social work programmes. Ability to effectively manage resources and delegate tasks. Strong teamwork skills, collaborating effectively with colleagues and stakeholders. Potential for leadership roles in advocating for social change.
PSO4	Social Responsibility/ Ethics/Professional Ethics/ Human Values/ Gender Issues	Commitment to social justice and promoting individual and collective well-being. Upholding ethical principles in all professional interactions. Respecting human rights and advocating for equality and inclusion. Possessing a critical understanding of gender dynamics and promoting gender equality.
PSO5	Global citizenship	Awareness of global social issues and their interconnectedness. Understanding of diverse cultures and perspectives. Commitment to promoting international cooperation and sustainable development. Ability to work effectively in multicultural settings.
PSO6	Environmental awareness	Understanding of the complex relationship between social issues and the environment. Commitment to promoting sustainable practices and environmental justice. Ability to integrate environmental considerations into social work interventions.

PSO7	Employability	Preparedness for a wide range of careers in social work and related
		fields.
		Ability to adapt to changing social needs and demands. Strong skills in resume writing, interviewing, and networking.
		Possession of a professional portfolio showcasing skills and
		experience.

Name of the Programme: - M.Sc. Anthropology

1. Critical	It develops analytical thinking among students.
Thinking	 The student develops the ability to evaluate the reliability and relevance of
g	data/information, identify logical flaws in academic arguments, analyse and
	synthesise data from a variety of sources, draw valid conclusions and support
	them with relevant examples and evidence.
2. Scientific Skills	 The student develops the skill to use both objective and subjective methods
2. Scientific Skins	in research.
	 It develops scientific aptitude among the students.
	 It develops seemine aptitude among the students. It develops the ability to analyse and understand data from humanities,
	social, biological & physical sciences.
3.	 Fieldwork training within Anthropology enables the student to build rapport
Communication	with people of different communities.
skill	 The student acquires the skill to express thoughts and ideas effectively, share
SKIII	and express one's views and develop the quality of listening and
	understanding others.
4. Social	• The subject develops the perspective of 'Cultural Relativity' among its
adaptability	students.
adaptability	 It develops an understanding of unfamiliar cultures.
	 It develops an understanding of unfamiliar cultures. It improves the social adaptability skills of an individual.
5. Environmental	 Environmental Anthropology, A branch of Anthropology investigates
Awareness	human relations with his Bio-Social Environment, thus generating
Awareness	environmental awareness.
	 It identifies a two-way, give-and-take relation between Man and His
	Environment. This results in acknowledging the fact that this symbiotic
	relation between the two is the basis of environmental conservation and
	Human Survival.
6. Ethics	• A student develops the ability to identify ethical issues related to work,
	environment, genetics, research etc.
7. Further	Students may get engaged in academic pursuits like Ph. D. in Anthropology
Education or	or related Bio-social fields.
Employment	• Besides this, they may serve as Researchers, Academicians, administrators,
	and consultants in Government, Non-Government or International
	Organisations like WHO, UNICEF, UNESCO etc.

Name of the Programme: - M.Sc. Zoology

1. Critical thinking	• Development of an understanding of zoological science for its application in medical pathology, Biotechnology, aquaculture, Environmental Physiology, Immunology, and modern medicine and analyses of the ecological and evolutionary significance of different taxa of animals
2. Scientific skill	• Enhance their scientific temper and scientific thinking and exhibit creativity in designing, planning, problem-solving, model making for various scientific concepts and Demonstrate a fundamental understanding of the academic field of Zoology, its different learning areas and applications, and its link with related disciplinary areas/subjects; provides awareness on the divisions an Animal Kingdom, their distribution, relationship among them and with the environment.
3.communaic ation skill	 Able to communicate the concepts, constructs and techniques involved related to animal evolution, animal behaviour, animal development and animal ecology, and Biomechanics, topics. Ability to connect and apply biological knowledge to other disciplines and to integrate knowledge into their personal and professional lives.
4. Social adaptability	 Apply Zoology discipline helps in adding Benefits by provisioning in-depth information regarding the socio-economic, bio-economic and economic branches to use the underlying concepts and core knowledge in enabling the industrial, social and environmental benefits. Explanation of animal behaviour animal-animal, animal-plant, animal-microbe interactions and their consequences to animals, humans and the environment. Able to be aware of themselves and also a society for some communicable and non-communicable diseases.
5. Environmenta 1 Awareness	 Understand the environmental conservation processes and its importance, pollution control, protection of endangered species, Wildlife Management; Climatic changes and Global Management are discussed as a paper to improvise the subject knowledge for identifying any problems related and in helping the impacted environment and biodiversity.
6. Ethics	• Improve the observational, computational, and analytical ethical skills required for the research and development fields discussed for evolving trends in Genetics, molecular biology, microbiology, cell biology, etc.
7. Further education of employment	 Helps advancement in job, trades, and employment with the help of knowledge about Agro- based Small Scale industries like sericulture, fish farming, butterfly farming and vermicompost preparation and helps create various opportunities in the educational, research and developmental, social entrepreneurial sectors related to the same.

Programme Specific Outcomes Name of the Programme: - M.Sc. in Chemistry

PSO(1)	Critical Thinking / Scientific Temper	*	Think critically and develop his/her analytical mind for in- depth knowledge in advanced level chemistry and use analytical or experimental skills for doing higher-level research works in the emerging fields of chemistry.		
PSO(2)	Communication Skills				Communicate scientific information in a clear and concise manner both orally and in writing.
PSO(3)	Managerial Skills / Team Spirit and Leadership	*	Collaborate effectively on team-oriented projects in the field of Chemistry or other related fields.		
PSO(4)	Social Responsibility / Ethics / Professional Ethics / Human Values / Gender Issues	*	Develop human and social values and responsibilities in the context of learning chemistry and develop critical thinking, will be able to put forward new ideas, explain observations and draw logical inferences from scientific studies.		
PSO(5)	Global Citizenship	*	Enhance the scientific temper among the students so as to develop a research culture and implementation of the policies to tackle the burning issues at global and local levels.		
PSO(6)	Environment Awareness	*	Awareness of the role of Chemistry to understand, monitor, protect and improve the environment. Awareness about the development of tools and techniques to measure and mitigate environmental threats like air and water pollution, global warming, microplastics etc.		
PSO(7)	Employability	*	Qualify for National and State Level Eligibility Tests like CSIR NET, GATE, DRDO, TIFR, BARC, CGSET Scientific Officer etc. For research, teaching and job opportunities in top institutes. Testing/Laboratory-based works in institutes and industries.		

Name of the Programme: - M.A. in Ancient Indian History

PSO(1)	Critical Thinking / Scientific Temper	 Analyze and interpret historical evidence from various sources (texts, artefacts, monuments) with a critical eye. Evaluate different historical interpretations and methodologies. Formulate research questions and design research projects based on sound reasoning. Apply scientific principles to the study of ancient societies and cultures.
PSO(2)	Communication Skills	 *Effectively communicate complex historical information in written and oral formats, tailored to Develop engaging presentations and participate effectively in academic discussions. Hone research writing skills, including proper citation and referencing. Articulate findings clearly and concisely in reports, articles, or public presentations.
PSO(3)	Managerial Skills / Team Spirit and Leadership	 Participate collaboratively in research projects, demonstrating teamwork and effective communication. Contribute to team decision-making processes and manage assigned tasks responsibly. Develop leadership skills through participation in group projects and presentations. Organize and manage research materials and data effectively.
PSO(4)	Social Responsibility / Ethics / Professional Ethics / Human Values /	 Demonstrate cultural sensitivity and awareness of historical context when interpreting the past. Uphold ethical principles in research and academic pursuits. Promote inclusivity and acknowledge diverse perspectives in historical narratives. Critically analyze representations of gender and social structures in ancient societies.

	Gender Issues	
PSO(5)	Global Citizenship	 Develop an understanding of the interconnectedness of ancient civilizations and cultures. Appreciate the historical roots of contemporary global issues. Foster intercultural dialogue and respect for diverse cultural heritage. Engage in critical reflection on the impact of colonialism and globalization on historical interpretations. Analyze the relationship between ancient societies and their environment.
	Environment Awareness	 Understand the impact of human activities on the environment in the past. Develop a critical perspective on environmental sustainability in a historical context. Promote responsible stewardship of cultural heritage and archaeological sites.
PSO(7)	Employability	 Prepare for careers in various fields, including: Teaching (history, archaeology, social sciences) Research (academia, museums, government agencies) Cultural heritage management Museum curation and education Journalism and media Civil services Tourism and heritage travel Policy analysis and advocacy

Programme Specific Outcomes Name of the Programme - PGDCA

PSO(1)	Critical Thinking/Scientific Temper	 Develop solutions for complex problems and design computer software that meets the specified needs with appropriate consideration for the various aspects of social, economic, industrial and public issues. 			
PSO(2)	Communication Skill	• Communicate effectively with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PSO(3)	Managerial Skill/ Team Spirit and Leadership	• Development of software implements team spirit, leadership and problem-solving skills to lead organisations and to initiate the start of own ventures.			
PSO(4)	Social Responsibility/ Ethics/Professional ethics/ Human Values/ Gender Issues	 Apply appropriate techniques, resources, and modern IT tools including prediction and modeling to find ethical solutions for different social issues. 			
PSO(5)	Global citizenship	 To acquire proficiency in developing and implementing efficient solutions using emerging technologies, platforms, Free and Open-Source Software (FOSS). Become worthy global citizens who will emerge as future leaders, entrepreneurs and efficient administrators 			
PSO(6)	Environmental awareness	 Understand the impact of the professional solutions in societal and environmental contexts, and demonstrate the knowledge of modern computer tools for sustainable development. 			
PSO(7)	Employability	 Pursue Research and Development in the challenging areas of Computer science and Applications. Software professionals can work as a Web Developer, Database Administrator, Programmer, Web Designer, System Analyst and Data Analyst. Able to get the jobs in various Govt. Sectors. 			

Name of Programme: - M.A. in Psychology

	1	
PSO(1)	Critical Thinking / Scientific Temper	 Psychology courses often involve analysing complex human behaviour, thoughts, and emotions. This analytical approach encourages students to think critically about various theories, research findings, and real-world applications.
PSO(2)	Communicat ion Skills	 Psychology courses typically involve discussions, debates, and presentations where students must articulate their ideas, support their arguments with evidence, and engage in constructive dialogue with peers. These activities strengthen communication skills and encourage critical thinking by requiring students to defend their positions and consider alternative viewpoints.
PSO(3)	Managerial Skills / Team Spirit and Leadership	 psychology enhances managerial skills by providing insights into human behaviour, improving communication, developing conflict resolution abilities, motivating teams, facilitating decision-making, building cohesive teams, fostering leadership development, and promoting emotional intelligence, all of which contribute to effective leadership, team spirit, and organizational success.
PSO(4)	Social Responsibilit y/ Ethics / Professional Ethics / Human Values / Gender Issues	 Psychology helps individuals and communities understand their roles and responsibilities towards society. It promotes empathy, compassion, and a sense of duty towards addressing social issues such as poverty, inequality, discrimination, and environmental concerns. Psychologists contribute to social responsibility by conducting research, advocating for social justice, and developing interventions to promote positive social change. Psychology emphasizes ethical principles and guidelines that govern the conduct of psychologists and their interactions with clients, research participants, and the public. Ethical considerations in psychology include confidentiality, informed consent, avoiding harm, maintaining professional boundaries, and ensuring cultural sensitivity. By adhering to ethical standards, psychologists uphold trust, integrity, and accountability in their practice. Psychology promotes ethical behaviour and professionalism among practitioners. This includes respecting client autonomy, confidentiality, avoiding conflicts of interest, providing competent and evidence-based services, and engaging in ongoing professional development. Professional ethics in psychology ensure that clients receive ethical and effective treatment while upholding the integrity of the profession. Psychology contributes significantly to promoting social responsibility, ethical conduct, professional ethics, fostering human values, and addressing gender issues by raising awareness, conducting research,

		advocating for positive change, and promoting ethical and responsible behaviour in individuals and communities.
PSO(5)	Global Citizenship	 Psychology contributes to global health initiatives by studying factors that influence physical and mental well-being worldwide. It explores topics such as health behaviour, cross-cultural psychology, trauma, resilience, and intervention strategies to improve health outcomes and promote well-being on a global scale. Psychology plays a crucial role in nurturing global citizenship by promoting cultural awareness, empathy, critical thinking, effective communication, addressing global challenges, fostering health and well-being, supporting conflict resolution and peace-building efforts, and advocating for human rights and social justice worldwide.
PSO(6)	Environment Awareness	Psychology contributes to environmental awareness and action in several key ways.
		 Psychology plays a vital role in raising awareness, promoting pro- environmental behaviours, understanding risk perception, designing effective education programs, fostering nature connection and well-being, engaging communities, advocating for environmental policies, and contributing to sustainable development efforts.
PSO(7)	Employabilit y	 Psychology courses offer opportunities for specialization in various areas such as clinical psychology, counselling, organizational psychology, forensic psychology, health psychology, educational psychology, and more. Specialized knowledge and skills can enhance employability in specific fields or industries. Psychology course equips students with a range of transferable skills, professional competencies, ethical awareness, and specialized knowledge that are highly relevant and sought after in diverse career paths, making them more competitive and marketable in the job market.

Course Outcomes: English Literature

B.A. I

Semester I – British Literature from 1340-1750

ELT101

On studying this paper, the student will be able to:

- 1. Understand the development of British literature from the beginning to the Age of Pope.
- 2. Aware of different trends and movements of the period
- 3. Appreciate and analyse the select literary poems, plays, and prose pieces in a larger sociocultural context.
- 4. Develop presentation skills and face viva voce.

Semester II- British Literature from 1750-1890)

ELT201

On studying this paper, the student will be able to:

- 1. Understand the development of British literature from 1750 1890
- 2. Aware the students about different trends and movements of the period
- 3. Develop fundamental skills required for close reading and critical thinking of the texts and concepts.
- 4. To develop presentation skills and face viva voce.

Semester III- Modern English Literature -I

ELT 301

Upon successful completion of this course, the student will be able to:

- 1. Apprehend the development of modern English Literature
- 2. Aware the students of different trends and movements of the period
- 3. Develop fundamental skills required for the close reading and critical thinking of the texts and concepts.
- 4. Develop presentation skills and face viva voce.

Semester IV- Modern English Literature -II

ELT 401

Upon successful completion of this course, the student will be able to:

- 1. Apprehend the development of modern English Literature
- 2. Aware the students of different trends and movements of the period
- 3. Develop fundamental skills required for the close reading and critical thinking of the texts and concepts.
- 4. Develop presentation skills and face viva voce.

SEC

Semester III- Soft Skills in English

ELT 311

Upon successful completion of this course, the student will be able to:

- 1. Learn to handle emotions including tolerance and behavioral responses, build positive friendships and bond with peers and classmates, and learn to show understanding and to demonstrate respect for the opinions, personal space and beliefs of others.
- 2. Develop social and work-life skills, and raise awareness of one's place and role within a community through volunteering and conservation opportunities.

Semester IV- Employability Skills

ELT 411

Upon successful completion of this course, the student will be able to:

- 1. Develop social and work-life skills.
- 2. Connect and work with others.
- 3. Demonstrate clear briefing and listening skills.
- 4. Develop self-motivation, raised aspirations and belief in one's own abilities.

B.A. Part: III

Paper I: Indian Writings in English

BAIIIEG-A

On studying this paper, the student will be able to:

- 1. Develop the critical understanding of literature.
- 2. Acquire knowledge and acquaintance to Indian Writing in English.
- **3.** Learn to use literature to develop their moral and social sense.
- 4. Develop writing, analytical and expression skills.
- 5. Create interest in the different genres of Indian writing in English.

Paper II(A): American Literature

BAHIEG-B1

On studying this paper, the student will be able to:

- 1. Develop passion for American language and literature.
- 2. Gain knowledge of the major traditions of American literature.
- **3.** Become accomplished and active readers.
- **4.** Develop writing and oral communication skills and may develop an appreciation for different genres.

Paper II(B): 20th Century Literature in English

BAIIIEG-B2

- 1. Gain knowledge of the major theoretical and critical terms of twentieth-century English literature.
- 2. Get an insight into the major issues related to the cultural and social context introduced in the literature of the 20th century.
- 3. Appreciate the masterpieces of literature written in this literary period.
- 4. Improve their interpretive skills and textual analysis in reading literature.

M.A. I & II Sem.

Paper I: Poetry I and II

MEGI-A and **MEGII-A**

On studying this paper, the student will be able to:

- 1. Analyse various elements of poetry such as diction, tone, form, genre, imagery, figures of speech, symbolism, themes etc.
- 2. Recognize the rhythms, metrics and other aspects of poetry.
- 3. Develop an appreciation of language and style.
- 4. Understand the thought and imagination contained in the poem correlating it with contemporary scenario.
- 5. Understand the development of poetry from the beginning to the modern age.
- 6. Inculcate their aesthetic sense and love for English poetry.

Paper II: Drama I and II

MEGI-B and **MEGII-B**

- 1. Have firsthand knowledge of major dramatists and their work from Elizabethan to the Modern age.
- 2. Be acquainted with the literary movements, development of English drama and variety of experiments made like revenge tragedy, tragicomedy, romantic comedy, satirical comedy, historical play, poetic drama, problem play etc.
- **3.** Be familiarise with dramatic art and techniques and later may adopt their performing art as his/her vocation.
- **4.** Demonstrate understanding of social and artistic movements that have shaped English theatre.
- **5.** Analyse and interpret texts and performances both in writing and orally.
- **6.** Demonstrate knowledge of theatre history and literature and draw connections between theatrical practices and social contexts in different periods.

Paper III Prose I and II

MEGI-C and **MEGII-C**

On studying this paper, the student will be able:

- **1.** To develop the language ability of the students.
- 2. To enable the students to comprehend the idea contained in the prose.
- **3.** To develop an appreciation for the literary content.
- **4.** To enhance creative and critical thinking.
- **5.** To familiarize with eminent prose writers and their works.

Paper IV: Fiction I and II

MEGI-D and **MEGII-D**

On studying this paper, the student will be able to:

- 1. Be acquainted with the development of various genres i.e. poetry, prose, fiction and criticism correlating it with contemporary socio-economic, religious and political scenario.
- 2. Develop and integrate language skills.
- **3.** Develop an interest in the appreciation of fiction.
- 4. Be acquainted with eminent writers and their fictional works.
- 5. Develop empathy with the fictional characters.
- **6.** Recognize various narrative techniques, styles and forms.
- 7. Foster critical insight and develop critical imagination.
- **8.** Understand the complex dynamics of human relationship.

Paper V Language Management and Communication Skills I and II MEGI-E and MEGII-E

On studying this paper, the student will be able to:

- 1. Understand the concept of communication and its types.
- 2. Critically think about communication processes and messages
- 3. Produce words with right pronunciation, develop vocabulary and improve the accuracy in grammar
- 4. Enhance their communication skills as they would get adequate exposure in reading writing, speaking and listening skills
- 5. Will be able to get rid of their flaws and mistakes in pronunciation and grammar.
- 6. Gain confidence in oral and interpersonal communication

M.A. III & IV Sem.

Paper I: Critical Theory I and II

MEGIII-A and MEGIV-A

On studying this paper, the student will be able to:

- 1. To span the history of western literary criticism and introduce students to vital moments in its history.
- 2. Training students in the art of interpretation of literary texts.
- **3.** Equip students with terms and concepts towards critical reading of textual material.
- **4.** Update with the major theoretical movements in 20th century.
- **5.** Identify and use key concepts and theories to interpret literary texts.

Paper II: Indian Writing in English I &II

MEGIII-B and MEGIV-B

On studying this paper, the student will be able to:

- **1.** Made familiar with representative writers and their work in genres like poetry, drama, prose and fiction
- **2.** Introduce pioneers of Indian writing in English as well as some of the contemporary writers and works of English in translation.
- **3.** Develop the ability to handle a range of analytical and research methodologies in critical studies.
- 4. Buildup & project honest and true image of India.
- **5.** Made acquainted with the problems faced by Indian Writers in English.

Paper III: American literature I and II

MEGIII-C and MEGIV-C

On studying this paper, the student will be able to:

- **1.** Be familiar with the history of America along with major literary movements of American literature.
- **2.** Develop analytical skill for critical engagement with the text and skills for argumentative writing.
- **3.** Be familiar with the philosophy of America & showing its relation with oriental and German philosophy.
- **4.** Explore American literary tradition from American thought and political writing to American literary expression.

Paper IV: Linguistics I and II

MEGIII-D1 and MEGIV-D1

- 1. Create an enquiry into the function of language and lay ground work for systematic study of the science of language.
- **2.** Better understand human speech sounds. The knowledge of IPA would improve pronunciation and help in transcription.
- **3.** Use the knowledge of linguistics in the area of language teaching.

- **4.** Be acquainted with a variety of teaching aids so that it can gainfully be used in classroom teaching.
- **5.** Identify different kinds of relationships that are possible in a phrase structure tree.
- **6.** Conceptualise framework and draw conclusions and apply language learning techniques in the classroom. This will also carve them to be a good teacher in future.

Paper IV: English Language Teaching I and II MEGIII-D2 and MEGIV-D2

On studying this paper, the student will be:

- 1. Aware of what language teaching is about.
- 2. Learn the difference between the first and second language acquisition.
- 3. Aware of various theories that were used and are being used. .
- 4. Able to tailor their own methods to suit the needs of their teachers when they become teachers.
- 5. Reflect on various strategies to teach suprasegmental features of English Communication Skills and also language testing methods.
- 6. Learn the use of technology for teaching English.

Paper V (A): New Literatures in English I &II MEGIII-E1 and MEGIV-E1

On studying this paper, the student will be able to:

- 1. Gain an understanding of unique aspects of diverged literatures.
- 2. Discover the universality and timelessness of literary texts.
- 3. Demonstrate knowledge and understanding of a range of New literatures in English in its historical and cultural contexts.
- 4. develop an understanding of issues of cultural plurality and hybridity.
- 5. Recognise literary negotiations of colonization and decolonization, identity, inequality, marginalization and so on.
- 6. Appreciate aesthetic, moral and cultural trends in literature in English language.

Paper V (B): Research Methodology and Computer Application I & IIA &B

MEGIII-E2 and MEGIV-E2 and MEGIV-E3

- 1. Have a clear concept of research.
- 2. Understand the stages of research and the procedures involved in it
- 3. To highlight the significance of systematic planning and execution of research activity.
- 4. Demonstrate the ability to choose methods appropriate to research aims and objectives.
- 5. Develop advanced critical thinking skills
- 6. To give the students practice in the use of various tools and techniques of research.

- 7. Demonstrate enhanced writing skills
- 8. Prepare a proposal (to undertake a project).
- 9. Write a research report and thesis.

Course Outcomes:

BA. / B.Sc. /B.Com. Semester I

Subject: English Language I: BAELG101/BSCELG101/BCOMELG101

On studying this paper, the student will be able to:

- 1. Make them familiar with English speech sounds, thereby improving their pronunciation. Develop
 - fundamental skills required for close reading and critical thinking of the texts and concepts
- 2. Have an appreciable understanding of English grammar.
- 3. Produce grammatically and idiomatically correct spoken and written discourse.
- 4. Spot language errors and correct them.
- 5. Equip the students with basic language skills along with improved non-verbal skills thereby improving their employability quotient.
- 6. Write Personal and Business Letters with the proficiency needed in day-to-day correspondence.
- 7. Acquire micro and macro language skills.
- 8. Develop digital literacy skills.

Semester III- English Language BAELG301/BSCELG301/BCOMELG301

Upon successful completion of this course, the student will be able to:

- 1. Develop fundamental skills, required for close reading and critical thinking of the text and concepts.
- 2. Understand the use of Prepositions, Voice, Narration and Auxiliaries.
- 3. Expand an idea.
- 4. Prepare a report.
- 5. Develop digital literacy skills through auditory comprehension.

BA. / B.Sc. /B.Com. Part III

Subject: English Language: BAIII-EL/BCOMIII-EL

- 1. Be familiar with the values of Indian life and social system.
- 2. Understand the development of India in the Modern context.
- **3.** Develop linguistic competence and communication skills.

4. Inculcate writing skills through essay writing and comprehension.

Course Outcomes: Psychology

B.A. I

Semester I: Fundamentals of Psychology

PSY-101

On studying this paper, the student will be able to:

- 1. Understanding what psychology is all about.
- 2. Appreciation of the scope and field of psychology.
- 3. Developing familiarity with the basic concept related to the foundational theme of study in psychology such as learning, memory, motivation, Emotion, perception and human biological system including brain.
- 4. Developing familiarity with individual level phenomenon such as Intelligence and Personality.

Semester II: Psychopathology

PSY-202

On studying this paper, the student will be able to:

- 1. Learn about mental health.
- 2. Know about mental health issues.
- 3. Learn about diagnosis.
- 4. Its outcome
- 5. Prognosis
- 6. Etiology
- 7. Treatment

Psychology Practicum

PSYP101 and PSYP201

On studying this course, the student will be able to:

Psychological testing is very useful to measure the behaviour of an individual. The Curriculum has been designed, through which students learn to test the different aspects of behaviour.

- 1. Learn to measure different behaviour like level of Anxiety, Depression and Stress tolerance.
- 2. Learn to test type of personality.
- 3. Learn to test Adjustment level towards society.
- 4. Learn to test the achievement motivation level of students.

Semester III-Social Psychology

PSY-301

Upon successful completion of this course, the student will be able to:

- 1. Understand what social psychology is all about.
- 2. Appreciate the scope and field of Social Psychology.

3. Develop familiarity with the basic concept related to the foundational theme of study in Social facilitation, social conformity etc.

4. Develop skills in mapping of social effect and effective processes including people's harming and helping behaviors.

Practicum PSYP301

Upon successful completion of this course, the student will be able to:

- 1. Practically learn how different situations cause, and effect on person's behavior and determine if there is a cause-and-effect relationship between different variables.
- 2. Study how people are influenced by groups.

Semester IV-Psychological Assessment

PSY401

Upon successful completion of this course, the student will be able to:

- 1. Develop an understanding of the basic principles of assessment.
- 2. Develop knowledge about the step of test construction and test standardization.
- 3. Develop knowledge abut he application of test in a variety of settings.

Practicum PSYP401

Upon successful completion of this course, the student will be able to:

- 1. Learn group behavior
- 2. Learn about self-concept.
- 3. Learn different aspects of behavior in social settings.

SEC

Semester III- Communication Skill

PSY311

Upon successful completion of this course, the student will be able to:

- 1. Understand the basic processes of communication, verbal as well as non-verbal.
 - 2. Identify one's own psychological barriers to effective communication.
- 3. Understand the nuances of communication gaps in interpersonal relationships and other social contexts.

Semester IV- Stress Management Skill

PSY411

Upon successful completion of this course, the student will be able to:

- 1. Comprehend the basic rules of stress management.
- 2. Learn to handle stress through lifestyle change
- 3. Use tips for managing stress in job, family and social life.

B.A. III

Paper I: Psychological Statistics

BAIIIPY-A

On studying this paper, the student will be able to:

- 1. Gain knowledge about various steps of research.
- 2. Learn the statistical tool for the analysis of their data.

Paper II: Human Development

BAIIIPY-B1

On studying this paper, the student will be able to:

- 1. Know about various stages of life in human development.
- 2. Learn both physical and mental processes and psychological aspects of these processes.
- **3.** Learn about the development of their self-identity crisis, ageing, gender discrimination and many more areas of humans.

Paper II: Environmental Psychology

BAIIIPY-B2

On studying this paper, the student will be able to:

- 1. Evaluate environmental ethics.
- 2. Understand values about Nature in the ancient Indian systems.
- 3. Psychological approaches to environment.
- 4. Learn about human nature and environmental problems.
- 5. Application of psychology in Man-Environment Fit.

Practical BAIIIPY-C

On studying this course, the student will be able to:

- i. Learn learning with brain function
- ii. Depth Perception and illusion in vision
- iii. Learn to measure mental health
- iv. Through field study they get research experience.
- v. Learn how aspiration level varies with each trial.

M.A. I Sem.

Paper I: Basic Psychological Process-I

MPYI-A

On studying this course, the student will be able to:

Enhance knowledge in the field of psychophysics, signal detection theory. Various perceptual and attention processes. It made to learn basic motivational concepts and theoretical framework, process and theories of emotion and emotional intelligence.

Paper II: Social Psychology

MPYI-B

On studying this course, the student will be able to:

The student will be able to learn all theoretical perspectives of social psychology, social cognition and person perception, social influence processes, attitude and theories of attitude

change pro-social behaviour and theories of aggression and management of aggression, as well as violence.

Paper III: Basic Research Methodology

MPYI-C

On studying this course, the student will be able to:

All research methodology up to perusing Ph.D. and other research work will be learned thoroughly.

Paper IV: Psychopathology

MPYI-D

On studying this course, the student will be able to:

All the concepts of psychopathology their causes, diagnosis and treatment.

Practicum (Experiment and Field Work)

MPYI-E

On studying this course, the student will be able to:

In practical classes students perform experiments and observe behaviour in laboratory conditions along with field study.

M.A. II Sem.

Paper I: Basic Psychological Process-II

MPYII-A

On studying this course, the student will be able to:

In continuation of first semester the knowledge will be enhanced in this area.

Paper II: Group Processes and Cultural Psychology

MPYII-B

On studying this course, the student will be able to:

This portion will make a student to acquire advanced knowledge in the field of social psychology like intergroup relations, leadership, various social issues like poverty, gender, population unemployment, culture and behaviour related issues.

Paper III: Advanced Research Methodology

MPYII-C

On studying this course, the student will be able to:

This portion is in depth and will make students to learn various advanced methods in research methodology.

Paper IV: Physiological Psychology and Health Behaviour

MPYII-D

This area of curriculum will make a student to acquire an idea about methods of physiological psychology, vision and audition process and human nervous system, sleep, waking and endocrine system, different approaches to therapy.

Practicum (Testing and Field Work)

MPYII-E

On studying this course, the student will be able to:

In practical classes will help students to perform tests of personality, mental health, intelligence motivation and stress and on field work.

Course Outcomes: B.A.I

Subject: Political Science

Semester I: Political Theory

POL101

On studying this paper, the student will be able to understand:

- 1. Meaning and Definition of Political Science.
- 2. State and its Essential Elements
- 3. Saver eighty and its Meaning
- 4. Kinds of Government
- 5. Public Welfare State.

Semester II: Indian Government and Politics

POL201

On studying this paper, the student will be able to understand:

- 1. Indian National Movement, Constitutional Development
- 2. Constitution of India, Fundamental Rights
- 3. Union Executive
- **4.** Indian Judiciary
- 5. State Legislature

Semester III- Political Thought

POL301

The course will enable the students to:

- 1. Understand Political Thinkers
- 2. History of Political Thought
- 3. Concept of Indian Thinkers
- 4. Relevance in the present era.

Semester IV- Comparative Government and Politics

POL401

The course will enable the students to understand:

1. Meaning of Comparative politics

- 2. Constitution of British, USA, Switzerland and China
- 3. Concept of Political D
- 4. Political Socialisation and Political Culture

<u>SEC</u>

Semester III-Indian Constitution

POL311

POL411

The course will enable the students to:

- 1. Understand the terms of partition and how princely states were Integrated
- 2. Know the Importance of Preamble
- 3. Know the Functions of the President, Prime Minister, Governor, Chief Minister Parliament and State Legislature.

Semester IV -Managing Election and Election Campaign

The course will enable the students to:

- 1. Learn how to file election nominations.
- 2. Aware of the role of media in election campaigns.
- 3. Know the required skills for media management during the election.

B.A. III

Paper I: International Politics

BAIIIPO-A

On studying this paper, the student will be able to:

- 1. Know about the significance of international politics and its impact on different countries.
- 2. Know about the Disarmament, Globalization and Diplomacy etc.

Paper II: Public Administration

BAIIIPO-B

On studying this paper, the student will be able to get:

- **1.** Knowledge of Public Administration, its importance and scope.
- **2.** Knowledge about government's part like legislature, executive and judiciary and its control on administration.

M.A. I Sem.

Paper I: Political Thought

MPOI-A

- 1. Understand different political ideologies of various thinkers.
- 2. Know students the importance of different political thought and theories.

Paper II: Comparative Politics

MPOI-B

On studying this paper, the student will be able to:

- 1. Know the characteristics and main features of politics of different countries.
- 2. Know the differences in main political system of different countries.

Paper III: Public Administration I

MPOI-C

On studying this paper, the student will be able to:

- 1. Know the meaning and importance of Public Administration.
- **2.** Know about private and public administration.

Paper IV: CG Government and Politics

MPOI-D

On studying this paper, the student will be able to:

- 1. Gain general knowledge of history, culture and language of Chhattisgarh.
- **2.** Get knowledge regarding the politics and Government of Chhattisgarh.

M.A. II Sem.: Subject: Political Science

Paper I: Western Political Thought

MPOII-A

On studying this paper, the student will be able to:

- **1.** Know various political thoughts and their importance in today's political systems.
 - 2. Know various theories given by political thinkers about politics.

Paper II: Politics of Developing Countries

MPOII-B

On studying this paper, the student will be able to:

- 1. Know the working and importance of political parties and pressure groups of different countries.
- **2.** Know the functions and organization of legislature, Executive and Judiciary.

Paper III Public Administration II

MPOII-C

- **1.** Know the working of personnel administration, Bureaucracy, Union Public Service Commission and about recruitment.
- **2.** Know about financial administration and formation of budget and its importance in Administration.

Paper IV: Foreign Policy of India

MPOII-D

On studying this paper, the student will be able to:

- **1.** Know about the foreign policy of India with various countries such as Bangladesh, China, Nepal and Cylone.
- 2. Know about the basic and main features of Indian foreign policy.

M.A. III Sem. : Subject: Political Science

Paper I: Indian Govt. and Politics

MPOIII-A

On studying this paper, the student will be able to:

- 1 Get knowledge about constitution, its characteristics and fundamental rights.
- 2. Get knowledge about Parliament, Supreme Court, judicial review and judicial activism.

Paper II: International Politics

MPOIII-B

On studying this paper, the student will be able to:

- 1. Know about international politics and its importance.
- 2. Know the concept of world state and different principles of international policies.

Paper III: Research Methodology

MPOIII-C

On studying this paper, the student will be able to:

- 1. Gain knowledge of research methodology.
- 2. Develop research skills as research is necessary for the academic development of the subject.

Paper IV: International Organizations

MPOIII-D

On studying this paper, the student will be able to:

- **1.** Get knowledge about the role and importance of international organizations like League of Nation and U.N.O.
- **2.** Get knowledge about the structure and functions of these organizations and its agencies.

M.A. IV Sem. Subject: Political Science

Paper I: Politics of State

MPOIV-A

On studying this paper, the student will be able to:

1. Get knowledge about the centre and state relations and their importance.

2. Get knowledge of influence of caste, religion, region and language in Indian politics.

Paper II: International Politics and Contemporary Issues MPOIV-B

On studying this paper, the student will be able to get:

- 1. Knowledge of Non alignment, cold war, Globalization, Human Rights, Environment etc.
- 2. Knowledge about New World Order and Terrorism.

Paper III: Research Methodology and Field Work

MPOIV-C

On studying this paper, the student will be able to:

- 1. Learn the use of tools and techniques in data collection.
- **2.** Learn the use of statistics and use and significance of computer in research.

Paper IV: International law

MPOIV-D

On studying this paper, the student will be able to:

- 1. Know what are international laws and its importance.
- 2. Get knowledge about the rights and duties of state.
- **3.** Know about the limitations and possibilities of international law.

Course Outcomes: B.A.I

Subject: Ancient Indian History

Semester I: Element of Indian Archaeology

AIH101

On studying this paper, the student will be able to know:

- 1. Archaeology
- 2. Archaeological Martial antiquities obtained from the excavation.
- **3.** About the rise of human being.

Semester II: Political History of Ancient India from Beginning to Second Century BC AIH201

On studying this paper, the student will be able to know:

- 1. Indian history
- 2. About different ruling dynasties of the ancient period.

Semester III– Ancient Indian Social and Economic Institution AIH 301

After studying this subject/ paper the student will learn about :

- 1. various facts of society and its structure
- 2. milestones in ancient Indian religious life and education.

Semester IV-Ancient Indian Polity and Administration

AIH 401

The course will enable the students to learn about:

- 1. All forms of Human Organization that of the State.
- 2. The Arthasastra or science of polity of Kautilya that the cumulative expression of a long tradition of political speculation and theorizing.

SEC

Semester III- Concept and Principle of Tourism

AIH 311

The course will enable the students to learn about:

- 1. Tourism and different aspects of tourism.
 - 2. The tools of employment.
 - 3. Important tourist places of India.

Semester IV- Museology

AIH 411

The course will enable the students to learn about:

1. The importance of archaeological source in creation of history.

B.A.III Subject: Ancient Indian History

Paper I: Fundamentals of Indian Art & Architecture

BAIIIAH-A

On studying this paper, the student will be able to:

- 1. Learn and develop skill to identify various styles of architecture prevalent in ancient India.
- 2. Understand about stylistic development of sculpture of ancient India.
- 3. Learn about chronological development of art and architecture in ancient India.

Paper II: Fundamentals of Epigraphy and Numismatics BAIIIAH-B

On studying this paper, the student will be able to:

1. Study the Indian art tradition as one of the oldest living art traditions in the world.

- 2. Know the art of country with its history social & economical perspective.
- **3.** Learn about excavation of the sites of the old towns like Harappa Mohenjo-Daro & Taxila and information of the other ancient monuments.

Practical: Survay and Field work

BAIIIAH-C

Course Outcomes: M.A. I&II Semester

Subject: Ancient Indian History

Paper I: History of India (From Early Times to 4th Century BC) MAHI-A

On studying this paper, the student will be able to:

- 1. Understand about various sources of Ancient Indian History.
- 2. Understand various chronological periods of Ancient Indian History.
- 3. Become familiar with various aspects of Political and Cultural history of those periods.

Paper I: History of India (From 319-600 AD)

MAHII-A

On studying this paper, the student will be able to:

- 1. Learn "Historiography in India was never more than a branch of epic poetry."
- **2.** Get the glimpse of the glorious 'cultural heritage of India in right perspective & without a tinge of bias & an iota of exaggeration.

Paper II: History of India (From 4th Century BC to 319 AD) MAHI-B

On studying this paper, the student will be able to:

- 1. Learn about various periods of political history of ancient India from the 4th century to 319 AD.
- 2. Learn about the Cultural and Administrative trends of various phases of time.

Paper II: History of India (From 600 AD-1200 AD)

MAHII-B

On studying this paper, the student will be able to:

- 1. Learn that Unity in diversity is the basic theme of Indian culture &continuity & changes are its main currents.
- 2. Our culture abhors pollution & assimilates the essentials. The Greeks, the Scythians, the hernias & many others came, saw & conquered India but now they have lost their distant ethnic identities & are known today as "Indians" Bharat their motherland. Let us preserve this cultural unity & scorn communalism separatism & terrorism.

Paper III: Ancient Indian Social & Economic Institutions I MAHI-C

On studying this paper, the student will be able to:

1. Learn about various facts of society and its structure, milestones in ancient Indian religious life and education.

Paper III: Ancient Indian Social & Economic Institutions II MAHII-C

On studying this paper, the student will be able to:

1. Get information about Indian society subjected to a variety of impacts under which the Indian people had to learn to adopt themselves to an ever- changing environment.

2. Get Knowledge about the caste & the guild two dominant forms of social & economic organization in ancient India.

Paper IV: Ancient Indian Polity I

MAHI-D

On studying this paper, the student will be able to:

- 1. All forms of Human Organisation that of State.
- 2. About the Artha shastra or Science of polity of Kautilya that cumulative expression of a long tradition of political speculation and theorizing

Paper IV: Ancient Indian Polity II

MAHII-D

On studying this paper, the student will be able to:

- 1. Know about the Artha shastra or science of polity of Kautilya as the cumulative expression of a long tradition of political speculation & theorizing.
- 2. Know about studies on state formation &state structures which have often stressed the importance of the ideology, despite the inherent analytical & conceptual difficulties that the notions of ideology possess.

Practical: Survay and Field work

MAHII-E

M.A. III & IV Sem. Subject: Ancient Indian History

Paper I: Numismatics I

MAHIII-A

On studying this paper, the student will be able to:

- 1. Study the Indian art tradition as one of the oldest living art traditions in the world
- 2. Know the art of country with its history social & economical perspective
- 3. Learn about excavation of the sites of the old towns like Harappa Mohenjo-Daro & Taxila and information of the other ancient monuments

Paper I: Numismatics II

MAHIV-A

On studying this paper, the student will be able to:

- 1. Study the Indian coins to be enlightened with a great deal regarding the history of ancient India.
- **2.** Know that coins help us to build up the history of the country in many ways.
- **3.** Get information about the kings who ruled at various times in different parts of the country.
- **4.** Fix up the chronology. The location of coins helps us to determine the extent of the territory of a king.
- **5.** Learn that Coins are discovered from time to time either in the archaeological excavations purposely or accidently.

Paper II: Epigraphy & Palaeography I

MAHIII-B

On studying this paper, the student will be able to:

- 1. Study the Indian art tradition as one of the oldest living art traditions in the world.
- 2. Know the art of country with its history social & economical perspective.
- 3. Learn about excavation of the sites of the old towns like Harappa Mohenjo-Daro & Taxila and information of the other ancient monuments.

Paper II: Epigraphy & Palaeography II

MAHIV-B

On studying this paper, the student will be able to:

- 1. Epigraphy is the study of inscriptions & inscriptions literally means any writings engraved on some objects.
- **2.** Inscriptions are of great value as they are engraved on stones & metals. They cannot be tampered with without detection.
- **3. 3.** The knowledge of epigraphy & palaeography has to be acquired by an intensive study of numerous published inscriptions.
- **4.** Inscription can be grouped under the felling heads: commercial, magical, religious, administrative, eulogistic, dedicative, commemorative & literary.

Paper III: Art & Iconography I

MAHIII-C

On studying this paper, the student will be able to:

- 1. Learn and develop skill to identify various styles of architecture prevalent in ancient India.
- 2. Understand about stylistic development of sculpture of ancient India.
- 3. Learn about chronological development of art and architecture in ancient India.

Paper III: Art & Iconography II

MAHIV-C

- 1. Indian art is not only one of the oldest & profusely productive but it also shows a remarkable diversity of forms of expression.
- 2. Information about the art of every country which has deep roots in its history, social & economic. The art of ancient India has grown in & developed out of a specific milieu. The conditions of which have determined the forms of its expression & controlled the pace of its growth.
- **3.** The history of the art of ancient India is to be very significant. The Indian art tradition is one of the oldest living art traditions in the world.

Paper IV: Architecture I

MAHIII-D

On studying this paper, the student will be able to:

- 1. Learn and develop skill to identify various styles of architecture prevalent in ancient India.
- 2. Learn about chronological development of architecture in ancient India.

Paper IV: Architecture II

MAHIV-D

On studying this paper, the student will be able to:

- 1. Learn about architecture in India that is represented by many different types of buildings which however maybe referred to as two conventional divisions (a) religious & (b) secular.
- 2. About the ancient monuments like buildings, statues of stone or metals, terra-cotta ornamental & decorative fragments, pottery etc. give us a lot of useful & reliable information.

Practical: Survey and Field MAHIV-E

Course Outcomes: B.A. I

Subject: Economics

Semester I: Micro Economics

ECO101

Upon successful completion of this Paper the student will be able to understand:

- 1. Consumer demand analysis
- **2.** Concepts of production and costs
- 3. Various market forms and determination of prices
- 4. Factor price determination
- 5. Introduction to welfare Economics

Semester II: Indian Economy

ECO201

Upon successful completion of this Paper the student will be able to understand:

- 1. How Indian economy is changing toward a market-based economy.
- **2.** The basic features of Indian Economy.
- **3.** Planning in India and economic reforms.
- 4. Role of Industry and policy decisions

Semester III- Macro Economics

ECO301

The course will enable the students to understand: -

- 1. National income, definition and methods of calculation.
- 2. Factors responsible for employment determination.3. Consumption function and its determinants.
- 4. Saving and investment, are important in national income determination.
- 5. Trade cycles and factors responsible for trade cycle.
- 6. Multiplier and Accelerator Principle.

Semester IV- Money, Banking and Public Finance

ECO401

The course will enable the students to understand: -

- 1. How the value of money changes.
- 2. Inflation and measures to control inflation.
- 3. Banks, their role in the economy and Central Banking System.
- 4. State and effect of its intervention in the economy.
- **5**. Sources of various revenues to the state.
- **6.** Public debt and economic effects.

SEC

Semester III- Rural Development

ECO311

The course will enable the students to understand: -

- 1. Concept of rural development.

 - Role of NGOs.
 Panchayats and SHGs.
 - 4. Schemes for rural development.

Semester IV- Data Analysis

ECO411

The course will enable the students to understand: -

- 1. Data collection.
- 2. Editing and classification of data.
- 3. Graphical representation of data.
- 4. Tests of significance.

B.A. III

Paper I: Development and Environmental Economics

BAIIIEC-A

Upon successful completion of this Paper the student will be able to understand:

- 1. Economic well-being of various nations; Poverty and emerging trends to measure poverty and deprivation.
- 2. Population and Economy linkage, various perspective developments.
- 3. Environment, growing importance of study of Environment Economy inter play.
- 4. Various socio- economic issues affecting mankind.

Paper II: Statistical Methods

BAIIIEC-B

Upon successful completion of this Paper the student will be able to understand:

- 1. Statistics, data collection
- 2. Measurement of representative values.
- 3. Easement of various representative values.
- 4. Inter-relationship between social and economic variables.
- 5. Construction of Index numbers and Measurement of trend.

Course Outcomes: M.A. I Sem

Subject: Economics

Paper I: Micro Economics

MECI-A

Upon successful completion of this Paper the student will be able to understand:

- 1. Define Demand Theories Apply elasticity on price demand measurement.
- 2. Uses of various methods to implore consumer behaviours.
- **3.** Impact of Time pattern on production process.
- 4. Cost & Revenue analysis in various market forms.

Paper II: Macro Economics

MECI-B

Upon successful completion of this Paper the student will be able to understand:

- 1. The Flow of National Income.
- 2. Various assessment of national income.
- 3. factors affecting employment and income.
- 4. Consumption & Investment.
- 5. Money and its supply and demand.

Paper III: Quantitative Methods

MECI-C

Upon successful completion of this Paper the student will be able to:

- 1. Measure Skewers in data.
- 2. Measure relationship between economic variables.
- **3.** Understand interdependence and permutation between various factors.
- **4.** Learn How to fine values through Extrapolation and Interpolation.
- 5. Understand time based variables and importance and construction of Index Number.

Paper IV: Indian Economy

MECI-D

Upon successful completion of this Paper the student will be able to learn:

1. Component and structure of National Income.

- 2. Demographic features of India.
- **3.** Agriculture and its importance in Indian economy.
- 4. Industrialization and initiative taken for industrialization of India.
- 5. Regional imbalance.

Paper V: Industrial Economics

MECI-E

Upon successful completion of this Paper the student will be able to understand:

- 1. Firm Industry and factors affecting their location.
- 2. Factors affecting productivity & capacity utilization and profitability of a firm.
- 3. Funding of Industry and firm.
- 4. Labour related issues.
- **5.** Some big industries of Chhattisgarh.

M.A. II Sem. Subject: Economics

Paper I: Micro Economic Analysis

MECII-A

Upon successful completion of this Paper the student will be able to understand:

- 1. How a firm takes decisions to maximize its objective.
- 2. Determination of returns to various factors of production.
- 3. Welfare economics imply value judgment and assess principles of welfare.
- 4. Analyse economy as a whole.
- 5. Operational problem solution.

Paper II: Macro Economic Analysis

MECII-B

Upon successful completion of this Paper the student will be able to understand:

- 1. Price rise and employment inflation trade off.
- **2.** Growth dilemmas unstable & unsteady growth.
- 3. Monetary policy for stability and growth.
- **4.** Govt.'s policy and its economic implications.
- **5.** Complexities of various monetary and fiscal measures.

Paper III: Research Methodology and Computer Application MECII-C

Upon successful completion of this Paper the student will be able to learn:

- 1. Research designs Methods to carry out researches.
- 2. Sampling Data collection to study and understand a problem.
- 3. Presentation of data.
- **4.** Formulation of hypothesis and testing of hypothesis.
- **5.** Uses of computer for Statistical Analysis.

Paper IV: Indian Economic Policy

MECII-D

Upon successful completion of this Paper the student will be able to understand:

- 1. Uses of planning process for growth and desired changes in Indian Economy.
- **2.** Problem of poverty and measures taken to remove poverty and employment generation policies.
- **3.** Working Finance Commissions to foster centre state relation.
- **4.** Trade Reforms and contribution of export import in Indian economy.
- **5.** Budget and its importance international economic associations and their importance for India.

Paper V: Labour Economics

MECII-E

Upon successful completion of this Paper the student will be able to learn:

- 1. Labour Market Interplay of forces of Labour market.
- **2.** Employment, wage and wage determinations, role of bargaining power.
- **3.** Formation of trade union, utility and functioning of trade union.
- **4.** Govt. intervention in labour market.

M.A. III Sem Subject: Economics

Paper I: Economics of Growth

MECIII-A

Upon successful completion of this Paper the student will be able to understand:

- 1. Essence of economic growth, impediments to growth.
- 2. Measurements of Growth, Alternative discourse on Growth.
- **3.** Perspectives of various economists on development and their formulation for speedy development.
- **4.** Contraction in strategies of development.

Paper II: International Trade

MECIII-B

Upon successful completion of this Paper the student will be able to understand:

- 1. Importance of trade in economy of a nation.
- 2. Why does different nation trade.
- 3. What are conditions of trade and how these terms for trading determined.
- **4.** Effects of trade on various macro parameters of Economy.
- **5.** Balance of payment and measure to bring about desirable changes in international payment position of a country.
- **6.** Determination of external value of domestic currency.

Paper III: Public Finance

MECIII-C

Upon successful completion of this Paper the student will be able to understand:

1. Taxation importance of taxation for Government.

- 2. Impact of taxes on production, consumption and distribution.
- **3.** Changing pattern of taxation in India.
- 4. Different forms of taxation
- **5.** Public expenditure and public debt and its impact on economy.
- **6.** Process of budget making.

Paper IV: Environmental Economics

MECIII-D

Upon successful completion of this Paper the student will be able to learn:

- 1. Environment as part of Grand Economics Theory.
- 2. Environment as a factor in general welfare.
- 3. Economic welfare and its measurements.
- 4. Impact of Environment influencing activities on market forces of demand and supply.
- **5.** Price calculation when Environmental influence affects market forces.

Paper V: Demography

MECIII-E

Upon successful completion of this Paper the student will be able to learn:

- 1. Factors governing population changes in population.
 - **2.** Role of Economic forces in shaping population trend of a nation.
 - **3.** Role of population in Economic parameters of a nation.
 - **4.** Factor responsible for birth rate, death rate, infant mortality rate.
 - 5. Economic and demographic inter linkages.

M.A. IV Sem. Subject: Economics

Paper I: Economics of Development and Planning

MECIV-A

Upon successful completion of this Paper the student will be able to understand:

- 1. Process of Planning, Planning in India and achievements of Indian Five Year Plan.
- **2.** Various theoretical perspectives on strategies to remove back wardress.
- 3. Role of Govt. and Banking System in development of a Nation.
- **4.** International comparison on two bases of poverty, prosperity and happiness.
- **5.** Some important macro issues and their solution.

Paper II: International Economics

MECIV-B

Upon successful completion of this Paper the student will be able to learn:

- **1.** Role of bilateral and multilateral integration.
- 2. Various international cooperative formations and their compact on different economies.
- 3. International capital movement, its advantages and disadvantages.
- **4.** Various international Institutions for general economic improvement of participating nations.

5. Impact analysis of structural reforms of 1991 on the foreign trade of India.

Paper III: Public Economics

MECIV-C

Upon successful completion of this Paper the student will be able to understand:

- 1. Federal system of India.
- 2. Finances of States and Centre.
- **3.** Constitutional provision to distribute resources between centre and states and among states.
- 4. Idea of fiscal federalism.
- 5. Analysis of budgets of centre and Chhattisgarh.
- **6.** Fiscal analysis of Chhattisgarh.

Paper IV: Economics of Social Sector

MECIV-D

Upon successful completion of this Paper the student will be able to understand:

- 1. Pollution, impact analysis of Pollution and causes of Pollution.
- 2. Various laws to protect environment.
- **3.** Uses of various natural resources and their implications and consequences.
- **4.** Education as an important economic variable and outcome.
- **5.** Health as an important economic variable and outcome.

Paper V: VIVA-VOCE

MECIV-E

Upon successful completion of this Paper:

Students are evaluated for their comprehensive ability to understand and explain two various economic facts of life through personal interface.

Course Outcomes: B.A. I/ B.Sc. I

Subject: Geography

Semester I: Geomorphology

GEO101

Upon successful completion of this Paper, the student will be able to understand:

- 1. Understand the function of the earth system in real-time and analyse the natural and
 - anthropogenic operation factors affect the development of landforms
- 2. Distinguish between the mechanisms that control these processes
- 3. Assess the roles of structure, stage and time in shaping the landforms, interpret Geo-morphological maps and the knowledge in geographical research.

Semester II: Geography of Human and Cultural Landscape

GEO201

Upon successful completion of this Paper the student will be able to:

- 1. Knot. %v the Changing of culture landscape.
- 2. Understand patterns and processes of population growth, the land its implications.
- 3. Appreciate the nature and quality of human landscapes.

Practical I: Cartographic Techniques

GEOP101

- 1. Read and prepare Maps.
- 2. Use and Importance of Maps for regional development and decision-making.

Practical II Statistical Methods in Geography

GEOP201

- 1. Understand the Basis Data Collection and Processing for the meaningful Outcomes:
- 2. Comprehend the representation and interpretation of the result

Semester III- Climatology and Oceanography

GEO-301

Upon successful completion of this course, the student will be able to:

- 1. Understand the elements of weather and climate and its impacts at different scales.
- 2. Comprehend the climatic aspects and its bearing on planet earth.
- 3. Understand the oceanic process and availability of resources.

Practical-Fundamentals of Remote Sensing

GEOP-301

Upon successful completion of this course, the student will be able to:

- 1. Appreciate the strength and application of remote sensing.
- 2. Map the resources. Their location and availability.
- 3. Apply this knowledge for sustainable development.

Semester IV- Geography of India

GEO-401

Upon successful completion of this course, the student will be able to:

1. Understand the physical profile of the country

- 2. Study the resource endowment and its special distribution and utilization for sustainable development.
- 3. Synthesize and develop the idea of regional dimensions.

Practical- Digital Remote Sensing

GEOP-401

Upon successful completion of this course, the student will be able to:

- 1. Develop the skill to use digital satellite data using software.
- 2. Prepare the maps based on satellite data to compare with the ground realities.
- 3. Classify digital data for the land use/land cover and urban studies.

SEC

Semester III- Thematic Atlas

GEO-311

Upon successful completion of this course, the student will be able to:

- 1. Have sound knowledge regarding the classification and elements of Maps.
- 2. Have proper utilization of maps for the development.
- 3. Appreciate the preparation of various thematic maps with the application of various techniques.

Semester IV- Disaster Management Project Work

GEO411

Upon successful completion of this course, the student will be able to:

- 1. Understand the process and impact of disaster.
- 2. Understand both natural and man-made disasters and human negligence in the context of the environment.
- 3. Write a field work-based report on disaster management to minimize the disaster risk/risk from disaster.

B.A. III Subject: Geography

Paper I: Remote Sensing and GIS

BAIIIGE-A/BSCIIIGE-A

Upon successful completion of this Paper the student will be able to learn that:

- 1. Remote sensing is the process of detecting and monitoring the physical characteristics of an area.
- 2. It is a modern technique which needs practice and learning.
- 3. Chhattisgarh is a rich state from resource point of view. It is very necessary to increase number of experts of remote sensing and GIS.

4. Students are benefitted by the improved syllabus. This will help in monitoring state's resources as well as career opportunities of the students will be enhanced.

Paper II: Geography of Chhattisgarh

BAIIIGE-B/ BSCIIIGE-B

Upon successful completion of this Paper the student will be able to learn that:

- 1. Chhattisgarh is a new state. Physical, economic and politico-cultural study is a must for geography students.
- 2. Study for natural resources is necessary for monitoring and planning.
- 3. Detailed study of the state is mandatory for state-level competitive examinations.

Paper III: Practical Geography

BAHIGE-C/BSCHIGE-C

Upon successful completion of this Paper, the student will be able to understand:

1. Topographical Sheets and socio-economic survey of village.

Course Outcomes: M.A. I Sem

Subject: Geography

Paper I: Geomorphology

MGEI-A

Upon successful completion of this Paper the student will be able to understand:

1. The structure of different part of earth and applied geomorphology.

Paper II: Climatology

MGEI-B

Upon successful completion of this Paper the student will be able to understand:

1. The structure of atmosphere and different types of climate and its characteristics.

Paper III: Geographical Thought

MGEI-C

Upon successful completion of this Paper the student will be able to get

1. Brief knowledge of history & development of Geographical Thoughts.

Paper IV: Geography of India

MGEI-D

Upon successful completion of this Paper the student will be able to gain:

1. Knowledge of physical and socio economical characteristics of India.

Paper V: Practical Geography-Advanced Cartography

MGEI-E

Upon successful completion of this Paper the student will be able to:

1. Acquire knowledge in the field of Map Making and Cartographic techniques.

M.A. II Sem. Subject: Geography

Paper I: Economic and Natural Resource Management

MGEII-A

Upon successful completion of this Paper the student will be able to understand:

1. Natural resource management and optimum uses of resources.

Paper II: Oceanography

MGEII-B

Upon successful completion of this Paper the student will be able to:

1. Understand characteristics of oceanic water and their movement.

Paper III: Regional Development and Planning

MGEII-C

Upon successful completion of this Paper the student will be able to understand:

1. Specific regions and their development.

Paper IV: Social Geography

MGEII-D

Upon successful completion of this Paper the student will be able:

1. To know how to grow a society and their geographical aspect.

Paper V: Practical-II Map Projections, Map Interpretation and Surveying MGEII-E

Upon successful completion of this Paper the student will be able to understand:

1. Map projection and digital surveying by advanced equipment.

M.A. III Sem. Subject: Geography

Paper I: Population Geography

MGEIII-A

Upon successful completion of this Paper the student will be able to gain:

1. Knowledge of population condition of the world and related problems.

Paper II: Regional Development and Planning

MGEIII-B

Upon successful completion of this Paper the student will be able to understand:

- 1. Rural and urban development of settlement and their problems.
- 2. Five Year Plans

Paper III: Geography of Chhattisgarh

MGEIII-C

Upon successful completion of this Paper the student will be able to:

1. Acquire knowledge of Chhattisgarh.

Paper IV: Research Methodology

MGEIII-D

Upon successful completion of this Paper the student will be able to understand:

1. Research techniques and their uses.

Paper V: Practical III: Remote Sensing, Interpretation of Map and Geographical Excursion MGEIII-E

Upon successful completion of this Paper the student will be able to gain:

 Knowledge of remote sensing, Geographic Information System.

M.A. IV Sem. Subject: Geography

Paper I: Urban Geography

MGEIV-A

Upon successful completion of this Paper the student will be able to gain:

1. Knowledge of urban structure and their problems.

Paper II: Agricultural Geography

MGEIV-B

Upon successful completion of this Paper the student will be able to gain:

1. Knowledge of Agriculture Regions and their theories.

Paper III: Environmental Geography

MGEIV-C

Upon successful completion of this Paper the student will be able to:

1. Understand elements of environment and its problems and management.

Paper IV: Field Work (Physical and Socio- Economic Survey) MGEIV-D

Upon successful completion of this Paper the student will be able to understand:

1. Survey Technique and Village Survey Field Work experience Tabulation and data processing.

Paper V: Quantitative Techniques (Practical)

MGEIV-E

Upon successful completion of this Paper the student will be able to understand:

1. Statistical methods and new techniques.

Course Outcomes:

Name of Programme: B.A. in Philosophy

1. Studying philosophy will help a student to analyse and construct sound arguments, distinguish fine differences between views and find common ground, present ideas

convincingly through well-constructed, systematic arguments, generate ideas and come up with solutions to problems, be open to new ideas and ways of thinking and also understand related disciplines.

2. The course comprises of three years, the respective partition of which is dealt below.

Semester I: Indian Philosophy

PHI101

Upon successful completion of this Paper the student will be able to understand:

- 1. The status of Indian Philosophy.
- **2.** The phases of Indian Philosophy.
- **3.** Various methods of studying the subject.

Semester II: Western Philosophy

PHI201

Upon successful completion of the course the students will

get:

- 1. Knowledge of the western Philosophical traditions.
- **2.** A broad introduction to the main thinkers and theories of western philosophy from antiquity up to the modern era.
- **3.** The continuities as well as the ruptures in the Western Philosophical narrative.

Semester III- Ethics (Indian and Western) PHI301

Upon successful completion of this course, the student will be able to:

- 1. Develop his ethical and moral character.
- 2. Learn about concept of right and wrong conduct and responsibility in life.

Semester IV- Philosophy of Religion

PHI401

Upon successful completion of this course, the student will be able to:

- 1. Learn about the nature and practice of Religion.
- 2. Analyse religious concepts, beliefs, terms, arguments, and practices of religious adherents.

SEC

Semester III-Philosophy of Yoga

PHI311

Upon successful completion of this Paper the student will be able to learn:

- 1. Mind, body, and spirit are all one and cannot be clearly separated.
- 2. There is a multitude of philosophical ideas that are helpful to explore the deeper dimensions of the body, mind and spirit.

Semester IV- Life Management Tips of Gita

PHI411

Upon successful completion of this Paper the student will be able to understand:

- 1. To focus on his studies and training.
- 2. To immerse himself in his learning journey.
- 3. Dedicated effort and focus on the process rather than the results.

B.A. Part III

Paper I: Logic BAIIIPS-A

Upon successful completion of this Paper the student will be able to understand:

1. The nature of reasoning; articulate his/her thoughts in a logical and clear fashion; recognize fallacies; construct good arguments; evaluate deductive arguments; evaluate inductive arguments.

Paper II: Greek Philosophy

BAIIIPS-B

Upon successful completion of this Paper the student will be able to understand:

1. From Thales, who is often considered the first Western philosopher, to the Stoics and Skeptics, ancient Greek philosophy opened the doors to a particular way of thinking that provided the roots for the Western intellectual tradition.

Course Outcomes:

Name of Programme: M.A. in Philosophy

Upon completion of this course the student will be able to explore such concepts as the nature of the world and how we have access to knowledge of the world; the relationship between our thoughts and the external world.

1. The student can get himself into several avenues including joining a University/College as

Professor, can help him clear UPSC and State PSC Examinations, get appointed as a Philosophical Councillor and further one can find job opportunities in the following sectors such as student affairs, journalism, creative writing, research, etc. A student can also work as advisors, lobbyist, and specialist in HR etc.

2. The course consists of two years divided into four semesters, the contents of each of which include:

M.A. I Sem

Paper I: Indian Ethics

MPSI-A

Upon successful completion of this Paper the student will be able to:

- 1. Express reasons in support of a moral claim.
- 2. Understand that there are better and worse reasons for making a moral decision.
- **3.** Explain the difference between an act being morally permissible and being morally necessary.

Paper II: Indian Logic

MPSI-B

Upon successful completion of this Paper the student will be able:

1. To gain an understanding about the rich tradition and heritage about logic as it existed in the Nyaya, Jain and Buddhist culture.

Paper III: Indian Epistemology

MPSI-C

Upon successful completion of this Paper the student will be able to learn:

How correct knowledge can be acquired, how one knows, how one doesn't, and to what extent knowledge pertinent about someone or something can be acquired.

Paper IV: Indian Metaphysics

MPSI-D

Upon successful completion of this Paper the student will be able to:

Look upon it a means that helps man transcend his finitude and permanently cross over the ocean of samaras into a state of everlasting freedom.

<u>M.A.II Sem</u>

Paper I: Western Ethics

MPSII-A

Upon successful completion of this Paper the student will be able learn about:

- 1. Self and what is rationally or logically true.
- 2. Its importance on law and justice.

Paper II: Western Logic

MPSII-B

Upon successful completion of this Paper the student will be able learn about:

1. Symbolic logic, which is a way to represent logical expressions by using symbols and variables in place of natural language, such as English, in order to remove vagueness.

Paper III: Western Epistemology

MPSII-C

Upon successful completion of this Paper the student will be able learn about:

- 1. The theory of knowledge.
- 2. The nature of knowledge, justification, and the rationality of belief.

Paper IV: Western Metaphysics

MPSII-D

Upon successful completion of this Paper the student will be able learn about:

Western metaphysics which is the attempt to understand the universe by means of a logical investigation of concepts rather than an empirical inquiry based on sensory evidence.

MAIII Semester

Paper I: Social Philosophy (samaj Darshan)

MPSIII-A

Upon successful completion of this Paper the student will be able learn that:

- 1. Structure, scope and importance of Social Philosophy.
- 2. Devine and Evolutionary theory of origin of society
- 3. Relevance of Philosophy in society
- 4. Social idea of democracy.

Paper II: Analytical Philosophy

MPSIII-B

Upon successful completion of this Paper the student will be able learn that:

- 1. Analytical Philosophy is also called linguistic philosophy.
- 2. It is a loosely related set of approaches to philosophical problems, dominant in Anglo-American philosophy from the early 20th century, that emphasizes the study of language and the logical analysis of concepts.

Paper III: Modern Indian Thought

MPSIII-C

Upon successful completion of this Paper the student will be able learn that:

1. Modern Indian Thought is one of the fantastic areas of scholarly debates and discussions in contemporary India.

2. It also signifies a shift away from excessive reliance upon Eurocentric views, methods and concepts to study and interpret Indian philosophy and its society.

Paper IV: Phenomenology and Existentialism

MPSIII-D

Upon successful completion of this Paper the student will be able learn that:

- 1. Phenomenology is a research technique that involves the careful description of aspects of human life as they are lived.
- 2. Existentialism, deriving its insights from phenomenology, is the philosophical attitude that views human life from the inside rather than pretending to understand it from an outside, objectively.

M A IV Semester

Paper I: Philosophy of Gandhi

MPSIV-A

Upon successful completion of this Paper the student will be able learn that:

- 1. Gandhi was not concerned with constructing a system of philosophy, but mainly with applying the ideals and principles that had become a part of his life.
- 2. For understanding Gandhi's philosophy, it is necessary that the concepts be understood in the context of Hindu Philosophy.
- 3. It is equally important to bear in mind that Gandhi's connotations of terms are different from the prevalent ones. Quite often they sound national or geographical, when in fact they are universal.

Paper II: Philosophy of Yoga

MPSIV-B

Upon successful completion of this Paper the student will be able to learn:

- 1. Mind, body, and spirit are all one and cannot be clearly separated.
- 2. There is a multitude of philosophical ideas that are helpful to explore the deeper dimensions of the body, mind and spirit.

Paper III: Adwait Vedant of Shankara

MPSIV-C

Upon successful completion of this Paper the student will be able learn about:

- 1. Introduction to Adwait Vedant.
- 2. Introduction to Brahma, Jeev and Moksh.
- 3. Acharya Shankara's explanation of Brahma-sutra
- 4. Criticism of Shankara's Philosophy.

Paper IV: Philosophy of Swami Vivekananda

MPSIV-D

Upon successful completion of this Paper the student will be able learn that:

1. Vivekananda linked morality with control of mind, seeing truth, purity and unselfishness as traits which strengthened it.

- 2. He advised his followers to be holy unselfish and to have shraddha (Faith).
- 3. He supported brahmacharya, believing it the source of his physical and mental stamina and eloquence.

Course Outcomes: M.A. in Public Administration

M.A. I Sem

Paper I: Introduction to Public Administration

MPAI-A

The student will acquire knowledge about:

- 1. The concept of public administration, private administration & management.
- 2. Approaches to the study of public administration & development of the discipline.
- **3.** Concept of organization; line & staff departments, public corporation & independent regulatory commission.
- **4.** Concept of centralization, decentralization & delegation.
- **5.** Administrative process like policy formulation, decision making communication, leadership & motivation.

Paper II: Recent Trends in Public Administration

MPAI-B

The student will acquire knowledge about:

- 1. Administrative theories.
 - 2. Management aids.
 - **3.** Concept of E-governance, Good-Governance, RTI, Ethics in public administration.
 - 4. Some issues- crisis, stress, Time management, office and file management.
 - **5.** Accountability of public administration.

Paper III: Indian Administration

MPAI-C

The student will acquire knowledge about:

- 1. Evolution & present scenario of Indian Administration.
- 2. Parliamentary democracy & political executive.
- 3. Departments & board & commission.
- **4.** Union-state relations, administrative reforms.

Paper IV: Development Administration

MPAI-D

The student will acquire knowledge about:

- 1. Concept & theory of development administration.
- **2.** Features of developed 7 developing countries.
- 3. Concept of modernization, economic development & development programs.
- **4.** Political development, social change and planning machinery in India.
- **5.** Development and bureaucracy, public participation & environment development.

M.A. II Sem

Paper I: State Administration with Special Reference to Chhattisgarh MPAII-A

The student will acquire knowledge about:

- 1. State government & administration.
- **2.** Organization & working of state finance commission, state election commission, state planning commission.
- **3.** Administration at the districts level.
- **4.** Analyse some administrative issues like minister secretary relationship, ARC-I & II, administrative corruption.

Paper II: Municipal Govt. in India with Special Reference to CG State MPAII-B

The student will acquire knowledge about:

- 1. Concept of local self Govt. & 74th constitutional amendment.
- **2.** Organization & functions of municipal corporations.
- **3.** Personnel administration of municipal employees & state control and municipal administration & deliberative- executive relationship.
- **4.** Committee system & problems & reforms in local self govt. Smart City Project, Swarna Jayanti Sahri Rojgar Yojna.

Paper III: Rural Development & Tribal Welfare in Chhattisgarh MPAII-C

The student will acquire knowledge about:

- 1. Concept of rural development dimensions of rural poverty & role of NGOs in rural development.
- **2.** Rural development policy & strategy, approaches to rural development machinery for rural development in India.
- **3.** Various rural development schemes like MNREGA, Swachchha Bharat Mission, social audit & Digital India.
- **4.** Tribal welfare at district, block & village level in Chhattisgarh, legislation, problems & schemes tribal welfare.

Paper IV: Panchayati Raj with Special Reference to Chhattisgarh MPAII-D

The student will acquire knowledge about:

- 1. Concept & evolution of Panchayati Raj 73rd constitutional amendment.
- 2. Structure, Power & functions of three tier Panchayati Raj in Chhattisgarh.
- **3.** Source of revenue of PRIs, state control over PRIs & rate of PRIs for weaker sections & women.
- **4.** Deliberative executive relationship in PRIs, political parties & pressure group in PRIs, problems of PRIs.
- **5.** E- Panchayats, self-help groups & public distribution system in Chhattisgarh.

M.A. III Sem

Paper I: Comparative Public Administration

MPAIII-A

The student will acquire knowledge about:

- 1. Concept & evolution of comparative public administration.
- **2.** Approaches to study of comparative public administration.
 - **3.**Weber's typology of authority & ideal type of bureaucracy, Rigg's typology of societies & prismatic-sala model.
- **4.** Administrative system of U.K., China, U.S.A. & France.
- **5.** Whitleyism in Britain IRC in U.S.A. prefect in Franthece, ombudsman in Sweden & role communist party in China.

Paper II: Personnel Administration & Human Resource Development MPAIII-B

The student will acquire knowledge about:

- 1. Concept of personnel administration & human resource management.
- **2.** Concept & theories of Max Weber & Karl Marx About bureaucracy.
- **3.** Recruitment, position classification & training of personnel in U.K, U.S.A. & France.
- **4.** Concept of promotion, discipline morale & motivation.
- **5.** Employer & employee relationship.

Paper III: Research Methodology in Public Administration MPAIII-C

The student will acquire knowledge about:

- 1. Concept of research design, hypothesis and sampling.
- **2.** Construction of questionnaires and schedules, role of interviewer.
- 3. Other methods of data collection.
- **4.** Processing of data classification, tabulation and analysis of data.
- **5.** Measurement of central tendency.

Paper IV: Administrative Law

MPAIII-D

The student will acquire knowledge about:

- 1. Concept of administrative law & rule of law.
- 2. Concept of delegated legislation legislative & judicial control over delegated legislation.
- **3.** Concept & Functions of administrative tribunals.
- **4.** Concept of natural justice legal remedies & liabilities of state.
- **5.** Lokpal & Lokayukta, central vigilance commission & public interest litigation (PTI.).

M.A. IV Sem

Paper I: Civil Service in India

MPAIV-A

The student will acquire knowledge about:

- 1. Concept and structure of civil service, recruitment, training & promotion.
- **2.** Salary administration.
- 3. Structure and function of UPSC, PSC & SSC.
- **4.** Political right and right to strike & condition of service, conduct rules disciplinary action and machinery for redress of civil service grievances.

Paper II: Public Policy

MPAIV-B

By the end of the course, students will be able to:

1. Identify the major theoretical debates in contemporary policy studies;

- 2. Engage in literatures relevant to the study of public administration and bureaucracy
- 3. Contrast and compare existing research on public policy, discuss theoretical traditions and frameworks and critically engage in their arguments;
- 4. Interpret and judge different methodological strategies used in public policy research, and evaluate their core assumptions as well as their heuristic and explanatory potential;
- 5. Evaluate the relevance of existing frameworks and approaches for their own work;
- 6. Have an understanding of the major challenges and requirement of doing advanced research professionally in an academic or practical context.

Paper III: Management of Public Enterprises and Industrial Relations MPAIV-C

The student will acquire knowledge about:

- 1. The role of public enterprises in national economy &problems of nationalization.
- **2.** Forms of organization, government control & parliamentary accountability.
- **3.** Concept of managerial personnel & problems of industrialization.
- **4.** Labour welfare and its influence social security in India, U.K. and USA.

Paper IV: Financial Administration

MPAIV-D

The student will acquire knowledge about:

- 1. Ministry of finance and financial administration.
- 2. Budget types & techniques.
- **3.** Control over public expenditure.
- **4.** Finance commission, 14th finance commission, fiscal management policy and monetary policy.

SEC

Subject – Public Administration

Semester III- E-Governance

PA311

Upon successful completion of this course, the student will be able to:

- 1. Gain a theoretical understanding of the concept, theory and models of e-governance.
- 2. Learn the practical application of e-governance in different walks of life.
- 3. Awareness of various e-governance initiatives undertaken to deliver Public services to the stakeholders.
- 4. Developing necessary skills to use and operate e-governance or digital service delivery.

Semester III- Database Administration

PA411

Upon successful completion of this course, the student will be able to:

- 1. Understand the fundamental Knowledge of Database Administration.
- 2. Understand data Structure.
- 3. Comprehend data analytics.
- 4. Learn about the job opportunities as database administrators.

Course Outcomes: History- BA I

Semester I: India History from Origin to 1206 AD

HIS101

Student will acquire knowledge:

- 1. regarding the primitive/life, and cultural status of ancient India.
- 2. They can gather knowledge about the society, culture religious and political history of Maurya, Gupta, Harsha Vardhan period and know the reason for foreign invasion in India at the ancient time.
- 3. They will also acquire knowledge of socio, economical cultural and administrative (political) scenarios of India and what is the picture of India in light of
- 4. Student can gather knowledge of regional history.

Semester II: World History from 1453 - 1870 AD

HIS201

Student will be able to analyse:

- 1. the historical development in Europe between 1453 to 1870.
- 2. they will acquire knowledge regarding the downfall of feudalism and the rise of the modern age. How was the Industrial Revolution start and after that the economy of the whole world was changed and the world phase the new political challenges like-revolution reform moment and how the old imperialism was gone for ever and new imperialism was born (rise) and world phase the new problem of new imperialism.

Semester III-History of India 1206 AD. To 1761 A.D.

HIS301

The course will enable the students to:

1. Identify the political, Social and religious development during the period 1206 to 1761

A.D. the changes regarding art, architecture and the field of socio-religious like – the Bhakti movement & Sufi movement.

- 2. Learn how the Maratha power emerged.
- 3. Gather knowledge about regional history.

Semester IV- World History (From 1871 To 1964 A.D.)

HIS401

The course will enable the students to:

- 1. Understand an era of shifting from Euro-centric to world.
- 2. Understand that in which condition the dictator emerged and raised a new problem for the whole world.

SEC

Semester III-History of National Movement in Chhattisgarh (1857-1947) HIS311

The course will enable the students to:

- 1. Understand the positive role of Chhattisgarh in the various phases and aspects of national movement.
- 2. Learn about different components of Chhattisgarh as a byproduct of specific characteristics as the factor of regional development.
- 3. Learn regional history which will be helpful I competitive examination and regional writings.

Semester IV- History of Indian National Movement (1857-1947)

HIS411

The course will enable the students to:

- 1. Learn the main movements of Indian history.
- 2. Learn different aspects of Indian National Movement.

B. A. Part III History

Paper- I History of India (1761 to 1947)

BAIIIHT-A

Course Outcome- Student will acquire knowledge regarding the European arrival in India, At that time what was the political condition f India, The student can gather knowledge about

how the European's use and the Indian soil for . First Economic exploitation and after some time they will interfere in Indian politics and became the ruler of this country." Syllabus introduce the Indian renaissance and Trible culture of Chhattisgarh.

Paper- II History of Indian National Movement from 1857 to 1947 A.D. BAIII HT- B

"The course aim to provide and understanding the main events of Indian National Movement. The study of different components and aspects of the national movement will lid the knowledge of regicrocal History"

Course Outcomes: M.A. I & II Semester

Paper I- Methodology of History (Semester I)

MHT I-A MHT II-A

Paper I- Historiography (Semester II)

Student will be identifying the methodology of History. Main contents of the syllabus related with the collection, selection, classification and interpretation of facts. Student also learn about the correlation of history with other social science (discipline). Second semester course related with the Historiography that's provides Knowledge that in different age(Ancient, Medieval, Modern) what was the trends of History writing. Greco Roman. Chinese, Arabic, Persian and Indian Historiography. Student will also introduce the different type of the Interpretation of Indian History.

Paper II-History of Modern World 1871 to 1919 (Semester I)

Paper II- Contemporary World 1919to 1990 (Semester II)

MHT II-B

The student will be able to analyse the socio, Political economic principles of the different nations. The principles and objects of foreign policy. How was the political crisis start before the beginning of first world war.

The study of the course will play a role to acknowledge the political scenario of the world after first world war. And the treat of varsities was the main responsible factor for the second world war and the rise of Autocracy.

Paper III- Ancient and Medieval Chhattisgarh (Semester I)

Paper III- Modern Chhattisgarh 1818 to 2001(Semester II)

MHT II-C

Student will acquire Knowledge regarding the Ancient and Medieval age of life, culture ruler dynasties, Main Profession, Society, Religion status of Chhattisgarh. They will also be

introduced the positive role of Chhattisgarh in the various places and aspects of the contribution of Chhattisgarh in National movement.

The study of regional History will play the role for the various competitive examination and regional writings.

Paper IV- History of Indian National Movement 1885 to 1919 (Semester I) MHT I-D Paper IV- History of Indian National Movement 1920 to 1947 (Semester II) MHT II-D

The object of the syllabus is to introduce the Primary activities of Indian national movement, aware about Nationalism and the study of the contribution of different components for Indian Independence

The course will enable the student to introduce the main events of Indian history during national movement. Student get knowledge that the Indian freedom struggle was totally different freedom struggle was totally different from the freedom movements of other country. Because the Indian national movement was based on truth and non-violence.

M.A. III & IV Semester

Paper I – Modern India Political and Administrative (1757 to 1857) (Semester III) MHTIII – A

Paper will consist pre-colonial political and administrative condition of India, student will know (Understand) that British Empire Expanded under the rule of British east India Company, policies and programme of company with Indian states

Paper I – Modern India Economic, Social and Cultural (1757 to 1857) (Semester IV)MHT IV – A

This programme is provide (understanding) knowledge about social, cultural and economic condition of pre-colonial India. The study of Rural Economy, Urban Economy, condition of Handicraft Industries, Industrialization, Indebtedness, Economic drain, social reforms during pre-colonial age.

Paper II – Modern India (1858 to 1964) Political and Administrative (Semester III) MHT III B

Study of the syllabus student will able to analyse the different ideology of modern Historiography, Arrival of European's and Expansion of British Empire. Relation with Indian States, Students also get knowledge about the Princely State, Tribal and Peasant movement and Ideologies.

Paper II - Modern India (1858 to 1964) Economic, Social and Cultural (Semester IV) MHT IV B

The course aim to provide understanding the rural, urban economy, Land reforms, Economic growth. Various social reform movement, women uplift efforts and the development of modern Education in India.

Paper III – Tourism – Principle and nature in Reference to History (Semester III) MHT III C Paper III– Tourism principle and nature in Reference to History (Semester IV) MHT IV C

Learning outcome of this course (syllabus) is to provide the knowledge of main Historical Tourist Centres of India, Travel Agencies utility of Travel Agencies, Scope of Tourism in Chhattisgarh and the main Tourist places of Chhattisgarh. Student also introduce the importance of Tourism and the significance of National Parks in Tourism.

Paper IV – Cultural History of India (Beginning to 1526)/ Cultural History of India (1526-1950 AD) MHTIII-D /MHTIV-D

- 1. The objective of the syllabus is to introduce the glorious culture of India during the Ancient, Medieval and Modern age.
- 2. Salient feature of Bhakti and Sufi Movements.
- 3. The glory of Jainism and Buddhism.
- 4. Contribution of rulers for the development of Indian culture.
- 5. In modern age the contribution of orientalist to Indian culture.
- 6. How to attempt for women empowerment in British India.

Course Outcomes: BA. / B.Sc. /B.Com. Semester II and IV

Semester II-Hindi Language BAHLG201/BSCHLG201/BCOMHLG201

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. हिन्दीभाषा के आधारभूत तत्वों की समझ विकसित करना है ।
- 2. भाषागत अशुद्धियों को दूर करना ।
- 3. सप्रेंषण कौशल विकसित करना ।
- 4. भाषा का ज्ञान होना ।
- 5. भाषा का शुद्ध प्रयोग करना ।
- 6. पत्रों के प्रारूप से परिचित होना ।

Semester IV-Hindi Language BAHLG401/BSCHLG401/BCOMHLG401

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

1. हिन्दीभाषा के विविध रुपों का ज्ञानहोगा।

- 2. व्याकरणिक कोटियों के ज्ञान से भाषिक-प्रयोगों में कुशलता अर्जित होगी।
- 3. साहित्यिक विधाओं के माध्यम से समाज—संस्कृति—परंपरा के प्रति जागरुकता उत्पन्न होगी।

B.A./B.Sc./B.Com. Third Year

Hindi Language

BAIII-HL/BSCIII-HL/BCOMIII-HL

इस पाठ्यक्रम के अध्ययन के पश्चात छात्रों में -

- 1. सप्रेंषण कौशल विकसित करना ।
- 2. हिन्दीभाषा के आधारभूततत्वों की समझ विकसित करना ।
- 3. साहित्य सस्कृति एवं सामान्य ज्ञान से परिचित कराना ।
- 4. रचनात्मक कौशल को बढ़ाना ।
- 5. व्याकरणिक ज्ञान ।

B.A. First Semester

Hindi Literature

Pracheen Evam Madhyakaleen Kavya

HLT101

इस पाठ्यक्रम के अध्ययन के पश्चात छात्रों में -

- 1. हिन्दीसाहित्य के इतिहास का ज्ञान
- 2. आदिकाल से उत्तरमध्यकाल की कविताओं का परिचय
- 3. तात्कालीनकवि दृष्टि एवंरचनाकौशल का ज्ञान
- 4. प्रतिनिधिकवियों की कृतियों एवं उनके वैशिष्टय का ज्ञान

B.A. Second Semester

Katha Sahitya

HLT 201

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. उपन्यास'गोदान' एवंभूलनकांदा के माध्यम से भारतीय कृषि एवंन्याय जगत की समस्यायों की पडताल
- 2. उदभवकाल से लके र आजपर्यंतिलखीगईप्रतिनिधिकहानियों के माध्यम से विविधआयामीसूझ का विकास
- प्रतिनिधिरचनाकारों का परिचय

Semester III- अर्वाचीनहिन्दीकाव्य

HLT301

- 1. विद्यार्थियों मेंआधुनिक चेतना और जीवन मूल्यों से युक्त युगीनभाषा, संस्कृति एवं समय की समझ विकसित होगी।
- 2- वे खडी बोली कविता के रचनाशिल्प, भाषा—सौष्ठव और सौन्दर्यबोध से अवगत होंगे।
 Semester IV- कथेतर गद्य

 HLT401
 - 1. कथासाहित्य से भिन्नअन्य गद्य विधाओं का ज्ञान प्राप्त होगा।
 - 2. कथेतर गद्य के माध्यम से युगीन संदर्भों को जान सकेंगे।
 - 3- मानव-मन की अभिव्यक्ति के सशक्त माध्यमों से परिचित होंगे।

SEC

Semester – IV Hindi Language Teaching

HLT311

- 1. कला, साहित्य, विज्ञान एवं तकनीकी क्षेत्र में मौलिक उपस्थापना करने में सक्षम हो सकेंगे।
- 2. समस्त लेखन विधाओं में कौशल हासिल करेंगे।
- **3-** साहित्यिक विधाओं के अलावा दूरदर्शन, पत्रकारिता, धारावाहिक, फिल्मसंवाद, पटकथालेखन में पारंगत हो सकेंगे।

Semester – III Creative Writing

HLT411

- 1. विद्यार्थी भाषा सीखने की सृजनात्मक प्रक्रिया को समझ सकेंगे।
- 2. हिन्दी भाषा शिक्षण में कौशल का विकास होगा
- 3. भाषायी दक्षता अर्जित करेंगे।

B.A. Final Year

Paper I-Janpadiya Bhasha Sahitya (Chhattisgarhi)

BAIIIHI-A

इस पाठ्यक्रम के अध्ययन के पश्चात छात्रों में -

- 1. छत्तीसगढ़ी भाषा के आधारभूततत्वों से परिचय कराना ।
- 2.क्षेत्रीय भाषाकोप्रोत्साहनदेना ।
- 3. छत्तीसगढी साहित्य से परिचय कराना ।
- 4. छत्तीसगढ़ी भाषा के रचनाकारों की कृतियों का अध्यययन ।

PaperII-Hindi Bhasha Sahitya Ka Itihaas tatha Kavyaang Vivechan BAIIIHI-B इस पाठयक्रम के अध्ययन के पश्चात छात्रों में –

- 1. हिन्दीभाषाकीआधारभूतज्ञानप्राप्ति के साथहिन्दी के विविध रूपों स े अवगतकराना ।
- 2. हिन्दी के शब्दभण्डार स े परिचितकराना, जिससेविद्यार्थियो ं की भाषा समृद्ध औरपरिमार्जितहोसके ।
- 3. हिन्दीसाहित्य इतिहास की सक्षिप्तजानकारीदेकरविद्यार्थियों कोसाहित्य के प्रमुख युक्तप्रवृत्तियों के साथविकासकम से अवगतकरानातथा उस काल की ऐतिहासिक, सामाजिक, सांस्कृतिकपृष्टभूमि से परिचितकराना ।
- 4. काव्यांगविवेचनमेंअलंकारो ं औरछंदों का अध्ययन करभाषा के सौंदर्य के साथ—साथकाव्य परंपराओंकोभी समृद्ध करना ।

M.AHindi Literature

Semester I

Paper I-Hindi Sahitya Ka Itihaas

MHIA

इस पाठ्यक्रम के अध्ययन के पश्चात छात्रों में -

- 1. हिन्दीसाहित्य के अधिकार एवं भिक्तकाल की प्रवृत्तियों व रचनाकारों का अध्ययन
- 2. उक्तकाल की समस्त पृष्ठभूमियों का अध्ययन

Paper II-Pracheen Evam Madhyakaleen Kavya

MHIB

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. आदिकाल एवंभिक्तकाल की रचनाओं का अध्ययन
- 2 लोकजागरण का भावविकसितकरना

Paper III-Aadhunik Hindi Kavya

MHIC

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. नवीनभाव-भूमि एवंवैचारिकगतिशीलता का प्रसार
- 2. आधुनिकता, इहलौकिकता ,विश्वजनीयता एवंवैज्ञानिकदृष्टिकोण का विकास

Paper IV-Aadhunik Gadhya Sahitya

MHID

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. गद्य की विविध विधाओं के माध्यम से मानव जीवन के विविध पक्षों का उद्घाटन
- 2. एतिहासिक, सामाजिक, सांस्कृतिकमृल्यों का विकास

Semester II

Paper I-Hindi Sahitya Ka Itihaas

MHIIA

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. हिन्दीसाहित्य इतिहास के आधुनिककाल एवंछायावादोत्तरकाल का व्यापक अध्ययन
- 2. समस्तपृष्टभूमियों, प्रवृत्तियों एवंप्रतिनिधि रचनाकारों का परिचय

Paper II-Prachin evam Madhyakalin Kavya

MHIIB

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. मध्यकालीन (सग्णभिक्त धारा / रीतिकाव्य का अध्ययन)
- 2. लोकमंगल, भावनात्मक एकता एवंसांस्कृतिकपरंपरा से जोड़ना

Paper III-Adhunik Hindi

MHIIC

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. प्रगतिवाद एवं प्रयोगवाद के प्रमुख हस्ताक्षरों के अध्ययन
- 2. समकालीन भावाभिव्यंजना एवं शिल्पगत नवीनता से परिचय

Paper IV-Adhunik Gadhya Sahitya

MHIID

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. साहित्य, समाज, संस्कृति का दर्शन
- 2. आंचलिकता से रूबरू कराना ।

Semester III

Paper I-Kavyashastra Evam Sahityalocha

MHIIIA

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. रचना में मर्यादा का पालन करना
- 2. रचना को उसकी समग्रता में जांचना, परखना
- 3. साहित्यिक समझ विकसित करना

Paper II-Bhasha Vigyan Evam Hindi Bhasha

MHIIIB

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. साहित्य के गंभीर अध्ययन हेत् भाषिक व्यवस्था का ज्ञान
- 2. हिन्दीभाषा के ऐतिहासिक विकास कम को समझना
- 3. देवनागरी लिपि और मानकीकरण की प्रक्रिया को समझना

Paper III-PrayojanmoolakHindi

MHIIIC

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. रोजगार एवं जीविका के क्षेत्र में भाषाकौशल विकसित करना
- 2. जीवन और समाज की विभिन्न आवश्यकताओं के अनुरूप भाषा की दक्षता उत्पन्न करना

Paper IV-Bhartiya Sahitya

MHIIID

इस पाठ्यक्रम के अध्ययन के पश्चात छात्रों में -

- 1. भारत की विभिन्न भाषाओं का ज्ञान
- 2. भारतीय भाषाओं में हिन्दीसाहित्य का स्थान निर्धारित कर हिन्दीसाहित्य का विस्तार करना
- 3. भारतीय साहित्य के माध्यम से छात्रों के ज्ञान क्षितिज एवं ज्ञानदृष्टि का विकास करना
- 4. बगंला एवं हिन्दीसाहित्य के इतिहास का तुलनात्मक अध्ययन

Semester IV

Paper I-Kavyashastra Sahityalochan

MHIVA

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. हिन्दीलक्षणपरंपराकोजानना
- 2. हिन्दीआलोचना की प्रमुख प्रवृत्तियोंको समझना
- 3. व्यवहारिकसमीक्षा का ज्ञान

Paper II-Bhasha Vigyan Evam Hindi Bhasha

MHIVB

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. हिन्दी के विविध रूप का ज्ञान
- 2. हिन्दी की उपभाषाओं का ज्ञान
- 3. भाषा की वैज्ञानिकता के आधार पर भाषा के ऐतिहासिक विकासकम, भौगोलिक विस्तार एवं स्वरूप को समझना

Paper III-PrayojanmoolakHindi (Patrakarita)

MHIVC

इस पाठ्यक्रम के अध्ययन के पश्चात् छात्रों में -

- 1. पत्रकारिता के स्वरूप और इतिहास को जानना
- 2. विभिन्न जनसचार माध्यमों के महत्व को समझना

3. प्रमुख प्रेस कानून एवं आचारसंहिता की जानकारी, साहित्य के साथ-साथ रोजगारपरकता की आकांक्षा की पूर्ति

Paper IV-Janpadiya Bhasha Evam Sahitya (Chhattisgarhi)

MHIVD

इस पाठयक्रम के अध्ययन के पश्चात छात्रों में -

- 1. छत्तीसगढी भाषा का नामकरण, बोलियों औरव्याकरण का ज्ञान
- 2. छत्तीसगढी साहित्य के इतिहास का परिचय
- 3. छत्तीसगढ़ी साहित्य की रचना और रचनाकारों से परिचित होना, क्षेत्रीय भाषा को प्रोत्साहित करना

Course Outcomes: Sociology

B.A. Part I

Semester I: Introduction to Sociology

SOC101

The course will enable the students to:

- 1. Understand social practices.
 - 2. Understand social structure and social adjustment.

Semester II: Contemporary Indian Society

SOC201

The course will enable the students to:

1. Understand ancient social practices in human life of Dharma, Karm, Moksha and Ashram..

Semester-III Sociology of Tribe

SOC301

The course will enable the students to:

- 1. Understand the classification of tribal people.
- 2. Gain knowledge about the socio-cultural profile of the tribe.
- 3. Understand various tribal problems.
- 4. Understand various tribal movements.

Semester-IV- Crime and Society

SOC401

The course will enable the students to:

- 1. Understand Social structure and anomalies.
- 2. Understand the meaning, causes, consequences and remedies of terrorism.

SEC

Semester- III–Sociology of Religion

SOC 311

The course will enable the students to:

1. Understand the different forms of religion.

- 2. Understand Indian religion and culture.
- 3. Study different principles of religion.

Semester IV– Sociology of Environment

SOC 411

The course will enable the students to:

- 1. Get a sound conceptual, theoretical, and empirical background to the issues of environment sustainable development and resource management.
- 2. Prepare themselves for further research areas.
- 3. Learn the main concepts, theories and empirical practises on the interactions between environment and society.

B.A. Part III

Paper I: Foundation of Sociological Thought

BAIIISO-A

- 1. विद्यार्थियों को समाजशास्त्र के अंतर्गत कौन—कौन से विद्वान हैं उसकी जानकारी होती है ।
- 2. विभिन्न समाजशास्त्रियों के सिद्धांतों की जानकारी प्राप्त होती है ।
- 3. भारत में समाजशास्त्रीय विचारधारा या चिंतन का विकास कैसे और कब हुआ एवं भारतीय विचारक जैसे महात्मागांधी एवं राधाकमल मुखर्जी के विचारों एवं सिद्धांतों से परिचित होते हैं।
- 4. विदेशी (पश्चिम) के विचारकों को जानकर उनके सिद्धांतों की जानकारी प्राप्त होती है ।
- 5. प्रतियोगी परीक्षाएं जैसे PSC, UPSC में उन्हें लाभ होता है ।

Paper-II: Method of Social Research

BAIIISO-B

- 1. विद्यार्थियों को शोध की जानकारी होती है कि शोध कैसे करते है ।
- 2. शोध करने की पद्धतियों की जानकारी होती है ।
- 3. सामाजिक शोध में कम्प्यूटर का प्रयोग कैसे करते है इसकी उन्हें जानकारी प्राप्त होती है
- 4. M.A., M.Phil. PhD. में उन्हें शोध करने में आसानी होती है आगे प्रतियोगी परीक्षाओं हेतु लाभ होता है।

M.A. I Semester

Paper I: Classical Sociological Tradition

MSOI-A

1. इसमें समाजशास्त्र के कई सामाजिक विचारकों के बारे में जानकारी ।

- 2. समाजशास्त्रीय विचारकों में अगस्त काम्टे, इमाइल दुर्खीम, मक्सवेल और कार्लमार्क्स के बारे मे जानकारी ।
- 3. समाजशास्त्र परंपरा और आधुनिकता की जानकारी ।

Paper II: Philosophical and Conceptual Foundation of Research Methodology MSOI-B

Upon successful completion of this Paper the student will be able to understand:

- 1. शोध अनुसंधान की जानकारी ।
- 2. शोध कार्य संबंधी अनुसूची प्रकार एवं प्रक्रिया की जानकारी ।
- 3. नवीन शोध की प्रक्रिया ।

Paper III: Industrial Sociology

MSOI-C

- 1. समाजशास्त्र विषय मे हुंए सामाजिक परिवर्तन विषय पर जानकारी ।
- 2. आधुनिकीकरण की परिवश एवं बदलते आयामों के संबंध में जानकारी ।
- 3. समाज के समयानुसार हो रहे परिवर्तन की जानकारी ।

Paper IV: Criminology

MSOI-D

Upon successful completion of this Paper the student will be able to understand:

- 1. ग्रामीण परिवशे की विशेष जानकारी ।
- 2. ग्रामीणसमाज एवं परंपरा संबधी जानकारी ।

Practical: (Interview Schedule)

MSOI-E

- 1 विद्यार्थी शोध हेत् उपकरण एवं प्रविधि का प्रयोग करना सीखते है ।
- 2- छात्र / छात्राएं किसी सामाजिक विषय या सामाजिक समस्या पर प्रश्न बनाना सीखते है।
- 3- वे साक्षात्कार अनुसूची बनाना व उसका प्रयोग करना सीखते है ।
- 4- इस प्रकार वे सामग्री का सकंलन करते है या तथ्यों का एकत्रीकरण करते है

II Semester

Paper I: Classical Sociological Thinkers

MSOII-A

Upon successful completion of this Paper the student will be able to understand:

1.समाजशास्त्रीय विचारकों के सिद्धांत संबंधी जानकारी

2.सिद्धांतो की प्रकिया एवं उनके प्रणाली के सबंध में जानकारी

Paper II : Quantitative Research Techniques of Sociology

MSOII-B

Upon successful completion of this Paper the student will be able to understand:

- 1.गुणात्मक शोध संबधी जानकारी की प्राप्ति
- 2.गुणात्मक अनुसंधान की प्रक्रिया एवं शोधकार्य संबधी जानकारी की प्राप्ति।

Paper III: Sociology of Development

MSOII-C

Upon successful completion of this Paper the student will be able to understand:

- 1.समाजशास्त्रीय विकास के संबंधमेंजानकारी की प्राप्ति।
- 2. समाज के बदलते परिवेश एवं संचार के संबंध में जानकारी की प्राप्ति।
- 3.समाज के विकास के विभिन्न आयामों संबंधी जानकारी ।

Paper IV: Indian Rural Society

MSOII-D

Upon successful completion of this Paper the student will be able to understand :

- 1.भारतीय ग्रामीणसमाज के संबंध में जानकारी।
- 2.ग्रामीणसमाज की रूपरेखाएं परिवश परंपरा तथा परिस्थिति के संबंध में जानकारी प्राप्त होती है।
- 3.भारत के विकास में ग्रामीणसमुदाय का विकास एवं निरंतरता एवं परिवर्तन सबंधी जानकारी।

Practical: (Questionnaire)

MSOII-E

- 1 विद्यार्थी प्रोजक्ट हेतु टूल्स और तकनीक का उपयोग करना सीखते है ।
- 2-प्रश्नावली बनाना सीखते है और डाक से भेजना जानते है ।
- 3 सामग्री सकंलन या तथ्यों का एकत्रीकरण करते है ।

III Semester

Paper I: Theoretical Perspectives in Sociology

MSOIII-A

Upon successful completion of this Paper the student will be able to understand:

- 1.समाजशास्त्र के विषय में देखने का तरीका, प्रक्रियाएं समाज को हम किस रूप से देख रहे है, समाज के साथ व्यवहार एवं उनके ऊपर किये जाने वाले प्रक्रिया के बारे में जानकारी प्राप्त होती है ।
- 2.पुराने परंपरा विषय की जानकारी ।
- 3.कार्यक्षमता सिद्धांत के विशेष आयाम की जानकारी प्राप्त होती है ।
- 4. सरंचनात्मक एवं संघर्षरूपी सिद्धांतों की जानकारी ।

Paper II: Social Movement in India

MSOIII-B

Upon successful completion of this Paper the student will be able to understand:

- 1.समाजिक आंदोलन के सबंध मेंजानकारी ।
- 2.भारतमेंहुए सामाजिकआंदोलन के संबंध में अलग—अलग समय में हुए विषय पर आधारित विषयों की जानकारी ।
- 3.समाज के विकास के लिये किये गये आदोलन एवं उसके परिणामों की जानकारी प्राप्त होती है।

Paper III: Industrial Sociology

MSOIII-C

Upon successful completion of this Paper the student will be able to understand:

- 1.समाजशास्त्र विषय में हुए सामाजिक परिवर्तन विषय पर जानकारी ।
- 2.आधुनिकीकरण की परिवश एवं बदलते आयामों के संबंध में जानकारी ।
- 3.समाज के समयानुसार हो रहे परिवर्ततन की जानकारी ।

Paper IV: Criminology

MSOIII-D

Upon successful completion of this Paper the student will be able to understand:

- 1. ग्रामीणपरिवशे की विशेष जानकारी ।
- 2. ग्रामीणसमाज एवं परंपर संबंधी जानकारी ।

Project Reports

MSOIII-E

- 1. किसी सामाजिक समस्या (ग्रामीण / नगरीय) को चुनकर उस पर अध्ययन करना सीखते है।
- 2. प्रोजक्ट वर्क अथवा प्रायोगिक कार्य हेतु उसका Synopsis(शोध प्रारूप) बनाना सीखते है।
- 3. प्रस्तावना से लेकर अध्ययन के महत्वत की पूरी जानकारी भरते है ।

IV Semester

Paper I: Recent thinkers & Sociological Theories

MSOIV-A

Upon successful completion of this Paper the student will be able to understand:

- 1.समाजशास्त्रीय सिद्धांत विषय की जानकारी।
- 2.वर्तमान समाज के अनुसार सिद्धांत एवं समाज की विशेषता तथा विचारकों की जानकारी
- 3. समाजशास्त्रीय सिद्धांत जो आवश्यक हो समाज के विकास में ।

Paper II: Comparative Sociology

MSOIV-B

Upon successful completion of this Paper the student will be able to understand:

- 1.समाज के विकास में हुए परिर्वतनों का तुलनात्मक अध्ययन ।
- 2.समाज की तुलनात्मक जानकारी जो समय के अनुसार आवश्यक है ।
- 3.समाज के विभिन्न आयाम एवं उसमें हुए परिवर्तन की विशेष जानकारी ।

Paper III: Sociology of Development

MSOIV-C

Upon successful completion of this Paper the student will be able to understand:

- 1.समाजशास्त्रीय विकास के संबंध में जानकारी की प्राप्ति
- 2.समाज के बदलते परवेश एवं संचार के संबंध में जानकारी की प्राप्ति समाज के विकास के विभिन्न आयामों संबंधी जानकारी ।

Paper IV: Indian Rural Society

MSOIV-D

Upon successful completion of this Paper the student will be able to understand:

- 1.भारतीय ग्रामीणसमाज के संबंध में जानकारी
- 2.ग्रामीणसमाज की रूपरेखाए परिवेश एवं परंपरा तथा परिस्थिति के संबंध में जानकारी प्राप्त होती है
- 3.भारत के विकासमेंग्रामीणसमुदाय का विकास एवंनिरंतरता एवंपरिवर्तनसबं धी जानकारी।

Project Reports

MSOIV-E

1 – विद्यार्थी शोध करना सीखते है कि किस प्रकार किसी <u>ग्रामीण / शहरी</u>समस्या या किसी भी सामाजिक विषय या योजना का अध्ययन कर सकते है ।

- 2-वैज्ञानिक पद्धति को अपनाकर किस प्रकार समाजशास्त्र में सामाजिक विषयों का अनुसंधान कर सकते है ।
- 3-प्रारंभ प्रस्तावना से लेकर संदर्भग्रंथसूची तक किस प्रकार कार्य करते है , सीखते है
- 4-M.Phil एवं PhD हेतु लाभ होता है (Dissertation औरThesisमें)
- 5 प्रतियोगी परीक्षाओं जैसे-UPSC एवं CGPSC में सहायता होती है ।

नोट :-उपर्युक्त पाठ्यक्रम पूर्णरूप से समाजशास्त्र संबंधी जानकारी देता है जो समाजशास्त्र के विद्यार्थियों के लिये महत्वूपर्ण है ।

Course OutcomesMSW I Semester Paper I:

Social Work History and Ideology- Indian Perspective

MSWI-A

भारत में समाजकार्य के इतिहास एवं उद्भव के संबंध में जानकारी प्राप्त होती है।

Paper II: Population and Environment

MSWI-B

जनसंख्या एवं पर्यावरण के विभिन्न पहलुओं तथा इनसे नीति, कानून एवं अधिनियमों के संबंध में जानकारी प्राप्त होती है।जोकि पर्यावरण सरंक्षण एवं जनसंख्या सबंधी समस्याओं के निराकरण हेतु आवश्यक है।

Paper III: Working with Groups & Group Work

MSWI-C

समाज कार्यकर्ता को समूह में कार्य करने की समझ बढ़ती है तथा समूहसंबधी प्रबंधन, नेतृत्व, समस्या निवारण इत्यादि गुणों का विकास होता है।

Paper IV: Social Work Research – Qualitative Methods

MSWI-D

सामान्य बुद्धि एव वैज्ञानिक बुद्धि में अंतर स्पष्ट होता है साथ ही अनुसधान तकनीकों व उपकरणों के संबंध में जानकारी मिलती है।

Paper V: Human Growth and Development

MSWI-E

मानवीय जीवन चक्र की विभिन्न अवस्थाओं के संबंध में जानकारी मिलती है तथा उन सभी अवस्थाओं में व्यक्ति की आवश्यकताओं व समस्यासबंधी समायोजन की समझ बढती है व सामाजीकरण की प्रक्रिया के बारे में पता चलता है।

MSW II Semester

Paper I: Social Work History and Ideology -Western Perspective MSWII-A

पश्चिमी देशाों में समाजकार्य के इतिहास एवं उत्पत्ति के संबंध में जानकारी प्राप्त होती है तथा पश्चिमी सभ्यता में समाजकार्य की तकनीक एवं प्रक्रिया के बारे में पता चलता है।

Paper II: Political Economy & Development

MSWII-B

समाजिकअर्थव्यवस्था से अवगतकरातीहैतथाआर्थिकसमस्याओं व उनके समाधानसंबंधीमॉडल के बारेमें समझ बढती है।

Paper III: Process & Evaluation of Development

MSWII-C

समूहनिर्माण की प्रक्रिया व उसकी विभिन्न अवस्थाओं के बारे पता चलता है तथा समूहनिर्माण करते समय किन बातों का ध्यान रखना चाहिए इसकी भी जानकारी मिलती है एवं समूह का मूल्यांकन किस प्रकार होना चाहिए व कब समूह समाप्त करना है, यह समझने में मदद मिलती है।

Paper IV: Social Work Research – Qualitative Methods

MSWII-D

समाजिकअनुसंधान के अंतर्गतसांख्यिकीय गणनाओंतथासामाजिकअनुसंधान की प्रक्रियाविष्लेशण एवंप्रतिवेदनलेखन के बारेमेंजानकारीप्राप्तहोतीहै।

Paper V: Social Work Practicum

MSWII-E

विभिन्नसंस्थाओं की कार्यप्रणालियां का प्रायोगिकअनुभवहाते।हैतथासीमित रूपमेंडाटाकलेक्शनकरप्रतिवेदननिर्माणकरने से सामाजिकअनुसंधान के लिए व्यावसायिकग्णों का विकासहोताहै।

MSW III Semester

Paper I: Sociology for Social Work in India

MSWIII-A

भारतीय समाज के संबंध में समझ बढ़ती हैक्योकिजिससमाजमें इसे कार्यकरताहै । सर्वप्रथमउसकेसंगठन व विभिन्नपहलुओंको समझनाआवश्यक है।

Paper II: Social Work Personnel, Training & Development

MSWIII-B

सामाजिककार्यकर्तामेंव्यावसायिकगुणों का विकासहोताहैतथामानवसंसाधन की उपयोगिता की समझ बढ़ती है व प्रशिक्षण के द्वाराकर्मचारीविकास के बारेमेंजानकारीप्राप्तहोतीहै।

Paper III: Family Social Work

MSWIII-C

परिवार एवंविवाहनामकसंस्था के बारेमेंसम्पर्णूजानकारीजिससेउसकीउत्पत्ति के सिद्वांतों के बारे में पता चलताहैजोिकपारिवारिकपरामर्शमेंमददकरताहै।

Paper IV: Social Policy in India

MSWIII-D

भारतमेंसामाजिक एवंआर्थिकविकास की नीतियों वउसकेप्रारूपों की जानकारीमिलतीहै।जिससेकि एक समाजकार्यकार्यकर्तासमाजमेंकार्यकरतेहुए इननीतियों का उपयोगकरसकताहै।

Paper V: Legal System in India

MSWIII-E

भारतमेंकानून व दण्डप्रक्रिया के बारेमेंजानकारीमिलतीहैजिससेव्यक्ति का पुनर्वास एवंसुधारजुड़ाहुआहै।इसकीजानकारीहोनेपरसमाजकार्यकर्तासवार्थियां की काननीमददआसानी संकरसकताहै।

MSW IV Semester

Paper I: Social Control & Change in India

MSWIV-A

समाज मेंहोनेवालेपरिवर्तनों के बारे में जानकारीप्राप्तहोतीहैतथा उन परिवर्तनों से उत्पन्न समस्या का समाधान किस प्रकार किया जाय, समायोजन एवं नियंत्रण के विभिन्न साधनों व तरीकों के बारे में पता चलताहै।

Paper II: Social Development

MSWIV-B

समाजिकविकास के विभिन्न घटकों की जानकारीमिलतीहैजिससेकिसमाजिककार्यकर्तासमाजमेंकार्यकरते समय विभिन्नपहलुओंके द्वारासामाजिकविकासमेंअपना योगदान दे सकताहै।

Paper III: Social Planning in India

MSWIV-C

भारतमेंविभिन्नसमस्याओं केनिवारणतथाविकास के लिए बनाए गये योजनाओं केसंबंध मेंजानकारीप्राप्तहातीहैजिससेकिसविद्यार्थियां या हितग्राहियोंकोलाभान्वितकियाजासकताहै।

Paper IV: Integrated Social Work Practice

MSWIV-D

समाज कार्यकर्ता द्वारासवार्थी के सर्वांगीणविकासजिसकेअंतर्गतव्यक्तिगतसामाजिकमानसिकआर्थिक एवंअन्य सभीपहलुओंपर समझबनतीहैतथासमाजकार्य की प्रक्रिया के बारेमेंजानकारीमिलतीहै।

Paper V: Research Project with Block Placement & Field Work Report MSWIV-E

समाजिक अनुसंधान की प्रायोगिक जानकारी मिलती है तथा क्षेत्रीय कार्य प्रतिवदेन के द्वारा प्रायोगिक अनुभवभ भी मिलता है।

BAI

Subject: Law

Semester I: Introduction to the Indian Legal System

LAW101

The course will enable the students to:

- 1. Demonstrate an understanding of substantive law as well as procedural law.
- 2. Enter the legal profession in which knowledge is an advantage.
- 3. Interpret relevant facts.
- 4. Conduct legal research.
- 5. Understand the laws at national and global levels.
- 6. Possess the skills to communicate in both oral and written forms.
- 7. Possess the ability to formulate legal problems using appropriate concepts.
- 8. Use skills in civil, criminal, industries clinical, social and counselling areas.
- 9. Understanding changing social dynamics.

Practical I: LAWP101

The course will enable the students to:

- 1. Demonstrate an understanding of substantive law as well as procedural law.
- 2. Enter the legal profession in which knowledge is an advantage.
- 3. Interpret relevant facts.
- 4. Conduct legal research.
- 5. Understand the laws at national and global levels.
- 6. Possess the skills to communicate in both oral and written forms.
- 7. Possess the ability to formulate legal problems using appropriate concepts.
- 8. Use skills in civil, criminal, industries clinical, social and counselling areas.
- 9. Understanding changing social dynamics.

Semester II: Justice System in India

LAW201

Student will be able

- 1. To understand the development of legal institution and juridical Intuitions.
- 2. To know the past of the present legal and judicial system.
- 3. Understand and appreciate the role of courts.
- 4. Know the various institutions that form part of the Indian Legal system

- 5. Acquire knowledge, skill and information of various types of courts, tribunals and commissions.
- 6. Understand and appreciate the role of the law in society.
- 7. Know the various instructions that form part of the Indian Legal system
- 8. Have knowledge about access to legal aid and justice, RTI and about the formal and alternative dispute redressal (ADR) mechanisms that exist in India.
- 9. Acquire knowledge, skill and information needed to become a responsible member of society.

Practical II: LAWP201

Student will be able

- 1. To understand the development of legal institution and juridical Intuitions.
- 2. To know the past of the present legal and judicial system.
- 3. Understand and appreciate the role of courts.
- 4. Know the various institutions that form part of the Indian Legal system
- 5. Acquire knowledge, skill and information of various types of courts, tribunals and commissions.
- 6. Understand and appreciate the role of the law in society.
- 7. Know the various instructions that form part of the Indian Legal system
- 8. Have knowledge about access to legal aid and justice, RTI and about the formal and alternative dispute redressal (ADR) mechanisms that exist in India.
- 9. Acquire knowledge, skill and information needed to become a responsible member of society.

Semester III: LAW301

The course will enable the students to:

- 1. Understanding the intent of the farmers of the Constitution and its interpretation in the context of balancing justice, rights and Governance.
- 2. Realise the status and importance of fundamental duties and directive principles of state policy and relation among them by understanding the articulation of its basic values under the constitution of India.
- 3. Know about the enforcement remedies available under the Constitution of India and about access to justice through Public Interest Litigation.
- 4. Comprehend the basic feature of the Constitution of India and the importance of the role of judiciary in ensuring checks and balances.
- 5. Under the meaning, nature and concept of federalism, its essential features and be able to familiarise with the Indian federal structure and status quo in the contemporary era.

Semester III: LAWP301

The course will enable the students to:

- 1. Understanding the intent of the farmers of the Constitution and its interpretation in the context of balancing justice, rights and Governance.
- 2. Realise the status and importance of fundamental duties and directive principles of state policy and relation among them by understanding the articulation of its basic values under the constitution of India.
- 3. Know about the enforcement remedies available under the Constitution of India and about access to justice through Public Interest Litigation.
- 4. Comprehend the basic feature of the Constitution of India and the importance of the role of judiciary in ensuring checks and balances.
- 5. Under the meaning, nature and concept of federalism, its essential features and be able to familiarise with the Indian federal structure and status quo in the contemporary era.

Semester IV: LAW401

The course will enable the students to:

- 1. Administrative law is mainly a judge made law and has secured its present features through a myriad of judicial decisions.
- 2. Students got a deep knowledge of the operation and changing phenomenon of the standards from a comparative angle.
- 3. The ever-increasing number of delegated legislation in the form of rules, regulation, circulars and general orders has the characteristic of law, that though framed by administration, impose burden on the rights of citizen.
- 4. Analyse the scope of review of delegated legislation and limitations of the judicial review of administration action, the principle of Natural Justice also have studied in details in this course.

Semester IV: Practical

The course will enable the students to:

- 1. Administrative law is mainly a judge made law and has secured its present features through a myriad of judicial decisions.
- 2. Students got a deep knowledge of the operation and changing phenomenon of the standards from a comparative angle.
- 3. The ever-increasing number of delegated legislation in the form of rules, regulation, circulars and general orders has the characteristic of law, that though framed by administration, impose burden on the rights of citizen.
- 4. Analyse the scope of review of delegated legislation and limitations of the judicial review of administration action, the principle of Natural Justice also have studied in details in this course.

SEC

B.A. III sem Cyber Security

LAW 311

LAWP401

The course will enable the students to:

- 1. Technology has proved to a great leveller.
- 2. It has helped in creating "machine-clones" in the form of computers a high speed data processing device performing arithmetic, logical and memory functions by manipulating optical, magnetic and electrical impulses.
- 3. Cyber space is a virtual medium.
- 4. It has no boundaries, no geographical mass or gravity.

B.A. IV sem Offences against child and women

LAW 411

MAT101

The course will enable the students to:

- 1. Provide students with a learning experience that will help in deep interest in the subject.
- 2. Develop broad, balances knowledge and understanding of key concepts, principles and theories
- 3. Equip students with the appropriate tools of analysis to tackle problems in the field.
- 4. Develop students' ability to understand the modus operandi of crimes variations involved in it.
- 5. The approaches required to handle these circumstances and to draw appropriate inferences
- 6. Provide students with the knowledge and skill base that enable them to undertake further studies in offences against Child and Women and related areas or in multi-disciplinary areas.

Course Outcomes: B.Sc. in Mathematics

Semester I: Calculus

This course will enable the students to:

- 1. Calculate the limit and examine the continuity and understand the geometrical interpretation of differentiability.
- 2. Understand the consequences of various mean value theorems.
- 3. Draw curves in Cartesian and polar coordinate systems.
- 4. Understand conceptual variations while advancing from one variable to several variables in calculus.
- 5. Inter-relationship amongst the line integral, double and triple integral formulations.

Semester II: Algebra

MAT201

This course will enable the students to:

1. EmployDeMoivre's theorem in a number of applications to solve numerical problems.

- 2. Learn about the fundamental concepts of groups, subgroups, normal subgroups, isomorphism theorems, cyclic and permutation groups.
- 3. Recognizeconsistentandinconsistentsystemsoflinearequationsbytherowechelonfor m of the augmented matrix, using rank.
- a. Find eigen values and corresponding eigen vectors for a square matrix.
- b. Understand real vector spaces, subspaces, basis, dimension and their properties.

Semester III- Differential Equation

MAT 301

Upon successful completion of this course, the student will be able to:

- 1. Understandthegenesisofordinaryaswellaspartialdifferentialequations.
- 2. Learnvarioustechniquesofgettingexactsolutionsofcertainsolvablefirstorder differentialequationsandlineardifferentialequationsofsecondorder.
- 3. KnowPicard'smethodofobtainingsuccessiveapproximationsofsolutionsoffi rstorderordinarydifferentialequations,passingthroughagivenpointintheplan e.
- 4. LearnaboutsolutionoffirstorderlinearpartialdifferentialequationsusingLagr ange'smethod.
- 5. Knowhowtosolvesecondorderlinearpartialdifferentialequationswithconstantcoefficients.
- 6. Formulatemathematicalmodelsintheformofordinaryandpartial differential equationst oproblems arising in physical, chemical and biological disciplines.

Semester IV- Real Analysis

MAT 401

Upon successful completion of this course, the student will be able to:

- 1. Understandbasicpropertiesofrealnumbersystemsuchasleastupperboundpro pertyandOrderproperty.
- 2. Realizeimportanceofbounded, convergent, Cauchy and monotonic sequences of real numbers, find their limit superior and limit inferior.
- 3. Applyvariousteststodetermineconvergenceandabsoluteconvergenceofaseri esofrealnumbers.
- 4. LearnaboutRiemannintegrabilityofboundedfunctionsandalgebraofRintegrablefunctions.
- 5. Determinevarious applications of the fundamental theorem of integral calculus.
- 6. Relateconceptsofuniformcontinuity, differentiation, integration and uniform convergence.

SEC

Semester III- Mathematical Aptitude

MAT 311

Upon successful completion of this course, the student will be able to:

- 1. Develop a proper understanding of the number system.
- 2. Learn method of rationalising the denominators of a rational number.
- 3. Learn formula for surface, area and volume of different solid objects
- 4. Develops strategies to apply the concept of A.P. and G.P.
- 5. Simplify ratios, convert fractions into decimals and percentage.
- 6. Define the concept of interest and show how it relates to the time and principal amount.

Semester IV- Counting Principle and Probability

MAT 411

Upon successful completion of this course, the student will be able to:

- 1. Understand the purposes of measures of central tendency.
- 2. Calculate mean, medium, mode and range.
- 3. Calculate deviations and can draw conclusions on different sets of data.
- 4. Determine which measures of central tendency is best to use in a given circumstances.
- 5. Use permutation and combination to solve problems.
- 6. Expand expression.
- 7. Solve problems related to probability.

B.Sc. III Year

Paper I: Analysis

BSCIIIMT-A

Upon successful completion of this subject the student will be able to learn:

- 1. Properties of complex numbers.
- 2. The use of complex numbers in the field of Calculus.
- 3. It is used in fixed point theorem and mapping principles.
- 4. Study continuous functions and convergence of sequences on metric spaces.
- **5.** Learn connected complete and compact metric spaces.

Paper II: Abstract Algebra

BSCIIIMT-B

Upon successful completion of this subject the student will be able to:

- 1. It is branch of algebra.
- 2. Used in Discrete Mathematics, Computer Science, Information Technology etc.

- 3. Learn about modules.
- 4. Learn about canonical forms.
- 5. Learn about Vector Space and Inner product.

Paper III: Discrete Mathematics

BSCIIIMT-C1

Upon successful completion of this subject the student will be able to:

- 1. Understand the basics of graph theory.
- 2. Understand trees and spanning trees.
- 3. Used in Genomics, networks, etc.
- **4.** Useful for understanding sets, logic and probability theory.
- 5. Used in Discrete Mathematics, Computer Science and I.T.

Paper-III (Optional)- Programming in "C" and Numerical Analysis

BSCIIIMT-C2

On completion of the course, students will be able to

- 1. Understand basic concepts of programming in "C" language.
- 2. Learn the concepts and applications of Loop, Functions and Strings.
- 3. Solve the linear equations and ordinary differential equations using direct and iterative methods.
- 4. Understand the interpolation and numerical Quadrature.

M.Sc. I Sem

Paper I: Advanced Abstract Algebra-I

MMTI-A

Upon successful completion of this course the student will be able to

- 1. Use of Solvable groups, Nilpotent groups, Composition series and relation between them and understand and analyze Jordan holder Theorem.
- 2. Illustrate the fundamental results and techniques from the theory of extension field and apply it into theory of equations and branches of applied mathematics
- 3. Explain the fundamental concepts of finite fields and algebraically closed field and their role in modern mathematics and applied contexts.
- 4. Illustrate the concept of Galois Theory and their applications.
- 5. Apply concept of radical extension to check a polynomial is solvable by radicals or not.

Paper II: Real Analysis-I

MMTI-B

After the completion of this course the students will be able to

- 1. Recognize the difference between pointwise and uniform convergence of sequences and series of functions.
- 2. Illustrate the effect of uniform convergence of sequences & series of functions on the limit function with respect to continuity, differentiability, and integrability.
- 3. Gain confidence in proving theorems and solving problems. Extend their knowledge of real variable theory for further exploration of the subject for going into research.
- 4. Understand the concept of Power series.
- 5. Determine radius of convergence of power series and the sum of rearrangement of series.
- 6. Understand the Functions of several variables.
- 7. Develop concepts on derivatives in an open subset of R^n & partial derivatives.
- 8. Understand the basics concepts of Taylor's theorem.
- 9. Apply Implicit and inverse function theorem, moving towards calculus on manifolds.
- 10. Determine the differentiation of an integral & Jacobians.
- 11. Find Extrema of functions of two or three variables & understand the use of the method of Lagrange multipliers & solve constrained optimization problems.
- 12. Learn Differential forms & Stokes' theorem.
- 13. Understand to how Differential forms provide a natural way to define integration on manifold.

Paper III: Topology-I

MMTI-C

Upon successful completion of this course the student will be able to

- 1. Get knowledge of well known theorems and their applications as Zorn's Lemma, Axiom of Choice.
- 2. Learn the concept of Cardinality and its arithmetic, Countable sets.
- 3. Introduce the concept of Topological Spaces, its Base and Sub-base with properties.
- 4. Illustration of Closed set, Limit Point, Continuous functions, Homeomorphism in context of Topological spaces.
- 5. Learn the various topological properties as Countability and the Separation axioms.
- 6. Explain the concepts of Compactness and its types including one-point compactification.
- 7. Explore the equivalence of Compactness and connectedness in Metric spaces as well as Topological spaces.

Paper IV: Complex Analysis- I

MMTI-D

Upon completion of this course, the student will be able to:

- a. Explain the fundamental concepts of complex analysis and their role in modern mathematics and applied contexts.
 - 2. Demonstrate accurate and efficient use of complex analysis techniques.
 - 3. Demonstrate capacity for mathematical reasoning through analyzing, proving and explaining concepts from complex analysis
 - 4. Apply problem-solving using complex analysis techniques applied to diverse situations in physics, engineering and other mathematical contexts.
- b. Understand complex integration, Cauchy Gorsat theorem, Cauchy's integral formula.
- c. Understand Laurent's series, Isolated singularities, Meromorphic functions and Rouche's theorem.
 - 7. Explain Mobius transformations, Fixed points, Cross ratio, Bilinear transformations and Conformal mappings.
- d. Understand the Residues, Cauchy's residue theorem, Evaluation of integrals and branches of many valued functions.

Paper V: ADVANCED DISCRETE MATHEMATICS - I MMTI-E

After the completion of this course the students will be able to

- 1. Able to use logical notations to define and reason about fundamental mathematical concepts such as sets, relations and functions, Evaluate and analyze logical propositions via truth tables.
- 2. Understand the Basic concept of Homomorphism of semigroups, Monoids, Congruence relations and direct products of semigroups.
- 3. Understand Lattices of partial order relation, Boolean algebra, Switching Algebra and sketch relations.
- 4. Understand the different forms of Boolean function and their use in different Gates and circuits.
- 5. Able to know the concept of Grammars and Languages and their uses in different Theorems.

MSc II Sem

Paper I: Advanced Abstract Algebra-II

MMTII-A

Upon successful completion of this course the student will be able to

- 1. Have knowledge of modules and its properties and understand Schur's lemma, Hillbert basis and other theorems based on modules
- 2. Develop concepts of linear Transformations and relation between matrix.

- 3. Understand similarity of linear transformations, triangular forms. nilpotent transformations and may reduce matrix into Jordan forms.
- 4. Explain fundamental structure theorem for finitely generated modules over a principle ideal domain and its applications to finitely generated abelian groups.
- 5. Reduce a matrix into rational canonical form and Generalized Jordan form over any field and analyze properties of reduced matrix.

Paper II: Real Analysis-II

MMTII-B

After the completion of this course the students will be able to

- 1. Develop knowledge of Riemann-Stieltjes integral and use theory of Riemann-Stieltjes integral in solving definite integrals arising in different fields of science and engineering.
- 2. Understand Rectifiable curve, define the length of curves and study behavior of the curves.
- 3. Familiar with the basic concepts and results of Lebesgue measure theory (outer measure, measurable sets and connections with topology, Borel sigma algebra) as well as of Lebesgue theory of integrals (measurable functions, convergence theorems).
- 4. Learn how to generalize the concept of measure theory.
- 5. Approximating measurable functions by simple and step functions.
- 6. Understand the basics concepts of measures and outer measures.
- 7. Learn how a smallest sigma algebra containing all open sets be constructed on a topological space which ensures the measurability of all continuous function and how a measure called Borel measure is defined on this sigma algebra which ensures the integrability of a huge class of continuous functions.
- 8. Apply the knowledge of concepts of functions of several variables and measure theory in order to study theoretical development of different mathematical concepts and their applications.
- 9. Determine the Four derivatives and connection between differentiation and integration in the context of Lebesgue theory.
- 10. Interpret Lebesgue differentiation theorem.

- 11.Decide under which conditions the fundamental theorem of calculus is applicable in the context of Lebesgue integration.
- 12. Understand the functions of bounded variation, L_P Spaces, the convex functions, Jensen's inequality, Holder's and Minkowski's inequalities, convergence in measures and Almost uniform convergence.

Paper III: General and AlgebraicTopology-II

MMTII-C

Upon successful completion of this course the student will be able to

- 1. Define the concept of product topology and extend the separation axioms in product space.
- 2. Illustrate the properties as Compactness, Connectedness and Countability in product space
- Understand the Metrization theorems as Urysohn , Nagata Smirnov metrization theorems and apply the concept of Paracompactness to derive SmirnovMetrization Theorem.
- 4. Define the concept of Net, Filter and Ultra Filter. Demonstrate their convergence with compactness of Topological Space.
- 5. Get knowledge of Homotopy of paths. Define Fundamental group and Covering spaces.
- 6. Derive Fundamental group of Circle and Fundamental theorem of Algebra using Covering space.

Paper IV: Complex Analysis-II

MMTII-D

Upon completion of this course, the student will be able to:

- 1: Define Riemann's functional equation. Prove Weierstrass' factorization theorem.
- 2: To understand Gamma and Zeta functions, their properties and relationships
- 3: Prove Runge's theorem, Mittag-Leffler's theorem. Define Analytic Continuation and Power series method of analytic continuation.
- 4: Explain Schwarz Reflection principle, Monodromy theorem and Harmonic functions on a disk
- 4: Understand Harnack's inequality and theorem, Dirichlet problem, Green's function, Jensen's formula, Poisson-Jensen formula.
- 5: Understand Bloch's theorem, The little Picard theorem, Schottky's theorem, Montel caratheodary and great Picard theorem.

- 7: To understand the Harmonic functions on a disc and concerned results
- 8: To understand the factorization of entire functions having infinite zeros.
- 9: To understand range of analytic functions and concerned results.
- 10: To understand univalent functions.

Paper V: ADVANCED DISCRETE MATHEMATICS - II MMTII-E

After the completion of this course the students will be able to

- 1. Able to solve real world problems using graphs.
- 2. Understand the concept of matrices representation of Graph, Trees and Spanning Trees.
- 3. Understand the directed graph, Dijkstra's Algorithm for shortest path in weighted graph and Transitive cloure from Warshall's algorithms.
- 4. Develop the concept of Finite State Machine and use it for different machines.
- 5. Understand the phenomenon of Finite Automata and Turing Machine.

MSc III Sem

Paper I: Integration Theory & Functional Analysis (I) MMTIII-A

After the completion of this course the students will be able to

- 1. Understand the concept of Signed measure.
- 2. Learn to recognize the fundamental properties of Signed measure and Hahn decomposition theorem Radon-Nikodin theorem, Jordan & Lebesgue decompositions.
- Understand Lebesgue-Stieltjes integral, Product measures, Differentiation and Integration.
- 4. Overview the central results of the theory of Lebesgue integration, including convergence theorems and Fubini's theorem.
- 5. Learn to characterize bounded linear functionals on Lp spaces.
- 6. Understand the concept of Borel & Baire measures, regularity and continuous function with compact support.
- 7. Learn to recognize the fundamental properties of Normed linear spaces, Banach spaces.
- 8. Learn the concept of normed linear spaces and various properties operators defined on them.
- 9. Get an idea about different types of convergence of sequences in normed spaces and their relations.

- 10. Gain a comprehensive understanding of both weak and strong convergence and their applications in various areas of mathematics, particular functional analysis and related fields.
- 11. Understand the concept of the bounded operators and its application in solving certain differential equations.
- 12. Understand the concept of Dual spaces.

Paper II: Partial Differential Equations and Mechanics-I MMTIII-B

Upon successful completion of this course the student will be able to

- 1. Extend the knowledge of PDE in n-dimension. Understand the classification of PDE, such as elliptic, parabolic and hyperbolic.
- 2. Understand and analyze the properties of the transport equation and Laplace equation.

 Develop the concept of Green's function.
- 3. Have knowledge of Heat equation and its properties.
- 4. Apply method of spherical means for solution of wave equation and illustrate it for different dimensions.
- 5. Study and analyze the nonlinear 1st order PDE, know about the weak solution and its behavior.
- 6. Develop the concept of calculus of variations and its application in various problems.
- 7. Explain the attraction potential of different types of bodies.
- 8. Apply the Gauss theorem for normal attraction to find work done and equipotential surface.

Paper III: Programming in C -I MMTIII-C1

Upon successful completion of this course the student will be able to-

- 1. Understand basic techniques of C-language.
- 2. Understand the concepts of pointers and decision making, loop statements.
- 3. Be able to use an array to store multiple pieces of homogeneous data

- 4. Be able to use various operators in program
- 5. Develop programming skills in C
- 6. Develop some expertise in developing programs to solve various mathematical problems
- 7. Understand the fundamentals of cryptography and cryptanalysis.

Paper IV: Operation Research - I

MMTIII-D1

After completion of the course student will be able to

- 1. Understand the nature and basic concept of operation research and learn to formulate and solve real life problems.
- 2. To understand the concept of linear programming modeling and its applications.
- 3. Understanding the dual problem leads to specialized algorithms for some important classes of linear programming problems and sensitivity analysis.
- 4. Use of Parametric linear programming in different applications.
- 5. Determine the degree of attainment of the goals with the available resources. Providing the best satisfying solution under a varying amount of resources and priorities of the goals.
- 6. To build and solve Transportation Problems and Assignment Problems.
- 7. Train on organizing and presenting a project through a diagram using CPM and PERT.
- 8. Covers various real life problems like finding the shortest path, spanning tree, travelling salesman problem etc.

Paper V: Fuzzy sets and its application-I

MMTIII-E1

- 1. Know the concept of basic knowledge of the fuzzy sets, operations and their properties.
- 2. Understand the basic ideas of fuzzy Numbers and Arithmetic operations on intervals
- 3. Know the concept of Fuzzy relations and Fuzzy Morphisms.
- 4. Solve the problem of Fuzzy relations equations and its uses in Neural networks.
- 5. Identify the similarities and differences between possibility theory and fuzzy set theory and their application conditions.

MSc IV Sem

Paper I: Integration Theory & Functional Analysis - II MMTIV-A

After the completion of this course the students will be able to

- 1. Illustrate Closed Graph and Open Mapping theorem
- 2. Analytical approach to open mapping, closed graph theorem & Uniform boundedness theorem.
- 3. Understand the concept of linear functionals, Hahn-Banach theorems, reflexive spaces and some standard theorems.
- 4. Analytical approach to Hahn Banach theorems
- 5. Understand Compact Linear map, Compact operator.
- 6. Understand inner product spaces, orthogonal sets and Bessel's inequality.
- 7. Learn to recognize the fundamental properties of Hilbert space.
- 8. Know and use the elementary properties of inner product and the main properties of bounded operators between Banach and Hilbert spaces, the basic results associated to different types of convergences in normed spaces.
- 9. Explain Riesz Representation Theorem.
- 10. Understand bounded operators and adjoints.
- 11. Understand the surjective isometry between a Hilbert space and its dual.
- 12. Correlate Functional Analysis to problems arising in operator Theory and other branches of Mathematics.
- 13. Check whether a linear operator is bounded, to find its adjoint and determine whether operators are normal, self adjoint, unitary or positive.
- 14. Learn to recognize application of self adjoint operators, positive operator, projection and unitary operators.

Paper II: Partial Differential Equations and Mechanics-II MMTIV-B

Upon successful completion of this course the student will be able to

- 1. Learn various techniques and representations for solving various types of Partial Differential Equations in n-dimension.
- 2. Apply Transform methods as Laplace, Fourier, to find solutions of various PDE.
- 3. Develop the concept of Perturbations and Asymptotics.
- 4. Illustrate the Cauchy –Kovalevskaya Theorem.

- 5. Develop a deep understanding of fundamental principles and laws of Classical Mechanics.
- 6. Apply the concept of cyclic coordinates to derive important theorems.
- 7. Illustrate the concept of Poisson and Lagrange Bracket and its applications.
- 8. Knowledge of Canonical Transformations and its properties.

Paper III: Programming in C –II

MMTIV-C1

Upon successful completion of this course the student will be able to

- 1. Understand the concepts of storage classes.
- 2. Use functions, and understand how function calls are carried out, including passing parameters.
- 3. Use structure and union to store multiple pieces of different data types.
- 4. Create linked list and insert or delete nodes.
- 5. Understand dynamic memory management techniques by using pointers
- 6. Handle file Input /Output operations

Paper IV: Operation Research - II

MMTIV-D1

After completion of the course student will be able to

- 1. Solve multi-level decision problems using dynamic programming method and to find the shortest way to a solution when solving a problem.
- 2. Understand the game theory and discuss various concept related to games and to analyze pure and mixed strategy games.
- 3. Propose the best strategy using decision making methods under uncertainty and game theory.
- **4.** Construct linear integer programming models and discuss the solution techniques for pure, mixed and binary integer programming models.
- 5. Solve the integer programming models using branch-and-bound method.
- 6. Mathematical study of waiting lines or queues and has its base as statistical models and methods which provide competitive advantage to improve customer satisfaction.
- 7. Analyze the general nonlinear programming problems using some solution methods.
- 8. Explain the Lagrange multipliers.

Paper V: Fuzzy sets and its application-II

MMTIV-E1

After the completion of this course the students will be able to

- 1. Understand the fundamental concepts of Fuzzy logic and apply the concepts of Fuzzy logic in image processing.
- 2. Know the concept of Approximate Reasoning and Fuzzy implications.
- 3. Have knowledge Fuzzy control system to design different machines and design it with the help of fuzzy rule based system.
- 4. Understand the basic features of membership functions, fuzzification process and defuzzification process and its application use in fuzzy control system.

M.Sc. III Sem.

Paper-III (Optional)- Theory of Ordinary Differential Equations-(I) MMTIII-C2

On completion of the course, students will be able to

- 1. Understand the theory of existence and uniqueness of differential equations.
- 2. Apply the contraction mapping theorem.
- 3. Solve homogenous and non-homogeneous nth order differential systems.

Paper-IV (Optional)- Difference Equations - (I)

MMTIII-D2

On completion of the course, students will be able to

- 1. Understand the basic concepts of Difference Calculus.
- 2. Compare the differences in the theories of differential and difference equations.
- 3. Learn the stability of linear and nonlinear systems and the applications.

Paper-V (Optional)- Fluid Mechanics-(I)

MMTIII-E2

On completion of the course, students will be able to

- 1. Get the knowledge of basic principles of fluid mechanics.
- 2. To analyse fluid flow problems with the application of the momentum and energy equations.

3. Use the general energy equation to calculate changes in fluid flow for circular and noncircular pipes for in-compressible fluids.

Paper VI: Practical (Programming in 'C')

MMTIII-F

M.Sc. IV Sem.

Paper-III (Optional)- Theory of Ordinary Differential Equations-(II) MMTIV-C2

On completion of the course, students will be able to

- 1. Understand differential system involving linear and real parameter.
- 2. Solve self-adjoint boundary value problem for second order differential equations.
- 3. Learn comparison and expansion theorems.

Paper-IV (Optional)- Difference Equations - (II)

MMTIV-D2

On completion of the course, students will be able to

- 1. Understand the discrete calculus of variations.
- 2. Solve the boundary value problems for nonlinear equations.
- 3. Analyse the discretization of Partial differential equations.

Paper-V (Optional)- Fluid Mechanics-(II)

MMTIV-E2

On completion of the course, students will be able to

- 1. Understand the concept of fluid and the models of fluids and the physical meaning of general equations.
- 2. Develop the concept of stream function and potential function.
- 3. Formulate the equation for viscous flow, including laminar flow and turbulent flow.
- 4. Apply the compressible flow analysis to a pipe flow and compute the pressure losses due to friction, area change in the system and assess the performance of the system.

Paper VI: Practical (Programming in 'C')

MMTIV-F

Understand the concepts of different decision making techniques such as Individual, Multiperson, Multicriteria and Multistage decision making and its applications

Course Outcomes: Chemistry

B.Sc. Part I

Semester I: Inorganic and Physical Chemistry

CHE101

Upon successful completion of this subject the student will be able to:

- 1. To predict the atomic structure, chemical bonding and molecular geometry based on accepted models.
- **2.** To understand atomic theory of matter, composition of atom.
- **3.** To characterize bonding between atoms, molecules, interaction and energetic.
- **4.** To explain hybridization and shapes of atomic, molecular orbitals, bond parameters, bond distances and energies.
- **5.** To get insight into elements in periodic table, physical and chemical characteristics, periodicity.
- **6.** To understand Kinetic model of gas and its properties.
- 7. To explain behaviour of real gases, its deviation from ideal behaviour, equation of state, isotherm, and law of corresponding states.
- **8.** To get insight into solids, lattice parameters- its calculation, application of symmetry, solid characteristic of simple salts.

Semester II: Organic and Physical Chemistry

CHE201

Upon successful completion of this subject the student will be able to:

- 1. Basic of organic molecules, structures, bonding, reactivity and reaction mechanisms.
 - **2.** Stereochemistry of organic molecules- conformation and configuration, asymmetric molecules and nomenclature.
 - **3.** Aromatic compounds and aromaticity, mechanism of aromatic reactions.
 - **4.** Mechanism of organic reactions (effect of nucleophile/leaving group, solvent), substitution vs. elimination.
 - **5.** Laws of thermodynamics and concepts
 - **6.** Understand the concept of system, variables, heat, work, and laws of thermodynamics.
 - 7. Understand the concept of heat of reactions and use of equations in calculations of bond energy, enthalpy etc.
 - **8.** Dilute solution and its properties.
 - **9.** Liquid state and its physical properties related to temperature and pressure variation.

Lab I: Inorganic and Physical Chemistry

CHEP101

At the end of laboratory course the student will be able to do:

- 1. Titrimetric analysis
- 2. Surface tension measurement
- **3.** pHmetry
- **4.** Buffer soloution
- **5.** Viscosity measurement

LabII: Organic and Physical Chemistry

CHEP201

- 1.To analyse the given mixture for anions(acidic radicals) and cations(basic radicals
- 2. Titrations
- 3. Qualitative analysis
- 4. Tansition Temperature
- 5. Surface tension measurement
- **6.** Thermochemistry
- 7. Viscosity measurement

Semester III- Inorganic and Physical Chemistry II

CHE301

At the end of this course, the students will be able to understand:

- 1. Chemistry of s and p-block elements.
- 2. Structure, bonding of s and p block materials and their oxides/compounds.
- 3. Transition metals, their stability, colour, oxidation states and complexes.
- 4. Lanthanides, Actinides separation, colour, spectra and magnetic behaviour.
- 5. Coordination compounds its nomenclature, theories, d-orbital splitting in complexes, chelate.
- 6. Nomenclature of coordination compounds/complexes, Molecular orbital theory, d-orbital splitting in tetrahedral, octahedral, and chelate effects.
- 7. Transition metals stability in reactions, the origin of colour and magnetic properties.
- 8. Second and Third law of thermodynamics.
- 9. Concept of entropy and efficiency of heat engine.
- 10. Phase equilibria and its applications.

Practical-Inorganic and Physical Chemistry

CHEP301

At the end of this course, the students will be able to learn the following aspects of Chemistry

- 1. Semi-micro analysis of mixtures
- 2. Inorganic preparations
- 3. To determine Transition Temperature.
- 4. Solubility

Semester IV-Organic and Physical Chemistry II

CHE401

At the end of this course, the students will be able

- 1. To understand the mechanism of reaction.
- 2. To learn different name reactions and their mechanism.
- 3. To understand the kinetics of reactions.
- 4. To get insight into ionic equilibria.

Practical-Organic and Physical Chemistry

CHEP 401

By the end of this course, students will learn the following aspects of Laboratory exercises in Chemistry:

- 1. Qualitative analysis
- 2. Extraction
- 3. Organic preparations
- 4. Chemical kinetics
- **5.** To verify Beer's Law.

SEC

Semester III- Herbal Science & Technology

CHE311

At the end of this course, the students will be able to:

- 1. Deepen understanding of herbal technology
 - 2. Define and explain the principles of growing herbal products.
 - 3. List the most important herbs, their botanical names, and their chemical composition.
 - 4. Assess drug adulteration by biological testing.
 - 5. Formulate value-added processing/storage/quality control for better use of herbal medicines.
 - 6. Develop skills in growing crops and their value-added processing/storage/quality control skills.

Semester- IV Analytical Clinical Biochemistry

CHE 411

At the end of this course, the students will be able to:

1. Get insight into the structure and properties of carbohydrates, proteins, lipids, nucleic acids, and enzymes. Understand the diagnostic approach to the biochemistry of blood and Urine.

B.Sc. Part-III

Paper I: Inorganic Chemistry

BSCIIICH-A

Upon successful completion of this subject the student will be able to:

- 1. Describe metal- lagans bounding in transition metal complexes crystal field theory.
- 2. Describe the thermodynamics and kinetic aspect of metal complexes, factor affecting the stability of complexes, substitution reaction in square planer complexes.
- **3.** Describe the magnetic properties of the complexes, determination of magnetic susceptibility, LS coupling, magnetic moments and application of magnetic moment data.
- **4.** Describe the electronic spectra of transitional metal complexes including types of electronic transition, spectroscopic ground state, orgel diagrams, spectra of hexa qua titanium complexion.
- **5.** Describe organo metallic chemistry including definition, nomenclature and classification Alkyls and aryls of Li, Al, Hg, Sn and Ti.

- **6.** A brief account of metal- ethylene complexes, homogenous hydrogenation and mononuclear carbonyl and their nature of bonding.
- 7. Describe the bio-inorganic chemistry including essential and trace elements in biological system, the haemoglobin and myogblin, biological role of alkali and alkaline earth metals with special reference to Ca2+ and the nitrogen fixation.
- **8.** Classification of acids and bases as hard and soft.
- 9. Describe HSAB concept, symbiosis and theoretical basis.
- 10. Describe inorganic polymers silicon phosphorus.

Paper II: Organic Chemistry

BSCIIICH-B

Upon successful completion of this subject the student will be able to:

- 1. Describe the formation, structure and chemical reactions of Grignard reagent, organ zinc and organ lithium.
- **2.** Describe the nomenclature, structure formation and reactions of trios, trio ether, euphonic acids, sylph on amides and sylph on guanidine.
- **3.** Describe the organic synthesis via insolates including acidity of alpha hydrogen's, diethyl Malone's and ethyl ace to ace tale and their synthesis.
- **4.** Describe the chaise condensation, Kato Enola, taut amorism, alkylation of 1, 3-dithianes and a Kyla ion acryl ion of enemies.
- 5. Classification, nomenclature of carbohydrates, mechanism of ova zone formation.
- **6.** Describe the inter conversion of glucose & fracture, glucose to mannose, formation of gluers ides.
- 7. Describe mechanism of mote rotation, structure of ribose & doxy RI base disaccharides and poly saccharine.
- **8.** Describe the chemistry of fats, oils and detergents including sanctification value, iodine value, acid value, soap and detergents.
- **9.** Describe synthetic polymers polymerization such as free radical vinyl, ionic vinyl, Z-N, vinyl polymerization condensation or step polymerization.
- **10.**Describe the polyester, polyamides, phenol formaldehyde resin urea formaldehyde resin, epoxy resin and rubbers.
- 11. Describe synthetic dyes, their classification and chemistry.
- **12.**chemistry and synthesis of methyl orange, Congo red, malachite green, crystal violet, phenolphthalein, fluoresce in, alizarins and indigo.
- **13.**Describe the absorption spectra including UV absorption spectroscopy, beer's lamberts law and type of electronic transition, concept of chromospheres and Auto chrome, different shift.
- **14.**Describe infra-red spectroscopy including type of vibration, hook's law, selection rule, intensity of IR bands, finger print region and characteristic absorption of functional gap.

- **15.**Describe the NMR spectroscopy including all parameters such as nuclear shielding, deshielding, chemical shift, spin-spin splitting coupling.
- **16.** Interpret the PMR spectra of simple organic molecule.

Paper III: Physical Chemistry

BSCIIICH-C

Upon successful completion of this subject the student will be able to:

- 1. Describe elementary quantum mechanism through black-body radiation, plank's law, photoelectric effect and heat capacity and Bohr model of H-Atom.
- **2.** Describe de-Broglie, hypothesis, uncertainty principle, ware function, Schrodinger wave equation complete.
- 3. Describe elementary quantum mechanism with reference to molecular orbital theory.
- 4. Describe the spectroscopy and define its basic and spectrophotometer.
- **5.** Describe the rotational spectrum and Vibration spectrum.
- **6.** Describe the electronic spectrum along with concept of PE curves, frank-Condon principle.
- 7. Describe the photochemistry, law of photochemistry, Je Bloke diagram.
- **8.** Describe the fluorescence, phosphorescence and quantum yield.
- **9.** Describe the physical properties and molecular structure including optical activity, polarization, dipole moment and magnetic properties.
- **10.** Describe the solutions; dilute solution and Collegative properties in details.

Paper Lab Course

BSCIIICH-D

Upon successful completion of this subject the student will be able to:

- 1. Separate components of binary mixture of organic compounds.
- 2. Synthesize aspirin and sod. Trioxalato ferrate.
- **3.** Estimate Ba as BaSO4 gravimetrically.
- **4.** To verify Beer's law and determine the conc. of unknown solution of K2Cr2O7 by using digital photo elect uric colorimeter.
- **5.** Students will be able to design and carry out scientific experiments as well as accurately record and analyze the results of such experiments.
- **6.** Follow safety procedures and demonstrate proper use of personal protective equipment.

M.Sc. I Sem

Paper I: Inorganic Chemistry

MCHI-A

Upon successful completion of this subject the student will be able to:

1. Describe VSEPR theory, Walsh diagram, dx-px bonds, Bent's rule and energetic of hybridization, CFT, MOT for octahedral, tetrahedral and square planar complexes.

- 2. Describe formation constants by spectra photometric and potentiometric methods, factors affecting stability of metal complexes with reference to the nature of metal ion & legand.
- **3.** Describe preparation, properties and structure of isopoly and heteropoly acid and salts of Mo & W.
- **4.** Draw energy profile of a reaction.
- **5.** Explain kinetics of octahedral substitution and acid and base hydrolysis reactions.
- **6.** Describe inert and labile complexes.
- 7. Describe higher borages, Ade's rules, carbonates metalloboranes, metal carbonyl and halide cluster.
- **8.** Draw the structures of borazon &phosphazenes.

Paper II: Organic Chemistry

MCHI-B

Upon successful completion of this subject the student will be able to:

- 1. Describe nature of bonding in organic molecules.
- **2.** Explain delocalization, Conjugation, cross conjugation, resonance, hyper conjugation and tautomerism.
- **3.** Describe molecular rearrangements e.g.favoroskii, Baeyer villagers oxidation, Sfork examine, Shapiro reaction etc.
- **4.** Describe thermodynamic and kinetic requirements of reaction.
- **5.** Describe stability & reactivity of reaction intermediates carbonations, free radicals carbines, niters and benzenes.
- **6.** Describe antrafacial and superficial additions.
- 7. Describe sigma tropic rearrangements
- **8.** Describe elements of symmetry, chirality and methods of resolution.
 - Describe conformational analysis of cycloalkanes and decaling.
- 9. Describe stereochemistry of the compounds containing N, S and P.

Paper III: Physical Chemistry

MCHI-C

Upon successful completion of this subject the student will be able to:

- 1. Describe the postulates of quantum mechanics.
- 2. Derive the schrodinger equation and apply it to particle in 1-dimensional, 3-dimensinal box, harmonic ascillator and hydrogen atom.
- **3.** Describe the variation and perturbation theory.
- **4.** Describe the concept of laws of thermodynamics, free energy, chemical potential and entropies.
- 5. Describe non-ideal systems.
- **6.** Describe methods of determining order of reaction, collision theory and activated complex theory.

- 7. Describe photo chemical chain reaction.
- **8.** Describe surface tension, capillary action.
- 9. Explain catalytic activity of surfaces and BET equation.
- **10.** Describe theory of strong electrolyte- Debye huckle theory.
- 11. Derive Onsager equation and prove its validity.

Paper IV: Spectroscopy I & Group Theory

MCHI-D

Upon successful completion of this subject the student will be able to:

- 1. Describe phenomenon like absorption, emission, transmission, reflection, dispersion, polarization and scattering.
- 2. Describe selection rules for rotational, vibrational and Raman-Rotational and Raman-vibrational spectra.
- **3.** Describe effect of isotopic substitution on diatomic & polyatomic molecules' rotational spectra.
- 4. Describe transition probability and intensity of spectral lines.
- **5.** Describe linear harmonic oscillator, zero point energy, force constant and bond strengths.
- **6.** Explain anharmonicity Morse potential energy diagram.
- 7. Describe overtones, hot bands and fundamental and combination bands.
- **8.** Describe applications of microwave, IR and Raman spectroscopy.
- **9.** Explain symmetry elements and operations, group, sub groups, contumacy relation classes etc.
- 10. Depict matrix representation of groups.

Lab Course -1 (Inorganic)

MCHI-E

Upon successful completion of this subject the student will be able to:

- **1.** Perform quantitative analysis (separation & determination of two metal ions from solution mixtures) by volumetric and gravimetric methods.
- 2. Prepare selected inorganic compounds.
- **3.** Identify 8 radicals in a mixture including two less common metal ions by semi micro method.
- 4. Estimate phosphoric acid in commercial Ortho phosphoric acid.
- **5.** Estimate boric acid in borax and similar other exercises.

Lab Course -2 (Physical)

MCHI-F

Upon successful completion of this subject the student will be able to:

- 1. Verify the freundlich and Langmuir isotherms for adsorption of acetic acid or activated charcoal.
- 2. Study adsorption of oxalic acid on charcoal using KMnO4.
- **3.** Study the kinetics of hydrolysis of cane sugar.

- 4. Determine velocity constant of the hydrolysis of an ester in micelles media.
- **5.** Compare cleaning powers of two samples of detergent.
- **6.** Perform acid base titration in aqueous media using a pH meter.

M.Sc. II Sem

Paper I: Co-ordinate Chemistry

MCHII-A

After the completion of the course, the student will be able to-

- 1. Explain kinetics and mechanisms of ligand substitution reaction in square planar complexes.
- 2. Explain the Trans effect, electron transfer reaction in inner and outer sphere reaction.
- **3.** Explain electroic spectra of transition metal complexes.
- **4.** Explain term symbols for excited states, microstates.
- 5. Explain Orgel and Tanabe-Sugano diagrams for transition metal complexes.
- **6.** Explain magnetic properties of transition metal complexes.
- **7.** Explain structure and bonding in metal carbonyls.
- **8.** Explain vibrational spectra, important reaction, preparation metal carbonyls, metal nitrosyl, dinitrogen and dioxygen complexes.
- **9.** Explain anomalous magnetic moments, magnetic exchange coupling and spin crossover.

Paper II: Organic Chemistry

MCHII-B

After the completion of the course, the student will be able to-

- 1. Explain electrophilic substitution reactions.
- 2. Explain SE², SE¹ and SE¹ mechanism for aliphatic electrophilic substitution reactions.
- 3. Explain the ortho/para ratio, ipso attack and orientation in other ring system.
- **4.** Explain nucleophilic substitution reactions.
- **5.** Explain SN², SN¹, mixed SN¹ and SN² and SET mechanism.
- **6.** Explain neighbouring group mechanism and participation by ^ and _ bonds.
- 7. Explain SNAr, SN¹, benzyne and SRN¹ mechanism.
- **8.** Explain mechanism and stereo chemical aspects of addition reactions involving electrophiles, nucleophiles and free radicals.
- **9.** Explain type of free radical reactions, free radical substitution mechanism and neighbouring group assistance.
- **10.**Explain the mechanism of addition to Carbon-Hetero multiple bonds such as Aldol, Knoevenagel, Claisen, Mannich, Benzoin, Perking and stobbe reactions.
- 11. Explain E_2 , E_1 and E_1CB mechanism and their spectrum.

Paper III: Physical Chemistry

MCHII-C

After the completion of the course, the student will be able to-

1. Explain angular momentum, Eigen functions for angular momentum and eigen values of angular momentum.

- **2.** Explain electronic structureof atoms.
- **3.** Explain Russell Saunders term and coupling schemes.
- 4. Explain magnetic effects-spin-orbit coupling and Zeeman splitting.
- **5.** Explain probability theorem in statistical thermodynamics.
- **6.** Explain Translational, rotational, vibrational and electronic partition function.
- 7. Explain entropy production and entropy flow.
- **8.** Explain microscopic reversibility and Onsager's reciprocity relations.
- **9.** Explain Kinetics of enzyme reaction.
- 10. Explain critical micellar concentration and factors affecting the CMC of surfactants.
- 11. Describe definition and types of polymer.
- **12.** Describe Kinetics of polymerization.
- 13. Describe molecular mass determination by different methods.
- **14.** Describe polarization and decomposition potential.

Paper IV: Theory & Application of Spectroscopy-II

MCHII-D

After the completion of the course, the student will be able to-

- 1. Describe chemical shift and its measurements.
- 2. Describe factors influencing chemical shift, de-shielding, spin-spin interactions and coupling constant 'J'.
- 3. Describe NMR spectra of nuclei other than proton ¹³C, ¹⁹F and ³¹P.
- **4.** Explain Miller indices, Laue Method, Bragg Method and Debye-Scherer method of X-ray structure analysis of crystals.
- **5.** Describe electron and neutron diffraction.
- **6.** Describe basic principles involved in electron spin Resonance spectroscopy.
- 7. Explain factors affecting fragmentation and basic principles involved in Mass spectrometry.
- **8.** Describe mass spectra of alkenes, alkenes, aromatic hydrocarbons, alcohols and amines.
- 9. Explain nitrogen rule, ring rule, molecular weight and formula determination.

Lab Course - 3(Organic Chemistry)

MCHII-E

After the completion of the course, the student will be able to-

- 1. Explain general methods for separation and purification of organic compounds.
- **2.** Explain simple distillation, steam distillation, fractional distillation and distillation under reduced pressure.

- 3. Separate and identify organic binary mixtures containing two components.
- **4.** Prepare different organic compounds in single step preparation using acetylation, aldol condensation, Bromination, Cannizzaro reaction, Friedel crafts reaction oxidation, Perkin's reaction etc.
- **5.** Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problem.
- **6.** Design and carry out scientific experiments as well as accurately record and analyse the results of such experiments.

Lab Course - 4(Analytical Chemistry)

MCHII-F

After the completion of the course, the student will be able to-

- 1. Perform error analysis and statistical data analysis.
- **2.** Explain standard deviation and method of least squares.
- 3. Perform calibration of volumetric apparatus, burettes, pipettes, weight box etc.
- **4.** Determine iodine and saponification value of oil samples.
- 5. Determine DO, BOD, COD and hardness of water sample.
- **6.** Determine solubility of inorganic salt in water at different temperature and to plot the solubility method.
- 7. Determine transition temperature by solubility method.
- 8. Separate inorganic ions, amino acids, sugars etc. by paper chromatography.
- 9. Determine basicity of organic acids.
- 10. Determine degree of hydrolysis and hydrolysis constant of CH₃COONa and NH₄U.
- 11. Determine cations, anions and metal ions by flame photometry.
- **12.** Verify Beer's law spectrophotomtrically.
- **13.** Design and carry out scientific experiments as well as accurately record and analyse the results of such experiments.
- **14.** Skill in problem solving, critical thinking and analytical reasoning as applied to scientific problems.

M.Sc. III Sem

Paper I: Organotransition Metal Chemistry

MCHIII-A

After completion of the course, the students would be able

- 1. To understand Nomenclature, Classification, Preparation and Stability of alkyls and aryls of transition metal complexes.
- 2. To get insight into Fluxional behaviour of organometallic compounds.
- 3. To explain Nature of bonding, structure and chemical reaction involved in compounds of transition metal- carbon multiple bonds.

- 4. To describe Nature of bonding and structural features in transition metal picomplexes.
- 5. To get insight into Catalysts, types of catalysts and catalytic reaction

Paper II: Natural Products

MCHIII-B

After completion of the course, the students would be able

- 1. To understand classification, isolation, structure determination, and synthesis of important Terphenoids& carotenoids.
- 2. To understand role of alkaloids in plants, their synthesis and isolation of alkaloids.
- 3. To describe Isolation, structure determination & synthesis of important steroids and harmones.
- 4. To explain occurrence, nomenclature, structure determination & synthesis of important plan pigments & porphyrin.

Paper III: Kinetics, Photo & Solid State Chemistry

MCHIII-C

After completion of the course, the students would be able

- 1. To understand types of rate equation for composite mechanism.
- 2. To describe theory of primary and secondary kinetic isotope effects and kinetic solvent effects.
- 3. To explain fate of excited molecule and determination of reaction mechanism.
- 4. To get insight into stoichiometry and non stoichiometry defects in crystals.

Paper IV: Spectroscopy

MCHIII-D

After completion of the course, the students would be able

- 1. To understand instrumentation of UV-visible spectroscopy, various electronic transitions and absorption spectra of some compounds.
- 2. To gain familiarized with principle and applications of photo electron and photo acoustic spectroscopy
- 3. To get familiarized with principle and applications of photo electron and photo acoustic spectroscopy
- 4. To understand the theory, instrumentation and applications of Mossbauer and Flame Emission Spectroscopy.

Lab Course -5 (Organic Chemistry)

MCHIII-E

After the completion of the course, students would be able:

- 1. To perform multistep synthesis of organic compounds.
- 2. To perform qualitative organic analysis.
- 3. To estimate functional group by different methods.
- 4. To understand extraction of organic compounds from natural sources.

Lab Course -6 (Analytical Chemistry)

MCHIII-F

After the completion of the course, students would be able:

- 1. To determine different metal ions spectrophotometrically.
- 2. To understand pH metric and flame photometric determination.
- 3. To understand different methods for the separation of binary and ternary mixtures.
- 4. To estimate different elements by different methods.

M.Sc. IV Sem

Paper I: Bioinorganic Chemistry

MCHIV-A

After completion of this course, the student would be able

- 1. To get acquainted with role of metal ions in biological processes.
 - 2. To get insight into Bioenergetics and ATP cycle, electron transfer and transport & storage of di-oxygen.
 - 3. To understand working of various enzyme and enzyme models.
 - 4. To explain biotechnological applications of enzyme in medicine models.

Paper II: Medicinal Chemistry

MCHIV-B

After completion of this course, the student would be able.

- 1. To get an idea about development of new drugs and adverse effects of drugs.
- 2. To understand pharmacokinetics & pharmacodynamics.
- 3. To describe the properties and synthesis of various antibodies and anti malerials.
- 4. To understand local anti-infective drugs and anti neoplastic agents.
- 5. To understand recent development in cancer chemotherapy.

Paper III: Environmental Chemistry

MCHIV-C

After completion of this course, the student would be able.

- 1. To know about composition of atmosphere, heat budget and biogeochemical cycle.
- 2. To learn about disposal of waste and their management.
- 3. To learn about different causes of water pollution and water purification techniques.
- 4. To gain insight into various air pollutants and their chemistry.
- 5. To acquire knowledge of green house effect and acid rain. 6. To analyse extent of water pollution by measuring different parameters.

Paper IV: Analytical Chemistry

MCHIV-D

After completion of this course, the student would be able.

- 1. To have basic idea of role of analytical chemistry.
- 2. To differential types of error and acquire knowledge to minimize them
- 3. To gain insight into composition of blood and techniques for the analysis of body fluids.

4. To classify drugs and describe the screening method

- 5. To have an insight into analysis of various contents of food, adulterants and contaminants in food.
- 6. To acquits with the type of fluids, analysis of various parameters and calorific value.

Lab Course -7 (Inorganic Chemistry)

MCHIV-E

After the completion of the course, students would be able:

- 1. To perform analysis of alloys, ores and minerals.
- 2. To understand inorganic reaction mechanism.
- 3. To prepare selected inorganic complexes.
- 4. To understand extraction of chlorophyll from green leaves and complexation study of Cu(II) ion.

Lab Course -8 (Physical Chemistry)

MCHIV-F

After the completion of the course, students would be able to:

- 1. To determine % efficiency of given counter.
- 2. To study the effect of temperature, concentration of reactant and catalyst on the rate of a chemical reaction.
- 3. To get insight into autocatalytic reaction between KMnO4 and Oxalic acid.
- 4. To get insight into polarimetry, conductometry, pHmetry and potentiometry.

Course Outcomes: Physics Name of Programme: B. Sc.

Semester I: Mechanics

PHY101

In this course the student will

- 1. Vector and scalar multiplication algebraically.
- 2 Different derivatives of a vector with respect to a parameter.
- 3. To solve first and second order differential equation.
- 4. Newton's laws of motion, inertial reference frames.
- 5. Parameters defining the motion of mechanical system and equation of motion.
- 6. Concept of work, energy, centres of mass and conservation principles.
- 7. Newton's Law of Gravitation, Motion of a particle in a central force field, Rocketry motion.

- 8. Satellite motion, Basic idea of global positioning system (GPS).
- 9. Simple harmonic motion.
- 10. Basic concepts of special theory of relativity.

Semester II: Electricity and Magnetism

PHY201

The course will enable the students to:

- 1. Understand the basic idea about electrostatic field and electric flux.
- 2. Learn the problem related to electric field.
- 3. Use electric potential equation to solve the problems.
- 4. Learn problem related to dipole. Understand Gauss's theorem.
- 5. Understand the sources of capacitance.
- 6. Understand the concept and properties of electrostatic field.
- 7. Understand about magnetism. Biot-Savart's law & its applications.
- 8. Understand about different magnetic materials.
- 9. Understand about Electromagnetic waves.

Lab I: Mechanics PHYP101

- 1. Vector and scalar multiplication algebraically.
- 2. Different derivatives of a vector with respect to a parameter.
- 3. To solve first and second order differential equation.
- 4. Newton's laws of motion, inertial reference frames.
- 5. Parameters defining the motion of mechanical system and equation of motion.
- 6. Concept of work, energy, centres of mass and conservation principles.
- 7. Newton's Law of Gravitation, Motion of a particle in a central force field, Rocketry motion.
- 8. Satellite motion, Basic idea of global positioning system (GPS).
- 9. Simple harmonic motion.
- 10. Basic concepts of special theory of relativity.

Lab II: Electricity and Magnetism

PHYP201

Understand the basic idea about electrostatic field and electric flux.

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- 3. Learn problem related to dipole. Understand Gauss's theorem.
- 4. Understand the sources of capacitance.
- 5. Understand the concept and properties of electrostatic field.

- 6. Understand about magnetism. Biot-Savart's law & its applications.
- 7. Understand about different magnetic materials.
- 8. Understand about Electromagnetic waves.

Semester III- Thermal Physics and Statistical Mechanics PHY301

The course will enable the students to:

- 1. Understand the basics of thermodynamics and statistical mechanics.
- 2. Concept of Work & Heat, Concept of Entropy, Scale of Temperature, Unattainability of Absolute Zero. Thermodynamic Variables.
- 3. Understand the Kinetic Theory of Gases and Statistical postulates.

Practical PHYP301

The course will enable the students to:

- 1. Understand the basics of thermodynamics and statistical mechanics.
- 2. Concept of Work & Heat, Concept of Entropy, Scale of Temperature, Unattainability of Absolute Zero. Thermodynamic Variables.
- 3. Understand the Kinetic Theory of Gases and Statistical postulates.

Semester IV - Wave and Optics

PHY401

The course will enable the students to:

- 1. Understand Superposition, Wave Motion, the concept of Velocity of Waves.
- 2. Understand Superposition of Two Harmonic Waves.
- 3. Understand the fundamentals of Wave Optics, Interference, Diffraction and Polarization.

Practical PHYP401

The course will enable the students to:

- 1. Understand Superposition, Wave Motion, the concept of Velocity of Waves.
- 2. Understand Superposition of Two Harmonic Waves.
- 3. Understand the fundamentals of Wave Optics, Interference, Diffraction and Polarization.

SEC

Semester III- Computational Physics

PHY311

The aim of this course is not just to teach computer programming and numerical analysis but to emphasize its role in solving problems in Physics. The course will enable the students to:

- 1. To understand the use of computational methods to solve physical problems
- 2. To understand computer language as a tool in solving physics problems (applications)
- 3. Get hands-on training on the Problem solving on Computers.

Semester IV- Electrical Circuit Network Skills

PHY411

The course will enable the students to:

1. Design and troubleshoot the electrical circuits, networks and appliances through handson mode.

B.Sc. III

Paper I: Relativity, Quantum Mechanics, Atomic, Molecular and Nuclear Physics

BSCIIIPH-A

In this course the student will

- 1. Understand the origins of quantum mechanics
- 2. Understand and explain the differences between classical and quantum mechanics
- 3. Understand the idea of wave function
- 4. Understand the uncertainty relations
- 5. Understand the Schrödinger wave mechanics and operator formalism 6. Solve the Schrödinger equation for simple 1D time-independent potentials
- 7. Develop the idea of spin other quantum numbers.
- 8. Understand the ideas of basics of nucleus and their energy.
- 9. Understand the procedures for nuclear fission and fusion.
- 10. Understand the relationship between various types of spectral terms.
- 11. Ability to have insight into the interplay between theory, models, and data from modern experiments and into how the major open questions are being addressed.
- 12. A basic understanding of nuclear properties and models that describe the quantum structure, decay, and reactions of nuclei.

Paper II: Solid State Physics, Solid State Devices and Electronics BSCIIIPH-B

In this course the student will

- 1. Understand the basic concepts of force between atoms and bonding between molecules.
- 2. Understanding of diffraction experiment and reciprocal lattice
- 3. Understand free electron Fermi gas: density of states, Fermi level, and electrical conductivity

- 4. Understand electrons in periodic potential: energy bands theory classification of metals, semiconductors and insulators
- 5. Understand the properties of semi-conductors
- 6. Understand the relationship between semiconductors devices and understand the applications of semiconductor devices
- 7. Understand the properties of semi-conductors.
- 8. Understand the basics of diode and working of rectifier circuits and its characteristics.
- 9. Understand the relationship between semiconductors devices and understand the applications of semiconductor devices.
- 10. To have a basic introduction to computer organisation.

Practical Work BSCIIIPH-C

- 1. Students will develop a quality of a new perspective to look at everything from 'Physics' point of view.
- 2. Students will develop a quality of understanding of basic and advanced concepts in Physics Theoretical and practical skills along with problem solving ability.
- 3. Student will be able to observe the characteristics curves of tunnel diode and transistors in different modes.
- 4. Students will be able to learn the usage of the cathode ray oscilloscope by observing different lissajous figures.
- 5. Students will learn to use VTVM for measuring different parameters.

M.Sc. I Sem

Paper I: Mathematical Physics

MPHI-A

In this course the student will

- 1. Learn about complex variables and their typical applications in physics.
- 2. Learn about special type of matrices that are relevant in physics and then learn about their properties.
- 3. Get introduced to Special functions like Gamma function, Beta function, Delta function, Dirac delta function, Bessel functions and their recurrence relations
- 4. Learn different ways of solving second order differential equations and familiarized with singular points and contour integration method.
- 5. Learn the fundamentals and applications of Fourier series, Fourier and Laplace transforms, their inverse transforms etc

Paper II: Classical Mechanics

MPHI-B

This paper enables the students to understand

- 1. The Lagrangian and Hamiltonian approaches in classical mechanics.
- 2. The classical background of Quantum mechanics and get familiarized with Poisson brackets and Hamilton -Jacobi equation.
- 3. Kinematics and Dynamics of rigid body in detail and ideas regarding Euler's equations of motion.
- 4. Theory of small oscillations in detail along with basis of free vibrations.
- 5. Basic ideas about central forces and scattering.

Paper III: Electrodynamics and Plasma Physics

MPHI-C

After successful completion of the course, the student is expected to:

- 1. Have gained a clear understanding of Maxwell's equations and electromagnetic boundary conditions.
- 2. Know about the radiations related to the motion of charges.
- 3. Have grasped the idea of bremsstralung and synchrotron radiation.
- 4. Extend their understanding of plasma related concepts.
- 5. Understand the rather complex physical phenomena and elementary concepts of plasma kinetic theory observed in plasma.

Paper IV: Electronics

MPHI-D

On successful completion of course student will:

- 1. Acquire knowledge of operational amplifier circuits and their applications.
- 2. Gain knowledge and evaluate the Boolean expressions, combinational logic circuits and simplifications using karnaugh maps.
- 3. Analyse the operation of different logic families.
- 4. Understand the working of latches, flip-flops, designing registers, counters, a/d and d/a converters.
- 5. Design and Analyse synchronous and asynchronous sequential circuits.
- 6. Interpret the architecture, instruction set and also practice the basic programs of 8085 microprocessor.

Lab Course I-A: General and Optics

MPHI-E

- 1. Students will acquire an understanding of basic and advanced concepts in Physics.
- 2. Students will have a knowledge of theoretical and practical skills along with problem solving ability Logical and abstract thinking and analytical approach.
- 3. The students will gain the practical knowledge of principles of general optics.
- 4. The students will have the knowledge of measurement of different physical quantities.
- 5. Student will learn to determine the band gap of semiconductors.
- 6. Student will have knowledge about transmission line.
- 7. Student will learn about the determination of ionization potential of mercury lamp.

Lab Course I -B: Electronics

MPHI-F

- 1. Students will acquire an understanding of basic and advanced concepts in Physics.
- 2. Students will have a knowledge of theoretical and practical skills along with problem solving ability Logical and abstract thinking and analytical approach.
- 3. Student will learn to design and study regulated power supply.
- 4. Student will have knowledge about the astable, monostable and bistable multivibrators.
- 5. Students will learn about the basic logic gates and verification of their truth tables.

M.Sc. II Sem

Paper I: Quantum Mechanics I

MPHII-A

After successful completion of this paper, the student will be well-versed in

- 1. Linear vector spaces, Hilbert space, concepts of basis and operators and bra and ket notation
- 2. Both Schrödinger and Heisenberg formulations of time development and their applications
- 3. Theory of time independent perturbation theory and solutions of schrodinger equations.
- 4. To learn about the inadequacy of classical mechanics and the emergence of quantum physics.
- 5. Theory of central force problem and to solve the wave equations.

Paper II: Statistical Mechanics

MPHII-B

- 2. The students should be able to
- 3. Explain statistical physics and thermodynamics as logical consequences of the postulates of statistical mechanics
- 4. Apply the principles of statistical mechanics to selected problems
- 5. Grasp the basis of ensemble approach in statistical mechanics to a range of situations
- 6. To learn the fundamental differences between classical and quantum statistics and learn about quantum statistical distribution laws
- 7. Study important examples of ideal Bose systems and Fermi systems
- 8. Gain knowledge about classical and quantum statistical mechanics, including Boltzmann, Fermi-Dirac, and Bose-Einstein statistics.
- 9. Apply the formalism of statistical mechanics and probability theory to derive relations between thermos-dynamical quantities

- 10. broad understanding of Statistical Mechanics, and show a critical awareness of the significance and importance of the topics, methods and techniques.
- 11. Understand the physical statistics and its relation to information theory and able to Solve statistical mechanics problems for simple non-interacting systems.

Paper III: Electronic and Photonic Devices and Optical Modulators MPHII-C

On successful completion of course student will:

- 1. Acquire the basic knowledge of bipolar devices and its application
- 2. Gain knowledge on characteristics of diodes.
- 3. Understand digital terminology and characteristics of unipolar devices.
- 4. Study of characteristics of special microwave devices.
- 5. Study the different photonic devices and their structure and working principle.
- 6. Understand, analyse and design p-n junction solar cell and interface thin film solar cell.
- 7. Gain knowledge about the optical modulators and their properties.

Paper IV: Computational Physics and Computer Programming MPHII-D

The students should be able to,

- 1. Have a strong base in FORTRAN language regarding different data type such as list, sets, functions etc.
- 2. It helps to understand the different methods of determining zeroes of the equations.
- 3. Understand different interpolation and integration and differentiation techniques. methods
- 4. Gets a wide knowledge of numerical methods in computational Physics that can be used to solve many problems which does not have an analytic solution
- 5. Solve problems related to ordinary differential equations using Rungakutta method and predictor corrector methods.

Lab Course -II- A Numerical Analysis and Computer Programming MPHII-E

- 1. Students will be able to learn programming in fortran language and various components of programming viz., compilation and execution of programmes. They will also expertise in practical implementation of programming in numerical analysis methods.
- 2. Student will learn to use fortran language to solve simultaneous linear equations by gauss elimination method and gauss siedal method.

- 3. Student will learn to find the roots of transcendental equation using fortran language by newton raphson method.
- 4. Student will understand the use of fortran language to find the numerical integration by simpson's rule and trapezoidal rule.
- 5. Student will learn to write fortran programs to find eigen values of different matrices.

Lab Course –II- B Digital Electronics and Microprocessor

MPHII-F

- 1. Students will acquire an understanding of basic and advanced concepts in Physics.
- 2. Students will have a knowledge of theoretical and practical skills along with problem solving ability Logical and abstract thinking and analytical approach.
- 3. Student will have knowledge about different types of flip-flops; RS flipflop,JKflipflop,Master slave flipflop.
- 4. Student will learn about counters(Ripple counters, mode 3, mode 5 counters).
- 5. Student will learn the programming in 8085 microprocessor for addition of two 16 bit hexadecimal numbers, to find the parity of numbers.

M.Sc. III Semester

Paper I: Quantum Mechanics II

MPHIII-A

On successful completion of course student will:

- 1. Understand the kinematics of scattering process.
- 2. Evaluate the partial wave analysis using Born approximation method.
- 3. Apply time Independent perturbation theory for non-degenerate case.
- 4. Gain knowledge on WKB approximation method to study turning points.
- 5. Remember time dependent perturbation theory.
- 6. Analyse the interaction of an atom with electromagnetic radiation and the relativistic quantum mechanics using Klein Gordon equation
- 7. Explore the properties of Dirac particle.

Paper II: Atomic and Molecular Physics

MPHIII-B

After successful completion of the course, the student is expected to:

- 1. Know about different atom model and will be able to differentiate different atomic systems, different coupling schemes and their interactions with magnetic and electric fields.
- 2. Have gained ability to apply the techniques of spectroscopy to elucidate the structure of molecules

- 3. Be able to apply the principle of Raman spectroscopy and its applications in the different field of science & Technology.
- 4. To become familiar with different types of molecules and their rotational and vibrational spectra.
- 5. To find solutions to problems related different spectroscopic terms.

Paper III: Solid State Physics-I

MPHIII-C

On successful completion of course student will:

- 1. Understand different types of crystal structures in terms of the crystal lattice and the basis of constituent atoms.
- 2. Understand the theory of X-ray diffraction in the reciprocal lattice (k-space) formalism.
- 3. Apply the theory of lattice vibrations (phonons) to determine thermal properties of solids.
- 4. Study the problem of electrons in a periodic potential, examine its consequence on the band-structure of the solids.
- 5. Gain knowledge about the different properties of semiconductor crystals.

Paper IV: Electronics III

MPHIII-D

On successful completion of course student will:

- 1. Know about Number systems and codes and understand Logic gates,
- 2. laws of Boolean algebra and De Morgan's Theorem.
- 3. Acquire Knowledge about Karnaugh Map, Arithmetic circuits.
- 4. Know about different Logic families and Data processing Circuits
- 5. . 5. Acquire Knowledge about Sequential circuits as Flipflops, Counters . and Shift registers.
- 6. Understand Digital to Analog and Analog to Digital converters and details of Digital Integrated Circuits.

Lab Course III A: Material Science and General

MPHIII-E

On successful completion of course student will:

- 1. Know about Number systems and codes and understand Logic gates,
- 2. laws of Boolean algebra and De Morgan's Theorem.
- 3. Acquire Knowledge about Karnaugh Map, Arithmetic circuits.
- 4. Know about different Logic families and Data processing Circuits.
- 5. Acquire Knowledge about Sequential circuits as Flipflops, Counters

and Shift registers.

6. Understand Digital to Analog and Analog to Digital converters and details of Digital Integrated Circuits.

Lab Course III B: Electronics

MPHIII-F

On successful completion of course student will:

- 1. Know about Number systems and codes and understand Logic gates,
- 2. laws of Boolean algebra and De Morgan's Theorem.
- 3. Acquire Knowledge about Karnaugh Map, Arithmetic circuits.
- 4. Know about different Logic families and Data processing Circuits.
- 5. Acquire Knowledge about Sequential circuits as Flipflops, Counters and Shift registers.
- 6. Understand Digital to Analog and Analog to Digital converters and details of Digital Integrated Circuits.

M.Sc. IV Semester

Paper I: Nuclear and Particle Physics

MPHIV-A

On successful completion of course student will:

- 1. Understand Nuclear Force And Nuclear Models
- 2. Analyse the semi empirical mass formula and its applications using liquid drop model and shell model.
- 3. Understand the concept of Nuclear Decay Processes
- 4. Interpret the Classification of nuclear reactions
- 5. Understand the Classification of elementary Particles and their Quantum Numbers

Paper II: Laser Physics and Applications

MPHIV-B

On successful completion of course student will:

- 1. Gain knowledge on laser rate equations for Two, Three, Four-level laser systems.
- 2. Understand Einstein relations for emission and absorption of radiation
- 3. Gain knowledge on classification of laser systems
- 4. Gain knowledge on application of various laser systems
- 5. Understand basic principles of lasing action and its applications

Paper III: Solid State Physics II

MPHIV-C

On successful completion of course student will:

- 1. Acquire knowledge about different experimental approaches in the study of plasmons and polaritons.
- 2. Understand piezo, pyro and Ferro electricity, ferroelectric domains and hysteresis.

- 3. Understand basic theories of magnetic materials like ferromagnetism, ferrimagnetism, anti-ferromagnetism.
- 4. Acquire basic knowledge on curie point and curie temperature.
- 5. Understanding of various optical processes and excitons and defects.

Paper IV: Electronics IV

MPHIV-D

On successful completion of course student will:

- 1. Know about evolution of Microprocessor and Micro Computers and different types of Menlories.
- 2. Acquire knowledge about Architecture of microprocessor 8()85, Instruction cycles and Timing diagrams.
- 3. Know about Addressing Modes and Instruction sct of 8()85 pp. Learn types of different languages, Modular and Structured Programming.
- 4. Know about Assembly Language Programming of 8()85 VIP.
- 5. Acquire knowledge about Optical Fibers and their types.

Project MPHIV-E

Students will acquire an understanding of basic and advanced concepts in Physics. Students will have a knowledge of theoretical and practical skills along with problem solving ability Logical and abstract thinking and analytical approach. The project will rise the students intellectual level and will inculcate the observing and research qualities in their personality.

Course Outcomes: Zoology

B.Sc I

Semester I: Animal Diversity-Non-Chordate and Cell Biology

ZOO101

Upon successful completion of this subject the student will be able to:

- 1. Understand the structure and organization of invertebrate animals.
- **2.** Explain modifications in various functions of animals during transition from invertebrates to vertebrates.
- **3.** Identify invertebrates and homology, analogy and modification of mouthparts in relation to feeding habits, respiration, excretion, locomotion.
- **4.** Understand the functioning of nucleus and extra nuclear organelles and understand the intricate cellular mechanism involved.
- **5.** Acquire the detailedknowledge of different pathways related to cell signalling and apoptosis.

Semester II: Comparative Anatomy and Physiology of Vertebrates ZOO201

Upon successful completion of this subject the student will be able to know about:

- 1. Have an enhanced knowledge and appreciation of mammalian physiology.
- **2.** Understand the function of important physiological systems including the cardio-respiratory, renal, reproductive and metabolic systems
- **3.** Understand how these separate systems interact to yield integrated physiological responses to challenges such as exercise, fasting and ascent to high altitude and how they can sometimes fail

Lab Course I: ZOOP101

- 1. Identification, classification and the study of distinguishing features of important representatives from various groups (Protozoa to hemichordata)
- 2. Stud of permanent prepared slides(Protozoa to hemichordata)
- 3. Alternative method of
- 4. Major Dissection, Reproductive excretory, nervous and earthworm
- 5. Nervous system of Pila.
- 6. Minor Dissection mouth parts of cockroach house fly and mosquito, hastate plat of prawn, Radula of pila.
- 7. Slide Presentations of setae, septal Nephridia sporidium and ctenidium.
- 8. Permanent preparations of different materials to be provided for study.

Lab Course II: ZOOP201

After the completion of the course, the student will be able to know-

- 1. Identification, classification and the study of distinguishing features of important representatives, museum specimens and slides (chordates)
- 2. Comparative studies of integument, reproductive system with the help of chart and Model Alternative method of dissection- cranial nerves of frog, veranus, fowl and rabbit.
- 4. Osteology of Amphibia, aves, Reptile and Mammals.
- 5. Temporary mount of external scales in fishes (cycloid, ganoid, ctenoid).
- 6. Comparative study of brain with the help of models and charts.
- 7. Comparative study of urinogenital system with the help of models and charts.
- 8. Comparative study of heart with the help of models and charts.
- 9. Estimation of RBC, Haemoglobin, blood group and Rh factor blood clotting time.
- 10. Preparation of haemin crystals.
- 11. Determine the blood pressure of man.

12. Demonstration of action of salivary analyse

- 13. Demonstration of urea, glucose and ketone bodies in urine.
- 14. Demonstration of osmosis.
- 15. Permanent preparations of slides and its identification.

Semester III-Genetics and Developmental Biology

ZOO301

After successfully completing this course, the students will be able to:

- 1. Apply the principles of Mendelian inheritance on interaction of genes.
- 2. Learn various methods of sex determination in animal kingdom.
- 3. Understand the cause and effect of alterations in chromosome number and structure.
- 4. Know the Recent Assisted Reproductive techniques.
- 5. Develop critical understanding how a single-celled fertilized egg becomes an embryo and then a fully formed adult by going through three important processes of cell division, differentiation and morphogenesis.
- 6. Understand the general pattern and sequential developmental stages during embryogenesis and understand how the developmental processes lead to establishment of body plan of multicellular organisms.

Semester IV- Applied Zoology

ZOO-401

After successfully completing this course, the students will be able to:

- 1. Learn various aquaculture techniques in details.
- 2. Understand the aquaculture techniques, their problems, and commercial viability.
- 3. Understand the techniques and commercial significance of apiculture, sericulture and lac culture.
- 4. Understand the basic and technical skills related to dairy management, poultry and vermicomposting etc.

Practical ZOOP-301

After successfully completing this course, the students will be able to:

- 1. Learn the different aspects of early, late and post embryonic development.
- 2. Know about implications of developmental biology in various fields, such as in teratogenesis, stem cell biology, invitro fertilization, cryopreservation, cord blood transfusion etc.

Practical ZOOP-401

After successfully completing this course, the students will be able to:

- 1. Understand the culture techniques of prawns, pearls and fish.
- 2. Understand silkworms rearing and their products.
- 3. Understand dairy animal management, the breeds and diseases of goats and learn the testing of egg and milk quality.

SEC

Semester III- Public Health and Hygiene

ZOO-311

After successfully completing this course, the students will be able to:

- 1. Identify current national and global public health problems.
- 2. Aware about the issues of food safety, water safety, vaccination exercise and obesity exposure to toxins.
- 3. Frame a public health plan during any epidemic or spread of infections disease etc.
- 4. Analyse case studies of mortality and obesity.
- 5. Assess the health inequalities with regard to gender, race, ethnicity, income etc.
- 6. Students may make an oral presentation and compare the health care system of India with a country having advanced one.

Semester IV- Aquarium Fish Keeping

ZOO-411

After successfully completing this course, the students will be able to:

- 1. Student should be able to acquire to knowledge about different kind of fish, their compatibility in aquarium.
- 2. Become aware of Aquarium as commercial, decorative and of scientific studies.
- 3. Develop personal skills on maintenance of aquarium.
- 4. Know about the basic needs to set up an aquarium i. e,. Dechlorinated water, reflector, filters, scavenger, aquatic plants etc. and the ways to make it cost-effective.

B.Sc. III

Paper I: Ecology, Environmental Biology, Toxicology, Microbiology and Medical Zoology BSCIIIZO-A

After the completion of the course, the student will be able to know-

- 1. About the major ecosystems of world, characteristics of population, type of pollution and their regulation, conservation of natural resources.
- **2.** Different type of chemical and biological toxicants, their effects and prevention.
- **3.** Importance of Microorganism.
- **4.** Study of Pathogenic animals, diseases and their symptoms and preventions.

Paper II: Genetics, Cell Physiology, Biochemistry, Biotechnology and Biotechniques

BSCIIIZO-B

After the completion of the course, the student will be able to know about-

- 1. The Human Genetics
- 2. Physiological functions of cells.
- 3. Different Bio-molecules and their metabolism.
- **4.** Different Genetical Engineering Techniques.
- **5.** Different Bio-Instrumental techniques.

Practical: BSCIIIZO-C

After the completion of the course, the student will be able to know about-

- 1. Blood group detection and RBC counting methods.
- 2. Estimation of Population Density.
- 3. Identification of bacteria.

M.Sc. I Sem

Paper I: Biosystemics, Taxonomy and Biodiversity

MZOI-A

After the completion of the course, the student will be able to -

- Understand, classify and identify the diversity of animals.
- Understanding of general taxonomic rules on animal classification
- The importance of classification of animals and classify them effectively using the six levels of classification.
- Understand Mechanism of Speciation.
- Understand the Animal diversity around us Hot Spots ,Threats and Conservation
- Biodiversity and Conservation increase awareness and understanding of how human life depends on preserving animal species and natural ecosystems
- Apply the International rules of Nomenclature to give a scientific name to animals which are found during research.

Paper II-Structure and function of Invertebrates

MZOI-B

After the completion of the course, the student will be able to -

- Understand the life cycle of Invertebrate animal of Different Phylum.
- Understand the structure and organization of invertebrate animals. □
- Identify invertebrates and homology, analogy and modifications of mouthparts in relation to feeding habits.

• Students will have the knowledge and skills to: Describe the variety of invertebrate organisms and explain their evolutionary origin and diversification. Investigate invertebrates in laboratory and field conditions, and identify major taxonomic groups.

Paper III-Population Genetics and Evolution

MZOI-C

After the completion of the course, the student will be able to understand -

- The origin of life
- Evidences of EvolutionDestabilizingforces-for evolution like Mutation, variation, Isolation, Genetic Drift.
- Mode of Speciation
- Formation and types of Fossils.
- The students will be able to learn most of the essential aspects of Evolutionary Biology in detail which will help them in getting better understanding regarding the subject.
- Understand the gradual development and evolutionary history of different kinds of living organisms from earlier forms over several generations

Paper IV- techniques in Biology

MZOI-D

After the completion of the course, the student will be able to understand-

- Different techniques-ph-metry, colorimetry, spectrophotometry.-
- Different types of Microscopies.
- Radio Isotopes Technique.
- Magnetic resonance Imaging.
- Separationtechniques-Centrifugation, Chromatography, Electrophoresis
- Students gain skills in techniques of chromatography, electrophoresis, spectroscopy and radioisotopes.

Lab Course I: Based on Paper I and II

MZOI-E

After the completion of the course, the student will be able to -

- Understand, classify and identify the diversity of animals.
- Understanding of general taxonomic rules on animal classification
- The importance of classification of animals and classify them effectively using the six levels of classification.
- Understand Mechanism of Speciation.
- Understand the Animal diversity around us Hot Spots, Threats and Conservation
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- Understand the structure and organization of invertebrate animals.
- Identify invertebrates and homology, analogy and modifications of mouthparts in relation to feeding habits.
- Students will have the knowledge and skills to: Describe the variety of invertebrate organisms and explain their evolutionary origin and diversification. Investigate invertebrates in laboratory and field conditions, and identify major taxonomic groups.

Lab Course II: Based on Paper III and IV

MZOI-F

After the completion of the course, the student will be able to understand -

- The origin of life
- Evidences of Evolution Destabilizing forces-for evolution like Mutation, variation, Isolation, Genetic Drift.
- Mode of Speciation
- Formation and types of Fossils.
- The students will be able to learn most of the essential aspects of Evolutionary Biology in detail which will help them in getting better understanding regarding the subject.

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- Different types of Microscopies.
- Radio Isotopes Technique.
- Magnetic resonance Imaging.
- Separationtechniques-Centrifugation, Chromatography, Electrophoresis
- Students gain skills in techniques of chromatography, electrophoresis, spectroscopy and radioisotopes.

Semester II

Paper I- Comparative Anatomy of Vertebrates

MZOII-A

- Gain knowledge the comparative anatomy of vertebrate Understanding of origin and salient features of Amphibians, Reptiles, birds and Mammals
- Gain knowledge of functional anatomy of vertebrates from fishes to mammals.
- Gain Knowledge of Origin, Evolution and general organisation of Chordates.
- Gain Knowledge of Evolution of heart, lungs and urino-genital organs of vertebrates

• Gain Knowledge of comparative anatomy of all systems of vertebrates.

Paper II- Physiology of Vertebrates

MZOII-B

After the completion of the course, the student will be able to understand -

- Detailed concepts of digestion respiration excretion the functioning of nerves and muscles. blood coagulation
- About neurophysiology and Different types Receptor Physiology
- Communication
- Thermoregulation
- The students will be well equipped to become very competent in research.
- The course provides employability in teaching fields
- Students feel confident in teaching physiology as well as executing research projects.
- Students will gain skill to execute the roles of a medical lab technicians with training as they have basic fundamentals.

Paper III-Molecular Cell Biology and Biotechnology

MZOII-C

After the completion of the course, the student will be able to understand -

- Molecular structure and function of Nucleus and Chromosome.
- Structure and types of DNA.
- Transportation of Biomolecules across biomembrane.
- Cell cycle –mitosis and meiosis.
- Cell cycle control in mammalian cell.
- Apoptosis-Mechanism and regulation
- DNA-Replication Transcription Translation Regulation of translation in PCR Technology.
- R-DNA Technology. DNA Foot Printing
- It gives insight into various cell/tissues culture techniques
- Understanding of in vitro culturing of organisms and production of transgenic animals.
- Understanding of cloning of mammals, large scale culture and production from recombinant microorganisms
- Students Gains skills in medical, environmental biotechnology, biopesticides.
- This insight allows students to take into consideration about ethical issues involved in production transgenic animals.

Paper IV-Quantitative Biology (Computer and Biostatistics) MZOII-D

Students gain knowledge about various tools & techniques used in biological systems

- Biostatistics teaches them to use the best data analysis methods in their research projects
- Students gains knowledge about statistical methods like measures of central tendencies, Probability
- Learns about hypothesis testing and inferential statistics
- Analyse biological data mathematically and statistically

Lab Course I: Based on Paper I and II

MZOII-E

After the completion of the course, the student will be able to -

- Gain knowledge the comparative anatomy of vertebrate Understanding of origin and salient features of Amphibians, Reptiles, birds and Mammals.
- Gain knowledge of functional anatomy of vertebrates from fishes to mammals• Gain Knowledge of Origin, Evolution and general organisation of Chordates.
- Gain Knowledge of Evolution of heart, lungs and urino-genital organs of vertebrates
- Gain Knowledge of comparative anatomy of all systems of vertebrates
- Detailed concepts of digestion respiration excretion the functioning of nerves and muscles. blood coagulation
- About neurophysiology and Different types Receptor Physiology
- Communication
- Thermoregulation
- The students will be well equipped to become very competent in research.
- The course provides employability in teaching fields
- Students feel confident in teaching physiology as well as executing research projects.
- Students will gain skill to execute the roles of a medical lab technicians with training as they have basic fundamentals.

Lab Course II: Based on Paper III and IV

MZOII-F

- Molecular structure and function of Nucleus and Chromosome.
- Structure and types of DNA.
- Transportation of Biomolecules across biomembrane.
- Cell cycle –mitosis and meiosis.
- Cell cycle control in mammalian cell.
- 3. Apoptosis-Mechanism and regulation
- DNA-Replication Transcription Translation Regulation of translation in PCR Technology.
- R-DNA Technology. DNA Foot Printing

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- Understanding of in vitro culturing of organisms and production of transgenic animals.
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- Biostatistics teaches them to use the best data analysis methods in their research projects
- Students gains knowledge about statistical methods like measures of central tendencies, Probability
- Learns about hypothesis testing and inferential statistics Analyse bio logical data mathematically and statistically

Semester III

PaperI–Reproductive Physiology and Embryology

MZOIII-A

- Develop the basic concepts of development. □
- Explain the fundamental concept of Oogenesis spermatogenesis.
- Explain the fundamental concept Female reproductive cycle.□
- development of extra embryonic membrane and the nature and physiology of placenta.
- Provides students insight into maintaining healthy relationships with their opposite gender and allows them to make right choice about their life partner thus preventing congenital/consanguial diseases.

Paper II Animal Behaviour-

MZOIII-B

After the completion of the course, the student will be able to understand -

- In detail about patterns of behaviours-instinct and learning.
- Chronobiology, orientation, migration.
- Animal communication-design of signals
- Reproductive behaviour
- Social and cooperative behaviours.
- The basic ecological and evolutionary processes that shape animal behaviour
- The relevance of animal behaviour, both as a biologist and a human being.
- Improve quantitative skills in the application of mathematical models and theories to the study of animal behaviour.
- Further develop the ability to apply critical thinking and logic to the solving of biological problems relating to animal behaviour.
- Student Gains skills in Wildlife technician Animal services associate Veterinary assistant. Animal adoption specialist Research technician

Paper III-Environmental Physiology

MZOIII-C

After the completion of the course, the student will be able to understand -

- In detail about different types of ecological adaptation in animals.
- Basic concept of environmental stress.
- The methods of relaxation of Stress and body by Yoga, Meditation, Asana & Pranayam
- Understanding of stress physiology will allow them to control their stress and emotions there by diverting their energy towards the positive nation building activities

PaperIV- Icthyology

MZOIII-D

After the completion of the course, the student will be able to understand -

- Integumentary system basic structure of skin, dermal and epidermal pigments, fins, and scales.
- Fishes habits and habitats and their functional anatomy
- The functional anatomy of all organ systems of fish Migration and adaptations in fishes.
- Importance of electric organs in fishes.
- The significance of Colouration, luminous and poisonous organs of fish.
- Identify fish by morph metric and meristic characters and apply the method in biodiversity oriented research.

Lab Work I: Based on Paper I and II

MZOIII-E

- Develop the basic concepts of development.
- Explain the fundamental concept of Oogenesis spermatogenesis.
- Explain the fundamental concept Female reproductive cycle.

- development of extra embryonic membrane and the nature and physiology of placenta.
- Provides students insight into maintaining healthy relationships with their opposite gender and allows them to make right choice about their life partner thus preventing congenital/consanguial diseases.
- In detail about patterns of behaviours-instinct and learning.
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- Animal communication-design of signals
- Reproductive behaviour
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- The basic ecological and evolutionary processes that shape animal behaviour
- The relevance of animal behaviour, both as a biologist and a human being.
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- Further develop the ability to apply critical thinking and logic to the solving of biological problems relating to animal behaviour.

Student Gains skills in Wildlife technician Animal services associate Veterinary assistant. Animal adoption specialist Research technician

Lab Work II: Based on Paper III and IV

MZOIII-F

After the completion of the course, the student will be able to understand -

- In detail about different types of ecological adaptation in animals.
- Basic concept of environmental stress.
- The methods of relaxation of Stress and body by Yoga, Meditation, Asana & Pranayam
- Understanding of stress physiology will allow them to control their stress and emotions there by diverting their energy towards the positive nation building activities
- Integumentary system basic structure of skin, dermal and epidermal pigments, fins, and scales.
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- Importance of electric organs in fishes.
- The significance of Colouration, luminous and poisonous organs of fish.
- Identify fish by morph metric and meristic characters and apply the method in biodiversity oriented research.

Semester IV

Paper I- Biology of Immune System

MZOIV-A

- The basic knowledge about immune system and allows the student to create insight as how to improve their immune system and good health.
- Types of immunity, antigens-antibodies and their properties.
- Complement system, MHC's and immune responses.
- Types of hypersensitivity reactions and auto immune diseases, Immunotolerance.
- Understanding of immune mechanisms in disease control, vaccination, process of immune interactions

Paper II- Ecology and Limnology

MZOIV-B

After the completion of the course, the student will be able to understand -

- Anticipate, analyse and evaluate natural resource issues and act on a lifestyle that conserves nature.
- About fundamental of Ecosystem.
- Conservation of natural resources. Global warming, Ozone Depletion etc.
- Solid waste management.
- Knowledge of physico-chemical and biological characteristics of fresh water bodies.
- The significance of aquatic flora, fauna in water bodies.
- About pollution of rivers, causes and control measures.
- Legislation and regulation on discharge of industrial effluents and domestic wastes in rivers and reservoirs.
- The students will be well equipped to become very competent in research or teaching field.

Paper III -Biology of Parasitism

MZOIV-C

After the completion of the course, the student will be able to understand -

- Host-parasite relationship
- Different types of Viral, bacterial and Fungal Disease.
- Protozoan Healminthus Disease. Disease transmitted by insects.
- Understanding of pathology of diseases caused by various microorganisms such as bacteria, virus, parasites and fungus.

Paper IV -Aquaculture and Fisheries

MZOIV-D

- The aquaculture practices. Overview importance of coastal and freshwater aquaculture, Types of Fish Farming.
- Physicochemical Condition of Water and its effect on Fishes.
- Construction and Maintenance of fresh water fish farm, Management of Ponds
- Fresh Water Fish Breeding (Dry & Wet bundh breeding and induced breeding).
- -Stocking and transport of fish seed and brood fish.
- Fishing Methods.
- Different type of Fish farming-integrated ,Sewage, prawn,Marine, Intensive culture.

- Preparation and Maintenance of Fish Aquarium.
- FishesPreservation and byproducts
- Fish Marketing
- Fish diseases and their control
- Disease Caused by Pollutants.
- Organizations related to Aquaculture Promotion.
- It is one of the small-scale industries which can provide the student employment opportunity.
- Provides knowledge of ornamental fish breeding which is highly professional and attractive avenue for youth.

Lab Course I: Based on Paper I and II

MZOIV-E

After the completion of the course, the student will be able to understand -

- The basic knowledge about immune system and allows the student to create insight as how to improve their immune system and good health.
- Types of immunity, antigens-antibodies and their properties.
- Complement system, MHC's and immune responses.

 Types of hypersensitivity reactions and auto immune diseases, Immunotolerance.
- Understanding of immune mechanisms in disease control, vaccination, process of immune interactions
- Anticipate, analyse and evaluate natural resource issues and act on a lifestyle that conserves nature.
- About fundamental of Ecosystem.
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- About pollution of rivers, causes and control measures.
- Legislation and regulation on discharge of industrial effluents and domestic wastes in rivers and reservoirs.
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Lab Course II: Based on Paper III and IV

MZOIV-F

- Host-parasite relationship
- Different types of Viral, bacterial and Fungal Disease.
- Protozoan Helminthes Disease. Disease transmitted by insects.
- Understanding of pathology of diseases caused by various microorganisms such as bacteria, virus, parasites and fungus.
- The aquaculture practices. Overview importance of coastal and freshwater aquaculture Types of Fish Farming.

- Physicochemical Condition of Water and its effect on Fishes.
- Construction and Maintenance of fresh water fish farm, Management of Ponds
- Fresh Water Fish Breeding (Dry & Wet bundh breeding and induced breeding).
- Stocking and transport of fish seed and brood fish.
- Fishing Methods.

Different type of Fish farming-integrated ,Sewage, prawn,Marine, Intensive culture.

- Preparation and Maintenance of Fish Aquarium.
- Fishes Preservation and byproducts
- Fish Marketing
- Fish diseases and their control
- Disease Caused by Pollutants.
- Organizations related to Aquaculture Promotion.
- It is one of the small-scale industries which can provide the student employment opportunity.
- Provides knowledge of ornamental fish breeding which is highly professional and attractive avenue for youth.

Course Outcomes: B.Sc. I

Subject: Botany

Semester I: Microbial Diversity and Plant Pathology

BOT101

After the completion of the course, the student will be able to know about -

- Understand the Viruses, Bacteria, Phycology, Mycology and Plant pathology
 - Learn microbial techniques which will be beneficial for agriculture and industry.
 - Learn life cycles of selected genera of different groups
 - Understand etiology of plant diseases
 - Apply their knowledge in the crop fields to eradicate or avoid the diseases

Semester II: Archegoniateae and Plant Architecture

BOT201

After the completion of the course, the student will be able to know about -

- Understand the General characteristics and affinities of Bryophytes, Pteridophytes and Gymnosperms
- Phylogenetic relationships with the help of Palaeobotanical studies Learn morphology, and- flower architecture of angiosperms

Lab I: Instrumentation and Microbial Techniques

BOTP101

After the completion of the practical, the student will be able to know about -

- Understand the instruments, techniques and good lab practices for working in a microbiology laboratory.
- Develop skills for identifying microbes and using them for Industrial, Agriculture and Environment purposes.
- Practical skills in the field and laboratory experiments in Microbiology & Pathology.
- learn to identify Algae, Lichens and plant pathogens along with their Symbiotic and Parasitic associations.
- Can initiate his own Plant & Seed Diagnostic Clinic
- Can start own enterprise on microbial product

Lab II: Archegoniate Identification

BOTP201

- Understand the habit, morphological and anatomical characteristics of Bryophytes, Pteridophytes and Gymnosperms
- Learn about Fossils. Palaeobotany is the study of fossil plants.
- Learn morphology and modification of root, stem and leaf. and- flower architecture of angiosperms.

Semester III – Plant Systematics, Economic Botany and Ethnobotany BOT301

The course will enable the students to:

- 1. Understand the plant taxonomy
- 2. Learn the characteristics of families included
- 3. Learn the economic importance of different plants of the concerned families
- **4.** Understand the traditional knowledge about the plants and the possible application of this knowledge.

Practical-Plant Identification and Economic Botany

BOTP301

The course will enable the students to:

- **1.** Learn how plant specimens are collected, documented and curated for a permanent record.
- 2. Recognise common and major plant families.
- 3. Comprehend the concepts of plant taxonomy and classification of Angiosperms.
- **4.** Understand the traditional knowledge about the plants and the possible application of this knowledge.

Semester IV – Plant Anatomy, Embryology and Plant Breeding BOT401

The course will enable the students to:

- 1. Understand the internal structure of root, stem and leaves
- **2.** Learn about the anomalous secondary growth of some plants.
- **3.** Understand the life cycle of Angiosperm plants with details of microsporogenesis, megasporogenesis, fertilisation and other developmental details up to embryogenesis.

4. Understand the concept of plant breeding and its application.

Practical-Plant Anatomy and Embryology

BOTP401

The course will enable the students to:

- 1. Understand the internal structure of root, stem and leaves
- **2.** Learn about the anomalous secondary growth of some plants.
- **3.** Understand the structure and reproductive part of the flower.

SEC

Semester III-Mushroom Culture Technology BOT311

The course will enable the students to:

- 1. Students study the morphology and types of Mushrooms.
- 2. Aware of the identification of edible and poisonous Mushrooms.
- 3. Able to produce spawn their own.

Semester IV- Medicinal Botany

BOT411

The course will enable the students to:

- 1. The utility of plants as medicines.
- 2. The preparation of basic herbal medicinal products
- 3. The idea of cultivation practices.
- 4. The storage, packaging and marketing of herbal medicines.
- 5. To work with individual plant and plant products.

B.Sc. III

Paper I: Plant Physiology, Bio Chemistry and Bio-Technology BSCIIIBO-A

After the completion of the course, the student will be able to know about -

- 1. Understand the water relation of the plants, water transport, mineral absorption and their role in plant growth and metabolism.
- 2. Describe and differentiable between the various steps of photosynthesis, respiration and enzymes controlling them.
- 3. Describe classification, types and significance of important biomolecules viz. Carbohydrates, Proteins, Fats etc.
- 4. Understand the mechanism of nitrogen fixation.
- 5. Explain the basis of medium preparation, tissue culture, RDNA technology and applied aspects.

Paper I: Ecology and Utilisation of Plants

BSCIIIBO-B

After the completion of the course, the student will be able to know about -

- 1. Understand how various factors like light, temperature, humanity, soil, water affect biological system and their adaptation.
- 2. How ecosystem acts as dynamic system with its tropic levels and functioning of food web, food chains, energy flow and mineral cycling.
- Appreciate the economic value of different plant products and their processing.
- 4. Understand therapeutic components of medicinal plants.

Botany Practical:

BSCIIIBO-C

After the completion of the practical, the student will be able to know about -

- 1. Understand how various physiological phenomena like osmosis, diffusion, permeability, plasmolysis etc.
- 2. Learn techniques like how to analyze the presence of carbohydrates, fats and proteins.
- 3. Learn technique to determine community structure in terms of frequency, abundance, density etc and role of habitat in the adaptation.
- 4. Demonstrate proficiency in the experimental techniques and method of analysis appropriate for their assigned lab works.

M.Sc. I Semester

Paper I: Cytology

MBOI-A

After the completion of the course, the student will be able to -

- 1. Student will understand the detailed descriptive structure and function of different cell organisation.
- 2. They will be able to understand the cycle events of cell division and types of cell division and specific enzyme activities related to them.
- 3. Understand cytoskaletal system of plant cell.
- 4. Understand about complexities of ribosome organisation for transceptional and transcational activities of protein synthesis.
- 5. Understand cell signalling and process of cell death and cellular aging i.e. programmed cell death (PCD).

Paper II: Genetics

MBOI-B

- 1. Structure and types of chromosome, karyotype analysis and evolution and structural and Numerical change in the chromosomes.
- 2. Genetic recombination and of genome, Gene structure and expression.
- 3. Molecular mechanism of recombination and role of enzyme in recombination and genetic matter.
- 4. Alien gene transfer, chromosome manipulation, Alien chromatin production and detection.
- 5. rDNA technology, transgenic plants, Gene Library and conservation of geneplasm.

Paper III: Microbiology, Phycology and Mycology

MBOI-C

After the completion of the course, the student will be able to -

- 1. Understand about Microbes and Thallophytes.
- 2. This paper will provide the understanding about atmosphere of ancient time evolution of microbes.
- 3. Students will know about the diversity of algae.
- 4. Students will understand the range of Fungal diversity and difference between Autotroph and Heterotroph.
- 5. Gain Knowledge about Pathogenic microbes which are harmful for plants.

Paper IV: Bryophyta, Pteridophyta and Gymnosperm

MBOI-D

After the completion of the course, the student will be able to -

- 1. Understand the diversity among Bryophytes, Pteridophytes and Gymnosperms.
- 2. To know about morphological, anatomical and reproduction in Bryophytes, Pteridophytes and Gymnosperms.
- 3. To recognise the major group of plant and their phylogenetic relationship.
- 4. To gain knowledge about life-cycle of Bryophytes, Pteridophytes and Gymnosperms.

Paper V: Lab Course I Based on Paper I and II

MBOI-E

After the completion of the course, the student will be able to -

- Various changes occur during the mitosis and meiosis cell division in plants.
- Procedure of isolation of cell organelles by ultracentrifugation.
- Able to determine the Index for mitosis cell division.
- Students will be able to identify the algae and classify into respective classes on the basis of characters exhibited by them.
- Able to know about Host-Parasite relationship and identification of fungi on the basis of asexual spores and their stages and morphology.

Paper V: Lab Course II Based on Paper III and IV

MBOI-F

After the completion of the course, the student will be able to -

- 1. Student will able to learn the procedure of isolation of DNA and RNA from plant sample.
- 2. Handling of electrophoresis technique will enable the students to separate biological materials like DNA and RNA.
- 3. Students will be able to identify the Bryophytes on the basis of morphological and anatomical characters.
- 4. Students will learn about the technique of preparation of double staining and permanent mount slide of pteridophytes.
- 5. Learn about section cutting technique (T.S./L.S./V.S./R.L.S./T.S.L.) and slide preparation of gymnospermous materials.

M.Sc. II Semester

Paper I: Taxonomy and Diversity of Plants

MBOII-A

After the completion of the course, the student will be able to -

- 1. Classification and interaction between taxonomy, anatomy embryology like various branches of botany and its role in taxonomy.
- 2. Different method and rules of naming plants and details of different principles of nomenclature etc.
- 3. Able to analyse the evolution of various system of classification from artificial to natural and phylogenetic system and its merits and demerits.
- 4. Critically analyse the role of fossil angiosperms the evolution of primitive advanced monocotyledonous and dicotyledonous families.
- 5. Will get to know about phyletic and phylogenetic relationship between families of angeosperms and their diagnostic features to identify and correlate.

Paper II: Molecular Biology

MBOII-B

After the completion of the course, the student will be able to –

- 1. Structure, replication of DNA, damage and repair of DNA.
- 2. Restriction mapping technique, Insitu hybridization techniques, microdissection and cloning of chromosomes and Instrumentation like cytometry and confocal microscopy.
- 3. Cis-trans test, RNA splitting ,regulation of gene expression and protein sorting.
- 4. Mutation, inherited human diseases and Robertsonian translocation.
- 5. Structure of protein, relationship between primary and higher order of structure and stability of protein.

Paper III: Plant Physiology

MBOII-C

After the completion of the course, the student will be able to -

- 1. Signal transduction, mechanism of signalling and the regulatory system in bacteria.
- 2. Plant response to various condition of stress and metal toxicity.
- 3. Sensory photobiology, Photophysiology, enzyme action, signalling responses.
- 4. Enzymes structure, allosteric mechanism, enzyme kinetics, Michaelis-Menteh equation.

Paper IV: Plant Metabolism

MBOII-D

- 1. Know historical landmark discovery and concepts of photosynthesis, understand the earlier experiments that led to the formulation of the modern education of Photosynthesis, cycle and non-cyclic ETS and Photo-phosphorylation along with various pathways of carbon fixation(C3,C4 and CAM pathways).
- 2. Able to know the biosynthesis of starch and sucrose.
- 3. Learn to explain fundamental processes involved in the various steps of aerobic and anaerobic respiration mechanism.

4. Able to know how lipids are synthesize and catabolic along with the knowledge of membrane lipid and structure lipid synthesis and storage.

Paper V: Lab Course I Based on Paper I and II

MBOII-E

After the completion of the course, the student will be able to –

- To know about the preparation of Herbarium specimen and maintenance of specimens.
- Use of Artificial key and identification of plants using FLORA.
- Morphological characterisation of plants.
- Quantification of DNA and RNA.
- Biochemical tests of plant materials.

Paper V: Lab Course II Based on Paper III and IV

MBOII-F

After the completion of the course, the student will be able to -

- Various plant physiological phenomenon related to plant water relation.
- Handling of physiological apparatus to determine transpiration, photosynthesis and respiration.
- Chromatography technique for the separation of pigments and amino acids.
- Impact of growth hormones on plants.
- Quantitative and qualitative estimation of organic compounds found in plants.

Course Outcomes: Anthropology

B.Sc.

Semester I: Introduction to Biological Anthropology

ANT101

After the completion of the course, the student will be able to know about –

- a. Various theories related to human evolution and variation. They will learn about the history of physical anthropology and its applications.
- b. About relationship between non-human and human primates. They will learn

about the origin of hominoid group, distribution and characteristic

of extinct hominids and the process of hominization.

- c. Some basic knowledge of genetics is also imparted through his paper.
- d. From the practical components they will understand craniometric measurements,

study various parts of human body which is useful in

studying evolutionary changes in modern humans.

Semester II: Introduction to Social-Cultural Anthropology

ANT201

After the completion of the course, the student will be able to know about –

- 1. About the scope and relevance of social-cultural anthropology in
- 2. relationship with other branches of anthropology.
- 3. About concepts of society, culture and social institutions.
- 4. About economic social and political organization.

- 5. Understand and describe basic concepts and methods of social-cultural
- 6. anthropology, along with its past and future.
- 7. Comparative study of culture and society of different ethnic groups. After the completion of the course, the student will be able to know about Evolution and distribution of human population.

Lab I ANTP101

The objective of this practical course is to introduce the students with the human skeletal system and its importance.

Lab II ANTP201

The objective of this practical course is to introduce the students with the human skeletal system and its importance and to learn anthropometric techniques used in living and non-living humans for assessment of ethnic variation. This will be helpful to make students skill-full for further anthological study and research.

Semester III- Archaeological Anthropology

ANT301

The course will enable the students to:

- 1. Use the Knowledge of archaeological research methods to make an original argument about past human cultures.
- 2. Understand the relationship between archaeological data and interpretation.
- 3. Identify some of the major global cultures, sites and archaeological discoveries.
- 4. Understand the role of anthropological inquiry in archaeology.
- 5. Have a better idea of a region or speciality for students to continue to focus on advance archaeological studies.

Semester IV-Tribal Culture of India

ANT401

- 1. The students will learn about various concepts of tribes and the importance of studying them.
- 2. They will learn about the difficulties of differentiating between tribe and caste in India.
- 3. They will also learn about the classification of tribes based on religion, economy, occupation, race etc.
- 4. From the practical component they will learn about the distribution of various categories of tribes in India and how to write an annotate and social structure of one of them.

5. They will be able to evaluate, plan and implement any project work in rural and tribal areas.

SEC

Semester III-Public Health and Epidemiology

ANT311

The course will enable the students:

- 1. To understand the basics of Community and Public Health.
- 2. To study the impact of nutrition and environment on Health.
- 3. To learn about common communicable and non-communicable diseases.
- 4. To get familiar with Health Programmes.
- 5. Studying the role of the International Health Organization in promoting Health.

Semester IV- Museology

ANT411

The course will enable the students:

- 1. To get basic knowledge of Museum.
- 2. To learn about the types and components of the Museum.
- 3. To learn methods of documentation, care and storage of museum collection.
- 4. To learn the methods of display, presentation and conservation of museum collection.

B.Sc.III

Paper I: Fundamentals of Human Genetics and Human Growth BSCIIIAN-A

After the completion of the course, the student will be able to know about –

1. Genetics and importance of growth, Ecology and Demography.

Paper II: Theories of Social Cultural Anthropology

BSCIIIAN-B

After the completion of the course, the student will be able to know about -

1. Cultural anthropology with different theories & contribution of famous Anthropologist in the field of social culture anthropology.

Practical Work BSCIIIAN-C

After the completion of the course, the student will be able to know about -

Somatometry genetics, Blood group Dermatographics and basic Statistical tools.

M.Sc. I Sem

Paper I – Fundamentals of Social/Cultural Anthropology

MANI-A

Upon successful completion of this subject the student will be able to know about:

- 1. The meaning scope and branches of Social-Cultural Anthropology.
- **2.** Relation of social anthropology with other science and social sciences.
- **3.** Some basic concept of culture and society.
- **4.** Social, economic and political organizations and religion in primitive society.

Paper II – Fundamentals of Physical/Biological Anthropology MANI-B

Upon successful completion of this subject the student will be able to know about:

- 1. The meaning, scope, branches of physical anthropology and its relation with other Sciences.
- 2. Theories of Organic evolution.
- 3. Comparative study of Man & Aps.
- 4. Concept of Race.

Paper III – Prehistoric Anthropology & Palaeo-Anthropology MANI-C

Upon successful completion of this subject the student will be able to know about:

- 1. The meaning, branches, aims and applications of Archaeology and its relation with other sciences and social sciences.
- 2. Cultural evolution of man during Paleolithic, Mesolithic stage and dating techniques are part of it.

Paper IV – Research methods in Anthropology

MANI-D

Upon successful completion of this subject the student will be able to know about:

1. Various tools and techniques used in research.

Lab Course I – Practical in Craniology and Craniometry MANI-E

Upon successful completion of this subject the student will be able to know about:

1. Study and measurement of skill is done in this paper.

Lab Course II- Practical in Osteology and Osteometry

MANI-F

Upon successful completion of this subject the student will be able to know about:

1. Study and measurement of bones is carried out in this paper.

M.Sc. IInd Sem

Paper I – Indian Archaeology

MANII-A

Upon successful completion of this subject the student will be able to know about:

- 1. Cultural Evolution during Poleolithic, Mesolithic, Neolithic and Chalcolithic period.
- 2. Indus civilization and megalith culture in India.

Paper II – Fundamentals of Human Genetics

MANII-B

Upon successful completion of this subject the student will be able to know about:

1. History, scope, branches and elementary principles of genetics.

2. Study of genes & Inheritance.

Paper III - Medical Anthropology

MANII-C

Upon successful completion of this subject the student will be able to know about:

- 1. Health, Illness and disease from a Social perspective.
- 2. Epidemiology, Health policy & programmes and Medical statistics.

Paper IV – Biostatistics & Computer Applications

MANII-D

Upon successful completion of this subject the student will be able to know about:

- 1. Measure of dispersion, correlation, test of significance, vital statistics.
- 2. Introduction to computer.

Lab Course I – Practicals in Archaeology

MANII-E

Upon successful completion of this subject the student will be able to know about:

1. Prehistoric tools & techniques and Prehistoric sites.

Lab Course II (Practical in Applied Biological Anthropology) MANII-F

Upon successful completion of this subject the student will be able to know about:

- 1. To estimate health status of the given population.
- 2. Personal Identification by different Blood Group Systems.
- 3. Equip students to some pathological techniques.
- 4. Knowledge of some techniques used in Forensic Anthropology.
- 5. Knowledge of genetical traits

M.Sc. III Semester

Paper-I Advanced Human Biology

MANIII-A

Upon successful completion of this subject the student will be able to know about:

- 1. To learn basics of genetics and genetic diseases
- 2. To Learn about inborn metabolic errors
- 3. To develop an understanding of inbreeding and its consequences, pedigree etc.

Paper-II Human Growth and Nutrition

MANIII-B

Upon successful completion of this subject the student will be able to know about:

- 1. To develop familiarity with the concept of growth and development
- 2. 2. To develop awareness reading various Health Programs
- 3. Learning about use of anthropometry in evaluation of nutrition status

Paper III: Disaster Management

MANIII-C

Upon successful completion of this subject the student will be able to:

1. To get introductory knowledge to students regarding disaster management, its meaning nature, scope and importance.

- 2. To learn about various types of natural and man-made disasters including deforestation and global warming
- 3. to understand issues related to Displacement and Rehabilitation of disaster victims.
- 4. to understand socio-political issues like ethnic conflict, naxalism, terrorism and its disastrous impact upon societal harmony.

Paper- IV Demographic Anthropology

MANIII-D

Upon successful completion of this subject the student will be able to:

- 1. give basic information about demography including its definition, scope and importance.
- 2. Learn about material, methods and techniques in Demography.
- 3. Learn about population growth theories and population projection
- 4. Understand the impact of population growth on environment and society

Lab Course I – Practical in Museum based Materials culture MANIII-E

Upon successful completion of this subject the student will be able to know about:

- 1. To estimate Nutritional Status on the Basis of Various Body Measurements
- 2. To estimate Genetic Inheritance of Different Genetic Traits among Human Population

Lab Course: II (practical's in Tribal Demography)

MANIII-F

Anthropology is a research-oriented subject with tribal's at its core. This practical provides a basic training to students in demographic studies. Upon successful completion of this subject:

- 1. Students learn about tribal distribution in India and Chhattisgarh through Maps.
- 2. Develop research skills by learning to prepare research schedule, report writing, book review.
- 3. Analyse demographic data through statistical tools like mean, mode, median standard deviation, correlation, chi square etc.
- 4. Present the data through graph, pie chart, histogram, bar diagram, line diagram etc.
- 5. Present research work through PPT.

M.Sc. IV Semester

Paper I: Indian Anthropology

MANIV-A

- 1. Introduction to Indian Anthropologists and their contribution
- 2. Understanding bases of Indian Social System
- 3. Learning about popular anthropological concepts

Paper II: Museology

MANIV-B

Upon successful completion of this subject the student will be able

- 1. To get an introduction to Museum and museography.
- 2. To learn documentation, care and storage of museum collection.
- 3. To learn about archival materials, their types, classification and storage.
- 4. Learn about tourism industry, cultural and natural heritage and related job opportunities.

Paper III: Applied Anthropology

MANIV-C

Upon successful completion of this subject the student will be able to know about:

- 1. To develop research aptitude among the students.
- 2. To familiarize with research tools and techniques.
- 3. To develop research skills
- 4. To gain exposure to field work experiences.
- 5. Promotes in-depth study of a specific topic of socio-cultural and biological interest.

Paper IV: Forensic Anthropology

MANIV-D

Upon successful completion of this subject the student will be able

- 1. To learn about definition, aims and scope of Forensic Anthropology.
- 2. Understand crime scene and assessment of time and course of death.
- 3. To learn about establishing age and sex related identity using skeletal, dental remains and dermatoglyphics. Personal identification through somatometric, somatoscopic observation, handwriting etc.

Paper V: Dissertation

MANIV-E

Course Outcomes: B.Sc. in Computer Science

Semester I: Fundamentals of Computers and Microsoft Word

CS101

This course will enable the students to:

- 1. Understand the basic computer hardware architecture and be able to design.
- 2. Fundamental logic circuits.
- 3. Understand the function of basic digital combinatorial circuits and sequential circuits.
- 4. Understand the fundamental hardware components that make up to a computer hardware and the role of each of these components.
- 5. Understand the role of CPU and its components.
- 6. Identify various input and outputs units and explain their purpose.
- 7. Gain knowledge of systems software and application software.
- 8. Essential for a modern office for day-to-day office management.

9. Learn about text formatting and editing using MS Word.

Semester I: Practical

CSP101

This course will enable the students to:

- 1. Understand the basic computer hardware architecture and be able to design.
- 2. Fundamental logic circuits.
- 3. Understand the function of basic digital combinatorial circuits and sequential circuits.
- 4. Understand the fundamental hardware components that make up to a computer hardware and the role of each of these components.
- 5. Understand the role of CPU and its components.
- 6. Identify various input and outputs units and explain their purpose.
- 7. Gain knowledge of systems software and application software.
- 8. Essential for a modern office for day to day office management.
- 9. Learn about text formatting and editing using MS Word.

Semester II: Programming in 'C'

CS201

Upon successful completion of this course the student will be able to-

- 1. Understand basic techniques of C-language.
- 2. Understand the concepts of pointers and decision making, loop statements.
- 3. Be able to use an array to store multiple pieces of homogeneous data
- 4. Be able to use various operators in program
- 5. Develop programming skills in C

Semester II: Practical

CSP201

This course will enable the students to:

- 1. Understand basic techniques of C-language.
- 2. Understand the concepts of pointers and decision making, loop statements.
- 3. Be able to use an array to store multiple pieces of homogeneous data
- 4. Be able to use various operators in program
- 5. Develop programming skills in C

SEC

Semester III- Fundamentals of Computers

CS311

This course will enable the students to:

- 1. Understand the meaning and basic components of a computer system.
- 2. Discuss the advantages, limitations and applications of computers.
- 3. Identify the various inputs and output units and explain their purpose.
- 4. Essential for a modern office for day-to-day management.
- 5. Learn about text formation and editing using MS Word.
- 6. Learn how to do effective presentation using MS Power Point.

Semester III- Introduction to Internet and e-Commerce

CS411

This course will enable the students to:

- 1. Students will be able to learn uses and advantages of internet.
- 2. Learn how to establish connection of computers through internet.
- 3. Learn about www, web standard, protocols, email etc.
- 4. Understand the basic concepts of E-commerce.
- 5. Demonstrate an retailing in E-commerce by using the effectiveness of market research.
- 6. Describe internet trading relationships including Business to Consumer, Business to Business and Intra- organisational.

Course Outcomes: B.Com I

Semester I

Paper I: Financial Accounting

COM101

Upon successful completion of this subject the student will be able to know about:

- **1.** Apply the generally accepted accounting principles while recording transactions and preparing financial statement
- **2.** Prepare final accounts including profit and loss account and balance sheet.
- **3.** Evaluate the importance of depreciation in financial statement.
- **4.** Prepare financial statements of partnership firms.
- 5. Prepare accounts of inland branches
- **6.** Prepare accounts for profit organisations
- 7. Prepare cash book and other accounts necessary while running a business.

Paper II: Macro Economics

COM102

Upon successful completion of this subject the student will be able to:

- 1. Explain the basic concepts related to national income, employment, savings, investments monetary theory, savings and investment function.
- **2.** Measure National Income and examine the problems related to measurement of national income in context to India.
- **3.** Examine how an economy functions. Evaluate the role of consumption, saving and investment in an economy.
- **4.** Evaluate the impact of various economic phenomena like inflation and deflation.
- **5.** Explain concepts like business cycle, multiplier, accelerator and demonetization.

Paper III: Business Law

COM103

Upon successful completion of this subject the student will be able to:

- 1. Examine various aspects of entering into a contract and implications of different types of contracts
- 2. Interpret the regulation governing the contract of sale of Goods
- **3.** Discuss the laws governing partnership and legal consequences of their transactions and other actions in relation with the partnership and examine contractual obligations and provisions governing limited liability partnership
- **4.** Describe the significant provisions of the competition act to prevent practices having adverse effect on competition and provision of the consumer protection act to protect the interest of the consumers.
- **5.** Explain the law governing regulation and management of foreign exchange under FEMA.

Semester II

Paper I Business Mathematics

COM201

Upon successful completion of this subject the student will be able to gain:

- **1.** Explain how matrix are used as mathematical tools in representing a system of equations
- 2. Describe relationship between quantity, price and other variables such as income by using simultaneous equation
- **3.** Present data in simple, summarized and comparison form by using average, ratio, proportion and percentage
- **4.** Apply mathematical formulation and solution of problems related to finance including different methods of interest calculation, future and present value of money.
- **5.** Solve business problems involving complex linear and non-linear relationships between decision variables and their determining factor.

Paper II: Business Organisation and Management

COM202

Upon successful completion of this subject the student will be able to know about:

- 1. Distinguish and explain each form of business.
- 2. Prepare draft of article of association and memorandum of association for a business
- 3. Explain principles and functions of management implemented in the organisation
- 4. Identify and explain the managerial skills used in business
- 5. Analyse the concept of delegation of authority, coordination and control

Paper III: Communication and Documentation in Business

COM203

Upon successful completion of this subject the student will be able to:

1. Realize the significance of effective communication in business

- 2. Learn business vocabulary and understand varied ways/methods to present business plans
- 3. Gain knowledge on drafting of official letters and documents
- 4. Develop appropriate skills for report writing and different ways of documentation
- 5. Explain the role of information technology for enabling business communication and documentation.

Course Outcomes:

B.Com I Commerce (Computer Application)

Semester I: Fundamentals of Computers and Office Automation COMCA101

Upon successful completion of this subject the student will be able to learn:

- 1. Understand the meaning and basic components of a computer system.
- 2. Discuss the advantages, limitations and applications of computers.
- **3.** Identify the various input and output units and explain their purpose.
- **4.** Essential for a modern office for day-to-day office management.
- 5. Learn about text formatting and editing using MS Word.
- **6.** Learn how to do effective presentation using MS Power Point.

Semester II: Computer Software and Office Automation and Tally COMCA201

Upon successful completion of this subject the student will be able to know about:

- 1. Gain knowledge of systems software and application software.
- **2.** Understand the primary functions of an operating system.
- **3.** Use of utility programs.
- **4.** Understand how the calculation will be done with MS Excel.
- **5.** Learn How to apply various mathematical functions and formatting option in MS Excel.

Semester III- Business Statistics

COM301

The course will enable the students to:

- 1. Develop the ability to analyze and interpret data to provide meaningful information to assist in management decision-making activities.
- 2. Apply appropriate graphical and numerical descriptive statistics for different types of data.
- 3. Apply probability rules and concepts relating to discrete and continuous random variables to answer questions within a business context.
- 4. Explain and interpret a variety of hypothesis tests to aid decision making in a business context.
- 5. Use simple /multiple regression models to analyze the underlying relationships between the variables.

Semester III- Corporate Law

COM302

The course will enable the students to:

- 1. Understand relevant definitions and provisions relating to the issue of prospectus and allotment of shares.
- 2. Synthesize company processes, meetings and decisions.
- 3. Determine the role of the board of directors and their legal position.
- 4. Describe the framework of dividend distribution, Accounts of the company and Audit and Auditors of the company.
- 5. State regulatory aspects involved in Oppression, Mismanagement, Corporate restructuring and winding up and to study the composition of Adjudicating Authority i.e. NCLT and NCLAT and its powers.

Semester III- Cost Accounting

COM303

The course will enable the students to:

- 1. Determine various types of cost of cost of production.
- 2. Compute unit cost and total cost of production and prepare cost statement.
- 3. Compute employee cost, employee productivity and employee turnover.
- 4. Determine cost under job costing, batch costing, process costing, contract costing and service costing.
- 5. Apply activity-based costing for cost determination.

Subject : Commerce with Computer Application Semester III- Introduction to Internet and E-Commerce

COMCA301

On completing the course the students will able to:

- 1. learn the uses and advantages of the Internet.
- 2. Learn how to establish connections of computers through the internet.
- 3. Learn about www, web standards, protocols, E-mail etc.
- 4. Understand the basic concepts of e-commerce.
- 5. Demontrae n retailing in E-commerce by using the effectiveness of market research.
- 6. Describe internet trading relationships including Business-to-consumer, Business-to-Business, and intra-organisational.

Semester IV- Corporate Accounting

COM401

On completing the course the students will able to:

- 1. Describe the rationale, merits, and demerits of issuing bonus shares for a company.
- 2. Prepare financial statements (Profit and loss account, Balance Sheet etc.)
- 3. Prepare a balance sheet after the Internal Reconstruction of the company.
- 4. Analyze the case study of major amalgamations of companies in India.
- 5. Describe the process of e-filing of annual reports of companies.

Semester IV- Entrepreneurship development

COM402

On completing the coursethe students will able to:

- 1. Discern distinct entrepreneurial traits.
- 2. Identify the parameters to assess opportunities and constraints for new business ideas.
- 3. Develop a business idea by adopting a systematic process.
- 4. Design strategies for successful implementation of ideas
- 5. Create a business plan

Semester IV- Business Economics

COM-403

Upon successful completion of this subject the student will be able to:

- 1. Analyze causes and consequences of unemployment, inflation and economic growth.
- 2. Analyze operations of markets under varying competitive conditions.
- 3. Analyze the demand & supply conditions and access the position of a company.
- 4. Apply effective written and oral communication skills in business.

Subject: Commerce with Computer Application Semester IV-Relational Database Management System

COMCA-401

Upon successful completion of this course, the student will be able to:

- 1. Define basic database.
- 2. Understand the different issues involved in the design and implementation of a database system.
- 3. Study the physical and logical database modelling.
- 4. Understand and use data manipulation language to quarry, update and manage a database.
- 5. Develop an understanding of essential DBM concepts such as database security, integrity and concurrency.

B.ComIIIrd Year

Core Course (Compulsory Group)

Paper I: Income Tax

BCOMIII-IT

Students can get the good basic practical knowledge of Income tax to develop the skill and techniques use in business and accounting.

Paper II: Indirect Taxes with GST

BCOMIII-GST

Upon successful completion of their course a student will be able to-

- 1. Analyze indirect taxes such as central excise duty, customs duty, state excise duty etc.
- **2.** Learning the procedure of filing returns.

3. Learning the computation of various indirect taxes.

Paper III: Management Accounting

BCOMIII-MA

Students can get good basic knowledge with skill concept of accounting and managerial decision about entrepreneurship.

Paper IV: Auditing

BCOMIII-AU

Upon successful completion of the requirements for this course student will be able to:

- **1.** Discuss the need for an independent or external audit and describe briefly the development of the role of the assurance provider in modern business society.
- 2. Explain the regulatory environment in which the external auditor operator and apply rules standards and pronouncement to the conduct of a financial report audit and assurance engagements.
- 3. Perform and apply professional ethics including code of conduct to specific scenario.
- **4.** Describe the various level of persuasiveness of different types of audit evidence.
- **5.** Understand auditor's legal liabilities and to be able to apply case law is making a judgment whether auditors might be liable to certain parties.
- **6.** The course aims to develop student cognitive skills, especially, analytical, appreciative and communication skill.

Optional Group

Paper I: Principles of Marketing

BCOMIII-PM

Upon successful completion of this course a student will be able to:

- **1.** Use an understanding of marketing and the market driven enterprise to differentiate market, enterprise.
- **2.** Market economy as a foundation for future course work and employer selection.
- **3.** Identify some of the basic approaches to formulating a market strategy in order to participate effectively when working with marketing policy coordinators.
- **4.** Identify key stages of the market planning process in order to create marketing plan through development of key sections common to most plan.
- **5.** Use knowledge of element of the marketing mix and the functional disciplines of marketing such as research and marketing communication in order to guide future course selections.
- **6.** Use understanding of both the product marketing life cycle including professional role and responsibilities within the life cycle to guide marketing career and identify key stake holders in the business work place.

Paper II: International Marketing

BCOMIII-IM

Upon successful completion of this course a student will be able to:

- 1. Beware of the differences between domestic marketing and international marketing.
- 2. Understand how culture affects marketing abroad.
- **3.** Understand the concept of global market.
- **4.** Understand how business customs and motivations may vary from country to country.
- **5.** Develop presentation and writing skills.
- **6.** Work as a team.

B.Com III

Subject: Commerce (Computer Application)

Paper I: Programming in Visual Basic

BCOMIII-PVB

Upon successful completion of this course a student will be able to:

- 1. Demonstrate fundamental skills in utilizing the tools of visual environment in terms of the set available command menus and toolbars.
- 2. Explain and use of delegates and event for producing event-driven application.
- 3. Implement SDI and MDI applications while using forms, dialogs and other types of GUI components.
- 4. Produce and use specialized new GUI components.
- 5. Explain message passing mechanism between components and threads using messaging.
- 6. Apply visual programming to software development by designing projects with menus and submenus.

Paper II: System Analysis, Design &MIS

BCOMIII-SAM

Upon successful completion of this course a student will be able to:

- **1.** Gather data to analyze and specify the requirements of a system.
- 2. Design system components and environments.
- **3.** Describe the system design tools.
- **4.** Describe the role of maintenance task in the system development life cycle.

Practical: In Computer Applications

BCOMIII-PCA

M.Com I Sem

Paper I: Managerial Economics

MCOMI-A

Upon successful completion of this course a student will be able to:

- 1. Understand the roles of managers in firms.
- 2. Understand the internal and external decision to be made by managers.
- **3.** Analyze real world business problems with a systematic theoritical frame work.
- **4.** Analyze the demand & supply conditions and assure the position of a company.

Paper II: Advanced Accounting

MCOMI-B

Upon successful conclusion of advanced accounting i will have out -lined the following topic areas.

- **1.** An introduction to business combination concepts and definition.
- 2. An introduction to consolidated Financial Statements and the consolidation process.
- **3.** The liquidation process of companies
- **4.** An introduction to Global Accounting Standards and Diversity.

Paper III: Income Tax Law and Accounting

MCOMI-C

Students can get the advance practical knowledge of Income Tax Law and provision to develop the skill and techniques use in different area of business income and accounting.

Paper IV: Statistical Analysis

MCOMI-D

Upon successful completion of this course a student will be able to:

- **1.** Learn a general system of concept for statistical analysis.
- **2.** Gain Knowledge of data collection techniques.
- 3. Study both theory and practice in depth in certain specific areas.
- **4.** Gain Knowledge of the basic concept of probability and random variable.
- **5.** Gain Knowledge of probability distributions.

Paper V: Corporate Legal Framework

MCOMI-E

Upon successful completion of this course a student will be able to:

- 1. Appreciate the importance of law and legal institutions in business.
- 2. Have a basic understanding of the law relating to contract, consumer protection, competition, companies and dispute resolution.

M.Com II Sem

Paper I: Business Economics

MCOMII-A

Upon successful completion of this subject the student will be able to:

- 1. Analyze causes and consequences of unemployment, inflation and economic growth.
- 2. Analyze operations of markets under varying competitive conditions.
- 3. Analyze the demand & supply conditions and access the position of a company.
- 4. Apply effective written and oral communication skills in business.

Paper II: Specialized Accounting

MCOMII-B

Upon successful completion of this course a student will be able to learn:

- 1. Business combination concepts and definition.
- **2.** Segment and interin reporting.
- **3.** Importance of ethical behavior in business.

Paper III: Tax Planning & Management

MCOMII-C

Students can get the advanced practical knowledge of income tax law and provision. to develop the capacity for computation income tax liabilities and pay planning at personal & professional level.

Paper IV: Advanced Statistics

MCOMII-D

Upon successful completion of the course a student will be able to-

- 1. Study both theory and practice in depth in certain specific areas.
- **2.** Knowledge of statistical decision theory.
- **3.** Knowledge of statistical techniques covered will include Z tests, T tests, F tests.
- **4.** Knowledge of Statistical quality control and Sampling method.
- **5.** Students learn interpolation and extrapolation method.

Paper V: Business Law

MCOMII-E

Upon successful completion of business law course a student will be able to-

- 1. Demonstrate an understanding of the legal environment of business.
 - 2. Apply basic legal knowledge to business transactions.
 - 3. Communicate effectively using standard business and legal terminology.

M.Com III Sem

Paper I: Management Concept

MCOMIII-A

Upon successful completion of this course the student will be able to-

- **1.** Learn their own managerial skills.
- **2.** Learn from the management experience of other.
- **3.** Improve communication skills.
- **4.** Develop and learn about goals specific to the students of this class.
- **5.** Use management thought to develop a better understanding of motivation.

Paper II: Organizational Behaviour

MCOMIII-B

Upon successful completion of this course a student will be able:

- 1. To discuss the development of the field of organizational behavior and explain the micro and macro approaches.
- **2.** To analyze and compare different model used to explain individual behavior related to motivation and rewards.
- 3. To identify the process used in developing communication and resolving conflicts.

- **4.** To explain group dynamics and demonstrate skills required for working in groups (team building).
- **5.** To identify the various leadership style and the role of leader in a decision making process.
- **6.** To explain organizational culture and describe its dimensions and to examine various organizational designs.
- 7. To discuss the implementation of organizational change.

Paper III: Advanced Cost Accounting

MCOMIII-C

Upon successful completion of this course a student will be able to:

- 1. Apply cost accounting theory to problem solving.
- 2. Analyze data and prepare cost of production reports for process costing.
- 3. Prepare cost of goods manufactured statement.
- 4. Explain the terminology basic concept and Principles of Cost Accounting.
- 5. Analyze transactions and prepare accounting entries for job costing and process costing.

Paper IV: Management Accounting

MCOMIII-D

Upon successful completion of this course a student will be able to: Various uses of financial accounting to get the quality oriented decisions for betterment of business.

Paper V: Accounting for Managerial Decisions

MCOMIII-E

Upon successful completion of this course a student will be able to:

For the development of business in new area or the change of business subject will support in taking financialdecisions logically.

M.Com IV Semester

Paper I: Principles of Marketing

MCOMIV-A

Upon successful completion of this course a student will be able to:

- 1. Assess marketing's role in discovering and satisfying consumers needs, wants and behaviors.
- 2. Determine market size through a target market analysis.
- **3.** Utilize environment scanning to identify opportunities and threats in the marketing environment.
- **4.** Examine electronic commerce and interactive marketing and how they create customer value.

Paper II: Advertising & Sales Management

MCOMIV-B

Upon successful completion of this course a student will be able to:

- 1. Develop effective marketing communication strategies and program.
- **2.** Understand the implications of current trends in advertising and promotion.

- **3.** Assess the strengths, weakness, opportunities and threats (SWOT) of different kinds of promotional campaigns.
- **4.** Apply marketing communication functions such as advertising, direct marketing, the Internet interactive media and Sales Promotion.

Paper III: Marketing Research

MCOMIV-C

Upon successful completion of this course a student will be able to:

Get the advanced practical knowledge & research work of marketing development, consumer behaviours and marketing skill techniques used in different areas of business.

Paper IV: International marketing

MCOMIV-D

Upon successful completion of this subject the student will be able to:

- 1. Differentiate between domestic marketing and international marketing.
- **2.** Understand the concept of global marketing.
- **3.** Develop presentation and writing skills.

Paper V: Project Viva

MCOMIV-E

Upon successful completion of this subject the student will be able to: Know about the business and Management Practice.

B A/B Sc/B Com

Subject: Environmental Studies

Semester I: Natural Resources, Ecosystem and Biodiversity

EVS101

This course will enable the student to be:

- 1. Aware about environment.
- 2. Aware about Natural Resources and their conservation.

Semester II: Environmental Pollution, Issues, Management and Fundamental Rights EVS201

This course will enable the student to:

- 1. Aware about environment.
- 2. Aware about Fundamental Right.

B.A. /B.Com./B.Sc.

Subject: NCC

Semester I: NCC: Organisation and Community Development NCC101

The students will develop a sense of responsibility and thereby display sense of patriotism, secular values, disciplines, improve bearing and develop the quality of immediate and implicit obedience of good things which will help to mould them a good citizen of the country.

Semester II: Personality Development and Social Service

NCC201

The students will be able to enhance their physical, mental and emotional personality and become more confident towards there public life and learn good etiquettes.

Practical I: NCCP101

- 1. Foot drill: General and words of command, attention, stand at ease, turning: Left turn, Right turn, About turn, Sizing, Forming up in threes, Numbering, Dressing of Troupe, Khuli line, Nikat line, Saluting Pattern in army, Navy and Air Force, Falling out and Dismissing.
- 2. Group Discussion on current topics and issues, Public peaking/ Extempore, First Aid: Bandages and CPR.

Practical II: NCCP201

- 1. Foot drill: Khade khade salute karna, pared pr visarjan, agli line, madhy line and pichli line se line todna, tejchaltham and dhirechaltham, dahine Bayen, aage our pihe kadam lena, tejchal se mudna, tejchal se salute karna, tej kadam tal our tham ,tej kadam tal se kadam badalna, teeno teen se ek file our ek file se teeno teen banana., dahinesaj our dhanhine se saj.
- 2. Group Discussion on current topics and issues, Publicspeaking/ Extempore, NCC and Defence based Quiz and IQ Exercises.

Semester III - Leadership & Disaster Management

NCC-301

The students will be able:

- 1. To enhance their Leadership skills
- 2. To enhance their Leadership traits
- 3. Tobe versed in the management skills of natural as well as manmade disasters.

Practical NCCP301

The students will be able to do:

- 1. Foot Drill: Platoon formation, Platoon commander duty, POC of Platoon commander, Platoon ko sajkarwana, Platoon ka nirikshankarwana, pared commander ko report banana.
- 2. Identification of fire extinguisher, fire-fighting practice/ Public speaking/ Extempore, NCC and defence-based guiz and IQ exercises.

Semester IV – General & Environmental Awareness

NCC-401

The student will be able:

- 1. to enhance their knowledge about various types and parameters of the environment.
- 2. To be versed in the conversation practices of the environment.

Practical NCCP401

The students will be able to do:

- 1. Foot Drill: Marching. POC, dahinedekh, samnedekh, bayendekh, samnedekh, chaltechaltepichemudh, chaltechalte salute karna, Proper March past.
- 2. Environmental Awareness/ Conversation Activity.

Course Outcomes:

LL.B Part I (I Semester)

Subject: Law

Paper I: Jurisprudence & Legal Theory

LL.B.-101

On Successful completion of this course Students will be able to –

- 1. Demonstrate an advanced understanding.
 - 2. Demonstrate "Law in context of Political, Social, Historical, Natural Philosophical, economical and analytical.
 - 3. Demonstrate various legal concepts such as property, Rights and duties, person, Possession, ownership, title, obligation and liability which are the roots of law.
 - 4. Understand ancient and modern source of Law.
 - 5. Demonstrate briefly "Knowledge of Law"
 - 6. Critically analyze complex problems relating to law and legal theory.
 - 7. Engage in identification articulation and Critical evaluation of legal theory and legal concepts.
 - 8. Have an elementary understanding around the nature of Law.

Paper-II: Law of contract & Specific relief Act 1963

LL.B.-102

On Successful completion of this course Students will be able to –

- 1. Able to define, distinguish and apply the basic concepts and terminology of law of contract.
- 2. Able to Know how a contract formed performed, breached and remedied.
- 3. Able to define various processes involved in valid contract formation

- 4. Able to identify the relevant legal issues in the area of supplementary contract Laws such as sale of goods, partnership. Negotiable instrument, specific performance issues etc.
- 5. Able to select a range of approaches to written communication and apply the critical thinking required to bring about creative solution in the area of contract law.

Paper-III: Specific contract, Indian Partnership Act 1932 & Sale of Goods Act 1930 LL.B.-103

On Successful completion of this course Students will be able to –

- 1. Able to define, distinguish and apply the basic concepts and terminology of law of contract.
- 2. Able to Know how a contract formed performed, breached and remedied.
- 3. Able to define various processes involved in valid contract formation
- 4. Able to identify the relevant legal issues in the area of supplementary contract Laws such as sale of goods, partnership. Negotiable instrument, specific performance issues etc.
- 5. Able to select a range of approaches to written communication and apply the critical thinking required to bring about creative solution in the area of contract law.

Paper IV: Law of Torts including Motor Vehicle Act & Consumer Protection Laws LL.B.-104

On Successful completion of this course Students will be able to –

- 1. To Study the Principles of Tortious liability.
- 2. To Study the capacity of parties to sue and be sued.
- 3. To evaluate the specific tort against the individual and property.
- 4. To study the remedies provided under the Consumer Protection Act 1986 and Motor Vehicle Act.

Paper-V: Legal and Constitutional History of India

LL.B.-105

On Successful completion of this course Students will be able to –

- 1. To Understand the historical development of Law in ancient period medieval and British Period.
- 2. To understand the development of legal institutions, Law commission, Juridical Institutions and constitution of India.
- 3. To know the past of the present legal and judicial system.

LL.B Part I (II Semester)

Paper I: Law of Crime I (Indian Penal Code-1807)

LL.B.-201

On Successful completion of this course Students will be able to –

- 1. Analyze the concept of crime and punishment with reference to structure of society.
- 2. Suggest the amendments regarding justice according to the changing needs of the society.
- 3. Indentify Criteria used to evaluate the Criminal Law of India.
- 4. Indentify social theory about Crime, Justice and Social deviance.
- 5. Address various obstacles experienced by individuals before during and after internment.
- 6. Understand and describe areas of criminal justice, law and society through a critical analysis of the subject.
- 7. Analyze lacunas within the criminal justice system and suggest the amendments to provide the justice according to the changing needs of the society.
- 8. Summarize the process of judicial review and identify criteria used by courts to evaluate the constitutionality of criminal law of India.
- 9. Indentify and synthesize social theory about crime, justice and social deviance that explain and address various obstacles and barriers experienced by individual before, during and after internment.
- 10.Problem solve complex issues in the criminal justice system and society related to policy, law enforcement, vulnerability and marginalization.

Paper II: Law of Crimes II Criminal Procedure code, Juvenile Justice Act and Probation of offenders Act LL.B.-202

At the end of the course a student will be able to understand.

- 1. To illustrate how society views about procedure of courts such as FIR, Bail etc
- 2. Demonstrate an in depth understanding of the aspects of criminal justice.
- 3. Indentify the principles of Criminal law with present scenario.
- 4. Students will understand importance of criminal procedure followed by criminal courts.
- 5. It is explain procedure from arrest till trial and punishment.
- 6. It is important legislation which gives practical knowledge to students.
- 7. It also covers the provision of appeals revision etc.
- 8. It explains hierarchy of criminal courts.

Paper III: Law of Evidence

LL.B.-203

- 1. Analyse and define the concept and general nature of evidence and illustrate the different types of evidence and court procedure relating to evidence.
- 2. Analyse the rule relating to relevance of evidence and admissibility of evidence before the court.
- 3. Evaluate the rules relating to dying declaration and admissibility of dying declaration

Paper-IV: Family Law – I (Hindu Law)

LL.B.-204

On Successful completion of this course Students will be able to –

- 1. Students learn about basic concept about religious and legal custom like marriage as a religious sacrament, divorce, parental custody, domestic abuse, succession.
- 2. Family law examines historical and social circumstances that have influenced the modern regulations of families.
- 3. This study gives examples of difference

Paper-V: Family Law – II (Mohammedan Law)

LL.B.-205

On Successful completion of this course Students will be able to –

- Family law examines and compares other personal law.
- Students learn about basic concepts of Muslim culture like marriage as a contract, Meher, Talaq, Hiba, Succession, Marzul maul, wakf based on religious text Quran.

LL.B Part II (I Semester)

Paper I: Constitutional Law –I

LL.B.-301

- 1. Students graduating with constitutional law understand the world, their country & their society.
- 2. Relation between Government and citizen.
- 3. Learn their rights and duties towards nation as well as theme-selves.
- 4. Have awareness of social rights, values and responsibility to the self and to others.
- 5. Understand different disciplines.
- Students will be able to indentify Constitutional concept and theories related to fundamental rights, duties, directive principles of state police and constitutional remedies.
- 7. Students will be able to integrate three main pillars of the Nation Judiciary, executive and legislature.

8. Students will be able to evaluate social welfare and interrelationship between fundamental rights and directive Principles through interpretation.

Paper II: Constitutional Law -II

LL.B.-302

On Successful completion of this course Students will be able to –

- 1. Students graduating with constitutional law understand the world, their country & their society.
- 2. Relation between Government and citizen.
- 3. Learn their rights and duties towards nation as well as theme- selves.
- 4. Have awareness of social rights, values and responsibility to the self and to others.
- 5. Understand different disciplines.
- 6. Students will be able to indentify Constitutional concept and theories related to fundamental rights, duties, directive principles of state police and constitutional remedies.
- 7. Students will be able to integrate three main pillars of the Nation Judiciary, executive and legislature.
- 8. Students will be able to evaluate social welfare and interrelationship between fundamental rights and directive Principles through interpretation.

Paper III: Administrative Law and Rights to Information Act 2005 LL.B.-303

On Successful completion of this course Students will be able to –

- 1. Administrative law is mainly a judge made law and has secured its present features through a myriad of judicial decisions. Students got a deep knowledge of the operation and changing phenomenon of these standards from a comparative angle.
- 2. The ever increasing number of delegated legislation in the form of rules, regulation, circulars and general orders has the characteristic of law, that though framed by administration, impose burden on the rights of citizens.
- 3. Analyze the scope of review of delegated legislation and the limitations of the judicial review of administration action, the Principle of Natural Justice also have studied in details in this course.

Paper IV: Law of Equity and Trust Act 1882

LL.B.-304

On Successful completion of this course Students will be able to –

- 1. To understand the ancient law of equity and its use in Indian context.
- 2. To gain the knowledge about the law of trust in India and its implementation

Paper V: Professional Ethics and Professional Accounting System (Practical) LL.B.-305

- 1. Demonstrate Personal and organizational entrepreneurship.
- 2. Engage in lifelong learning in Profession.
- 3. To Understand Bar-Bench relation and Accountancy for lawyers.
- 4. To give students as insight into moral decision making in the legal profession.

- 5. To know Lawyers aim to win at costs.
- 6. To balance duties towards their clien,t courts, judges, society and to themselves.

LL.B Part II (II Semester)

Paper I: CG Land Revenue Code and other local laws

LL.B.-401

Students graduating with C.G. Land revenue Code and other local laws.

- 1. To understand the land Revenue system in urban and non urban area.
- 2. To understand Bhumiswami, Diversion of Land and Government lessee.
- 3. To understand the various concept of Revenue Court and their Procedure.
- 4. Understand and describe legislative power to make laws relating to land and land ceiling is in the state list.
- 5. Different state have enacted their own laws on this subject and the application of these laws is varied from state to state.
- 6. The Constitutional perspectives relating to these subject have to be taught as an essential part of this course.
- 7. Problem solving complex issues in the land related matters and society related to policies, law enforcement, government bindings etc.

Paper II: Environmental Laws including Wild Life Protection and Animal Welfare LL.B.-402

Students who has taken admission for this course will be able to:

- 1. Analyse advanced and integrated understanding of the complex body of knowledge in the field of environmental law
- 2. Develop the capacity to identify new law and apply existing law in the rapidly evolving legal context of environmental law
- 3. Understand in depth knowledge of the specialised area of environmental law and associated disciplinary areas.
- 4. Determine and analyze the different causes of population and legal remedies to control it on national level.
- 5. Analyzed and evaluate laws relating to environmental aspect on a national level and its comparison with other countries.

Paper III :Labour& Industrial Laws I

LL.B.-403

Students graduating with Labour Laws will be able to :-

- 1. Resolve the labour welfare problem and students will learn the laws relating to industrial Relations, Social Security, private sector wages problem etc.
- 2. Working conditions and also learns the enquiry procedural and industrial discipline.
- 3. Development and the judicial setup of Labour Laws.
- 4. The salient features of industrial dispute and trade union power and function also to integrate the knowledge of labour laws in General HRD Practice.
- 5. The Laws relating to Industrial Relations, Working conditions and also learns the enquiry procedure and industrial discipline.

Paper IV: Labour & Industrial Law II

LL.B.-404

Students graduating with Labour Laws will be able to :-

- 1. Resolve the labour welfare problem and students will learn the laws relating to industrial Relations, Social Security, private sector wages problem etc.
- 2. Working conditions and also learns the enquiry procedural and industrial discipline.
- 3. Development and the judicial setup of Labour Laws.
- 4. The salient features of industrial dispute and trade union power and function also to integrate the knowledge of labour laws in General HRD Practice.
- 5. The Laws relating to Industrial Relations, Working conditions and also learns the enquiry procedure and industrial discipline.

Paper V: Alternative Dispute Resolution (Practicals)

LL.B.-405

Students graduating with 'Arbitration, Conciliation and Alternative Disputes Resolution Systems will be able to :

- 1. Familiarize with the modalities and techniques of resolution of conflict which is a necessary component in the endeavours of developing expertise in juridical exercise.
- 2. To understand and analyse the traditional justice delivery system through adjudication by along with an alternative mode of dispute resolution in the common law countries.
- 3. To approach the processes of arbitration, conciliation and mediation in areas where the traditional judicial system has its way in the past and in the new areas of conflicts that demand resolution by alternative methods.
- 4. Students to adopt a comparative approach, drawing on the experiences of many societies and jurisdictions in a large number of which, entrenched approaches to dispute handing are now under radical re-examination
- 5. Balancing theoretical and practical concerns, the principal areas of discourse and practice that the students will come to understand are the processes of negotiation and mediation.
- 6. The students will understand these processes in their own rights and also in the context of the emergence of new types of dispute resolution professional, who offer mediation and other services as alternatives of the lawyer often preferred practice of late settlement through litigation.

LL.B Part III(I Semester)

Paper I: Company Law

LL.B.-501

By the end of this course it is expected that the student will be able to:

- 1. Explain and apply to various fact scenarios the concept of separate legal entity.
- 2. To explain the basic documents such as MOA and AOA required for company.
- 3. To develop the ability to identify and effectively use the corporate law resources and to develop the ability to learn company law both independently and cooperatively in a professional environment.

4. To evaluate and analyse socially reasonable corporate behaviour.

Paper II: Public International Law

LL.B.-502

On successful completion of the course students will be able to:

- 1. Demonstrate knowledge and understanding of the international rights frame work, its origins and justifying theories
- 2. Demonstrate capacity to assess how specific human rights may be asserted, enforced or violated
- 3. Critically evaluate the relationship between international and domestic law.

Paper III: Interpretation of statutes

LL.B.-503

Students graduating with 'Interpretation of Statute & Principles of Legislation' will be able to:

- 1. Know what are the techniques adopted by courts in construing statutes? And the importance of the Law making process in the present context.
- 2. What are the matters to be reckoned with by legislature while enacting laws?
- 3. Understand and analyze the judicial interpretation, construction of words, phrases and expressions

Paper IV: Human Rights Law

LL.B.-504

On Successful completion of the course students will be able to:

- 1. Demonstrate knowledge and understanding of the human rights framework, its origins and justifying theories
- 2. Demonstrate capacity to assess how specific human rights may be asserted, enforced or violated.
- 3. Critically evaluate the relationship between international and domestic law on human rights.

Paper V: Moot Court exercise and Internship (Practicals)

LL.B.-505

On Successful completion of the course students will be able to:

- 1. Understand how to prepare a suit and how to file
- 2. Know the practical approach of the law course.
- 3. Get the practical training to make the career bright

LL.B Part III (II Semester)

Paper I: Transfer of Property Act and Easement Act

LL.B.-601

On Successful completion of the course students will be able to:

1. Analyse and define the concept and nature of transfer of immovable properly, and illustrate the different types of transfer and rules relating to it.

- 2. Analyse the rule relating to transfer of property within two living persons and the consequences of it
- 3. Evaluate the rules relating to general transfer of immovable property.
- 4. Determine and analyse the rules of sale of immovable property and rights and liabilities of seller and buyer.
- 5. Analyse and evaluate the rules governing Mortgages, Leases, Exchanges, Gift and Actionable Claims rights and liabilities to transferor and transferee.
- 6. Analyse and evaluate the rules relating concept of easement and kinds of easement and rights and liabilities of transferor and transferee.

Paper II: Civil Procedure Code and Limitation Act

LL.B.-602

On Successful completion of the course students will be able to:

- 1. Know the details procedure for redressal of civil rights.
- 2. Understand, where the suit is to be filed? The essential forms and procedure for institution of suit the documents in supports and against, evidence taking and trail, dimensions of an interim. Order, the peculiar nature of the suit, the complexities of executing a decree and provision for appeal and revision are all matters which a lawyer for any side is to be familiar with.
- 3. To have good grounding in the subject before one enters the profession.

Paper III: Law of Taxation

LL.B.-603

On Successful completion of the course students will be able to:

- 1. This subject provides an introduction to, and overview of, fundamental concepts of income tax law.
- 2. Employ a broad understanding of tax law.
- 3. Conduct tax law research by using research skills to interrogate primary and secondary legal material and analyse and synthesis complex legal information.
- 4. Exhibit sophisticated knowledge related to tax accounting rules and regulation
- 5. Indentify define and resolve tax issue through their understanding, knowledge and application
- 6. Explain different types of income and their taxability and expense and their Deductibility.

Paper IV: Intellectual Property Law and IT Act 2000

LL.B.-604

- 1. Skill to understand the concept of intellectual property rights.
- 2. Develops procedural knowledge to Legal System and solving the problem relating to intellectual property rights.
- 3. Skill to pursue the professional programs in Company Secretaryship, Law, Business (MBA), International Affair, Public Administration and other fields.

Paper V: Drafting Pleading and Convincing

LL.B.-605

On Successful completion of the course students will be able to:

- 1. Analyz and define the concept to Pleading and various rules of pleading and able to handle the client during the course of interaction.
- 2. Articulate the argumentation process and apply the legal drafting abilities during the appearances before Court and Tribunals.
- 3. Recognize the way to move to the criminal justice system with aid of various complaints.
- 4. Identify and discuss the various forms of conveyancing deed such as sale deed, gift, mortgage etc.
- 5. Apply legal drafting skills and understand practical aspect of registration of such documents.

LL.M Part I (I Semester)

Syllabus of LL.M as prescribed by universities, two year course and divided into four semesters.

Paper I: Legal and Constitutional History of India

101

Students will be able

- 1. To Understand the historical development of Law in ancient period medieval and British Period.
- 2. To understand the development of legal institutions, Law commission, Juridical Institutions and constitution of India.
- 3. To know the past of the present legal and judicial system.

Paper II: Constitutional Law and New Challenges -I

102

- 1. Able to define, distinguish and apply the basic concepts and terminology of law of contract.
- 2. Able to Know how a contract formed performed, breached and remedied.
- 3. Able to define various processes involved in valid contract formation
- 4. Able to identify the relevant legal issues in the area of supplementary contract Laws such as sale of goods, partnership. Negotiable instrument, specific performance issues etc.

5. Able to select a range of approaches to written communication and apply the critical thinking required to bring about creative solution in the area of contract law.

Paper III: Constitutional Law and New Challenges -II

103

- 1. Able to define, distinguish and apply the basic concepts and terminology of law of contract.
- 2. Able to Know how a contract formed performed, breached and remedied.
- 3. Able to define various processes involved in valid contract formation
- 4. Able to identify the relevant legal issues in the area of supplementary contract Laws such as sale of goods, partnership. Negotiable instrument, specific performance issues etc.
- 5. Able to select a range of approaches to written communication and apply the critical thinking required to bring about creative solution in the area of contract law.

Paper IV: Research Methodology

104

- 1. There are two parts in course work syllabus: (i) Research Methodology & (ii) Research ethics.
- 2. The researchers can achieve appropriate knowledge or Research work & research writing by these research methodology & ethics.
- 3. Both the parts are essential to researchers. It has great significance for a researcher with out which he cannot work successfully.
- 4. It is the first & foremost vision to the researchers without which they cannot write the thesis or any type of research—oriented works.
- 5. Recognized primary and secondary source of legal research material.
- 6. Use and apply secondary source, case law and legislation using both paper based and online resources to a research problem.
- 7. Develop correct research strategies to critically evaluate the relevance, quality, authority and currency of the research materials.
- 8. Demonstrate good legal writing skills, including an understanding of the use and preparation of legal research material in legal writing and the correct methods of legal referencing.

LL.M Part I (II Semester)

Paper I: Jurisprudence & Legal Theory

105

- 1. Demonstrate an advanced understanding.
- 2. Demonstrate "Law in context of Political, Social, Historical, Natural Philosophical, economical and analytical.
- 3. Demonstrate various legal concepts such as property, Rights and duties, person, Possession, ownership, title, obligation and liability which are the roots of law.

- 4. Understand ancient and modern source of Law.
- 5. Demonstrate briefly "Knowledge of Law"
- 6. Critically analyze complex problems relating to law and legal theory.
- 7. Engage in identification articulation and Critical evaluation of legal theory and legal concepts.
- 8. Have an elementary understanding around the nature of Law.

Paper II: Interpretation of statutes and Theory of legislation 106

Students graduating with 'Interpretation of Statute & Principles of Legislation' will be able to:

- 1. Know what are the techniques adopted by courts in construing statutes? And the importance of the Law making process in the present context.
- 2. What are the matters to be reckoned with by legislature while enacting laws?
- 3. Understand and analyse the judicial interpretation, construction of words, phrases and expressions

Paper III: Indian Administrative Law

107

On Successful completion of this course Students will be able to –

- 1. Administrative law is mainly a judge made law and has secured its present features through a myriad of judicial decisions. Students got a deep knowledge of the operation and changing phenomenon of these standards from a comparative angle.
- 2. The ever increasing number of delegated legislation in the form of rules, regulation, circulars and general orders has the characteristic of law, that though framed by administration, impose burden on the rights of citizens.
- 3. Analyse the scope of review of delegated legislation and the limitations of the judicial review of administration action, the Principle of Natural Justice also have studied in details in this course.

Paper IV: Human Rights and Environmental Development Policy 108

- 1. Demonstrate knowledge and understanding of the human rights framework, its origins and justifying theories 2. Demonstrate capacity to assess how specific human rights may be asserted, enforced or violated.
 - 3. Critically evaluate the relationship between international and domestic law on human rights.
- 5. Analyse advanced and integrated understanding of the complex body of knowledge in the field of environmental law
- 6. Develop the capacity to identify new law and apply existing law in the rapidly evolving legal context of environmental law
- 7. Understand in depth knowledge of the specialized area of environmental law and associated disciplinary areas.

- 8. Determine and analyse the different causes of population and legal remedies to control it on national level.
- 9. Analysed and evaluate laws relating to environmental aspect on a national level and its comparison with other countries.

LL.M Part II (I Semester)

(Constitutional Group)

Paper I: Constitutional Law of UK and Commonwealth Relation 109

- 1. Students post graduating with constitutional law of UK and Commonwealth understand the world, their country & their society.
- 2. Relation between Government and citizen.
- 3. Learn their rights and duties towards nation as well as theme-selves.
- 4. Have awareness of social rights, values and responsibility to the self and to others.
- 5. Understand different disciplines in UK and Commonwealth Relation.
- 6. Students will be able to indentify Constitutional concept and theories related to fundamental rights, duties, directive principles of state police and constitutional remedies.
- 7. Students will be able to integrate three main pillars of the Nation Judiciary, executive and legislature.
- 8. Students will be able to evaluate social welfare and interrelationship between fundamental rights and directive Principles through interpretation.

Paper II: Constitutional Law of USA and Comparative Studies of Other Federal System 110

- 1. Students graduating with constitutional law of USA and Comparative Studies of Other Federal System understand the world, their country & their society.
- 2. Relation between Government and citizen.
- 3. Learn their rights and duties towards nation as well as theme-selves.
- 4. Have awareness of social rights, values and responsibility to the self and to others.
- 5. Understand different disciplines of USA and Comparative Studies of Other Federal System.
- 6. Students will be able to identify Constitutional concept and theories related to fundamental rights, duties, directive principles of state police and constitutional remedies.
- 7. Students will be able to integrate three main pillars of the Nation Judiciary, executive and legislature.
- 8. Students will be able to evaluate social welfare and interrelationship between fundamental rights and directive Principles through interpretation.

Paper III: Constitutional Law of Canada and Australia

111

- 1. Students graduating with constitutional law of Canada and Australia understand the world, their country & their society.
- 2. Relation between Government and citizen.
- 3. Learn their rights and duties towards nation as well as theme- selves.
- 4. Have awareness of social rights, values and responsibility to the self and to others.
- 5. Understand different disciplines of Canada and Australia
- 6. Students will be able to identify Constitutional concept and theories related to fundamental rights, duties, directive principles of state police and constitutional remedies.
- 7. Students will be able to integrate three main pillars of the Nation Judiciary, executive and legislature.
- 8. Students will be able to evaluate social welfare and interrelationship between fundamental rights and directive Principles through interpretation.

Paper IV: Constitutional Law of Japan and Switzerland

112

- 1. Students graduating with constitutional law of Japan and Switzerland understand the world, their country & their society.
- 2. Relation between Government and citizen.
- 3. Learn their rights and duties towards nation as well as theme- selves.
- 4. Have awareness of social rights, values and responsibility to the self and to others.
- 5. Understand different disciplines of Japan and Switzerland.
- 6. Students will be able to identify Constitutional concept and theories related to fundamental rights, duties, directive principles of state police and constitutional remedies.
- 7. Students will be able to integrate three main pillars of the Nation Judiciary, executive and legislature.
- 8. Students will be able to evaluate social welfare and interrelationship between fundamental rights and directive Principles through interpretation.

(Crime and Tort Group)

Paper I: Criminology

113

- 1. Demonstrate knowledge of the general history of crime movements and criminology.
- 2. Evaluate a number of different definitions of Crime hood.
- 3. Critically analyse the issue that underline the main needs of crime victims
- 4. Evaluate recent legislative changes that increase the opportunity for Criminals to crime to be active players in the criminal justice process.
- 5. Evaluate critically issues that emerge when particular types of criminals are involved with the criminal justice system and other agencies.

6. Critically analyse media and other political debate about Criminal and their needs in broader economics, optical and social contexts.

Paper II: Penology

114

On Successful completion of the course students will be able to:

- 1. This course provides the student and understanding of the various theories of punishment, Panel reform, Prison reform etc.
- 2. Penology is a multi disciplinary subject that aims for the study and evaluation of the application of Penal Laws.
- 3. Penology is almost seen in every aspect in type of punishment for the crime and offences.
- 4. Penology deals with care, custody, treatment, prevention, Parole, Probation and control of Crime as also the various modes of sentencing and rehabilitation of criminals.
- 5. Understand the various dimensions of the various aspects of the Indian Law and abroad Law related to Penology.
- 6. Understand the various aspect of the Indian Legal structure life that of the concept of restorative justice and compensatory schemes for victims.
- 7. Demonstrate a through and contextual knowledge of panel law and the various leading cases particularly in its application to real law problems.
- 8. Identify and engage the key issue problem, trends, Ideas, and debates within the field of penology.

Paper III: General Principles of Criminology Law and IPC

115

- 1. Analyse the concept of crime and punishment with reference to structure of society.
- 2. Suggest the amendments regarding justice according to the changing needs of the society.
- 3. Identify Criteria used to evaluate the Criminal Law of India.
- 4. Identify social theory about Crime, Justice and Social deviance.
- 5. Address various obstacles experienced by individuals before during and after internment.
- 6. Understand and describe areas of criminal justice, law and society through a critical analysis of the subject.
- 7. Analyse lacunas within the criminal justice system and suggest the amendments to provide the justice according to the changing needs of the society.
- 8. Summarize the process of judicial review and identify criteria used by courts to evaluate the constitutionality of criminal law of India.

- 9. Identify and synthesize social theory about crime, justice and social deviance that explain and address various obstacles and barriers experienced by individual before, during and after internment.
- 10.Problem solve complex issues in the criminal justice system and society related to policy, law enforcement, vulnerability and marginalization.

Paper IV: Law of Evidence

116

On Successful completion of the course students will be able to:

- 1. Analyse and define the concept and general nature of evidence and illustrate the different types of evidence and court procedure relating to evidence.
- 2. Analyse the rule relating to relevance of evidence and admissibility of evidence before the court.
- 3. Evaluate the rules relating to dying declaration and admissibility of dying declaration

LL.M Part II (II Semester)

Constitutional Group

Paper I: Law & Social Transformation in India

117

On Successful completion of the course students will be able to:

- 1. Demonstrate an advanced understanding.
- 2. Demonstrate "Law in context of Political, Social, Historical, Natural Philosophical, economical and analytical.
- 3. Demonstrate various legal concepts such as property, Rights and duties, person, Possession, ownership, title, obligation and liability which are the roots of law.
- 4. Understand ancient and modern source of Law.
- 5. Demonstrate briefly "Knowledge of Law"
- 6. Critically analyze complex problems relating to law and legal theory.
- 7. Engage in identification articulation and Critical evaluation of legal theory and legal concepts.
- 8. Have an elementary understanding around the nature of Law.

Paper II: Administrative Law UK, USA, France & India

118

- 1. Administrative law is mainly a judge made law and has secured its present features through a myriad of judicial decisions. Students got a deep knowledge of the operation and changing phenomenon of these standards from a comparative angle.
- 2. The ever increasing number of delegated legislation in the form of rules, regulation, circulars and general orders has the characteristic of law, that though framed by administration, impose burden on the rights of citizens.

3. Analyze the scope of review of delegated legislation and the limitations of the judicial review of administration action, the Principle of Natural Justice also have studied in details in this course.

Paper III: Dissertation

119

- 1. After writing the dissertation any students may carry out his dissertation with the proper research method. or guidance.
- 2. In a specific given time (generally one year) a students complete this dissertation work and after evaluate of his work he/she may be awarded a master degree.
- 3. This kind of dissertation may be accounted as intellectual work. Similarly, it may be a great literary value.
- 4. Master & students at all.

Paper IV: ViVa

120

- 1. Prepare comprehensively to answer questions from all the course of two semesters.
- 2. Attain Oral Presentation skills by answering question in precise and concise manner.
- 3. Gain confidence and inter-personal skills.

LL.M Part II (II Semester)

Crime & Tort Group

Paper I: Law of Tort- General Principles

121

On Successful completion of the course students will be able to:

- 1. To Study the Principles of Tortious liability.
- 2. To Study the capacity of parties to sue and be sued.
- 3. To evaluate the specific tort against the individual and property.
- 4. To study the remedies provided under the Consumer Protection Act 1986 and Motor Vehicle Act.

Paper II: Specific Torts- Special Topic (1) Negligence (2) Vicarious Liability 122

On Successful completion of the course students will be able to:

- 1. To Study the Principles of Tortious liability.
- 2. To Study the capacity of parties to sue and be sued.
- 3. To evaluate the specific tort against the individual and property.
- 4. To study the remedies provided under the Consumer Protection Act 1986 and Motor Vehicle Act.

Paper III: Dissertation

123

1. After writing the dissertation any students may carry out his dissertation with the proper research method. or guidance.

- 2. In a specific given time (generally one year) a students complete this dissertation work and after evaluate of his work he/she may be awarded a master degree.
- 3. This kind of dissertation may be accounted as intellectual work. Similarly, it may be a great literary value. Master & students at all.

Paper IV: ViVa

- 1. Prepare comprehensively to answer questions from all the course of two semesters.
- 2. Attain Oral Presentation skills by answering question in precise and concise manner.
- 3. Gain confidence and inter-personal skills.

Course Outcomes: PGDCA

Paper I: Fundamentals of Computers

PGDCAI-A

- 1. Understand the meaning and basic components of a computer system.
- 2. Discuss the advantages, limitations and applications of computers.
- 3. Define and distinguish Hardware and Software components of computer system.
- 4. Identify different computing machines during the evolution of computer system.
- 5. Gain knowledge about five generations of computer system.
- 6. Identify and discuss the functional units of a computer system.
- 7. Identify the various inputs and output units and explain their purposes.
- 8. Understand the role of CPU and its components.
- 9. Understand the concept and need of primary and secondary memory.

Paper II: Office Automation and Tally

PGDCAI-B

- 1. To improve quality of output in terms of presentation and reduction in processing time
- 2. Student will do by their own create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc
- 3. Students do possess required skill and can also be employed as Tally data entry operator

Paper III: Programming in "C"

PGDCAI-C

- 1. Solve the given problem using the syntactical structures of C language
- 2. Develop, execute and document computerized solution for various problems using the features of C language. 3.To read and write C program that uses pointers, structures, files etc.

Practical based on PGDCAI-B

PGDCAI-D

By learning the course, the students will be able

1. To perform documentation

- 2. To perform accounting operations
- 3. To perform presentation skills

Practical Based on PGDCAI-C

PGDCAI-E

After Completion of the course student should able to know concepts in problem solving, to do

Programming in C language to write diversified solutions using C language.

Semester II

Paper I: Programming in VB.NET

PGDCAII-A

- 1. Demonstrate fundamental skills in utilizing the tools of a visual environment in terms of the
 - set of available command menus and toolbars
- 2. Explain and use of delegates and events for producing event-driven application
- 3. Implement SDI and MDI applications while using forms, dialogs, and other types of GUI components
- 4. Produce and use specialized new GUI components
- 5. Explain message passing mechanism between components and threads using messaging
- 6. Apply .net programming to software development by designing projects with menus
- 7. and submenus
- 8. Use .net programming environment to create simple visual applications

Paper II: Database Management System (DBMS)

PGDCAII-B

- 1. Gain a good understanding of the architecture and functioning of database
- 2. Management systems as well as associated tools and techniques, principles of data modelling using entity relationship and develop a good database design and normalization techniques to normalize database.
- 3. Understand the use of structured query language and its syntax, transactions, database recovery and techniques for query optimization.
- 4. Acquire a good understanding of database systems concepts and to be in a position to use anddesign databases for different applications.

Paper III- Internet and Web Technology

PGDCAII-C

- 1. Design and implement an e-commerce application with a shopping cart.
- 2. Integrate user-cantered design guidelines in developing user-friendly websites.
- 3. Analyse different types of portal technologies and deployment methodologies commonly used in the industry.
- 4. Create a static website using HTML and add dynamic functionality of CSS
- 5. Gain confidence to create dynamic website on real world problems.

Practical Based on PGDCAII-A

PGDCAII-D

- 1.To learn how to design and develop VB .Net application.
- 2.To familiar with all tools of VB .Net

- 3. Creation function and procedure.
- 4. To learn ADO .NET database programming .

Practical Based on PGDCAII-B and PGDCAII-C

PGDCAII-E

- 1. Design and implement a database for a given problem according to well known design principles that balance data retrieval performance with data consistency.
- 2. Design, create, build, and debug Visual Basic applications
- 3. Write Windows applications using forms, controls, and events.
- 4. Create local HTML pages and move them to a remote web server.
- 5. Design and develop basic web pages using HTML and CSS
- 6. Link pages so that they create a Web site.

Course Outcomes: Diploma in Business Management:

Paper I: Principles and Practice of Management

DBM-A

Upon successful completion of this course a Student will be able to:-

- 1. To understand role of a professional manager.
- 2. Know about management planning and decision-making techniques.
- 3. Know about business communication.
- **4.** Know about motivation, leadership and direction.
- **5.** Skill development.
- **6.** The student's knowledge control technique.

Paper II: Managerial Economics & Business Environment

DBM-B

Upon successful completion of this course a Student will be able to:-

- 1. Analyse the demand and supply conditions and assess the position of a firm.
- 2. Analyse courses and consequences on unemployment, inflation and economic growth.
- **3.** Analyse operation of market under varying competitive conditions.

Paper III: Financial Management and Control

DBM-C

- 1. List the primary sources of capital and incorporate their cost when making investment decisions.
- **2.** Calculate the value of various financial assets.
- 3. Learn about the importance of the financial decision and optimum capital structure.
- **4.** Understand the role of various financial institutions and financial investments in the money and capital market.

Paper IV: Personnel Management and Financial Accounting DBM-D

Upon successful completion of this course a Student will be able to:-

- **1.** Acquire an insight in to the role and responsibilities of the personnel management functions.
- 2. The different system with in Personnel Management viz recruitment and selection, Performance management Compensation Managements employee Relationship Management and recognize their strategic contribution to business and organization.
- 3. This course aims to imparting basic knowledge of the subject.

Paper V: Production Management & Marketing Management

DBM-E

Upon successful completion of this course a Student will be able to:-

- 1. Apply decision-making techniques in Production Management.
- 2. Apply Work Force Management techniques in business cases.
- **3.** Identify some of the basic approaches to formulating a market strategy in order to participate effectively.
- **4.** Use knowledge of element of the marketing mix and the functional disciplines of marketing such as Research & Marketing Communication.

Project DBM-F

Upon successful completion of this course the students will be able to gain practical experience while studying upon a business unit.

Viva DBM-G

Upon successful completion of this course students will be able to present and explain the report prepared by them systematically.