B.Sc Ist year

Paper Ist => Diversity of lowe plant

C.O.I	To study the cryptogams and detail learning about their diversity .
C.O.II	To study the whole classification and morphology about algae , fungi , and bryophyta .
C.O.III	Study the life cycle of cryptogams.
C.O.IV	Study the Economical importarce of cryptogoms .
C.O.V	Basic knowledge about virus, bacteria and Cynobacteria .

B.Sc Ist year

Paper IInd => Diversity of higher plant

C.O.I	To study the distribution, classification and general characters of gymnosperms In india .
C.O.II	Study about structure , reproduction and life cycle of gymnosperms like – cycas , pinus and ephedra .
C.O.III	Learn about root apical meristem , internal structure , root modification of monocot and dicot plant.
C.O.IV	To study the shoot system of monocot and and dicot plant .
C.O.V	Learn about internal leaf structure of dicot and monocot plants , study the photosynthesis and water stress physiology of plants .

B.Sc IInd year

Paper Ist => Taxonomy and embryology of angiosperms

C.O.I	Learn about the origin and evolution of angiosperm .
C.O.II	Study about economical importance of different flowering plants .
C.O.III	Learn about different families like – rubiaceae , asteraceae , apocynacace , solanaceae lamiaceae and poaceae .
C.O.IV	Study the structure of anther , microspor genesis and male / female gametophyte .
C.O.V	Teach about double fertilization , triple fusion and development of fruits .

B.Sc IInd year

Paper IInd => Plant ecology, biodiversity and phytogeography

C.O.I	To study the structure of ecosystem ,ecological pyramids ,and energy flow in ecosystem .
C.O.II	Learn about ecological adoptation, plant succession pnocess .
C.O.III	To study the featunes of any population like density , natality , mertality , growth curve etc.
C.O.IV	Learn about physical and chemical properties of soil, acid rain, global warming etc.
C.O.V	Study about phytogeography of india and Madhya Pradesh .

B.Sc IIIrd year

Paper Ist => Plant physiology and biochemistry

C.O.I	Study about plant water relation .
C.O.II	To learn the plant nutrition (macro and micro) biomolecules (carbohydrates , lipids, protein, enzyme) and metabolism process .
C.O.III	Learn about photosynthesis process occur in plants .
C.O.IV	To study the respiration process in plants .
C.O.V	To known about enzymes, plant hormones .

B.Sc IIIrd year

Paper IInd => Cell biology , genetics and biotechnology

C.O.I	Learn about structure of plasma membrane cell wall and different cell organelles .
C.O.II	To study the chromosomal organization of plant also study about DNA – Replication .
C.O.III	Detail study about mendelian laws
C.O.IV	To learn about gene, different types of RNA and role of RNA in evolution .
C.O.V	To study the plant breading techniques, biotechnology and genetic engineering .

Department of Chemistry

Outcomes of UG course

Course Outcomes **B.Sc. First year Chemistry**	
Course	After successful completion of three-year degree program in BSc students should be able to
Physical Chemistry **Unit 1**	1. Use of log table and antilog table in calculations. 2. Students will be able to learn differentiation of functions, maxima and minima, integration of some useful functions. 3. Solve the numerical problems based on ideal gas equation. 4. Understand the term PV isotherm, root mean square average and most probable velocities. 5. Know the meaning of collision numbers, mean free path and collision diameter.
Unit 2	1. Understand the difference between liquid crystal, solid and liquid. 2. Understand the classification and structure of nematic and cholesteric phases. 3. Understand laws of crystallography. 4. Describes Bragg's law. 5. Explain the structure of ionic solids.
Unit 3	1. Define the average and instantaneous rate of reaction. 2. Write an expression for rate constant K for first, second and third order reaction. 3. Solve the numerical problems based on rate constant. 4. Describe collision theory and transition state theory.
Unit 4	1. Describe theory of radioactivity. 2. Distinguish between nuclear fission and nuclear fusion reaction. 3. Understand the meaning of half-life period, isotopes, isobars and isomers. 4. Know the application of radiochemistry in daily life.
Unit 5	1. State the law of mass action. 2. Understand the use of Le-Chatelier's principle in heterogeneous system. 3. Define lyophilic and lyophobic colloids. 4. Understand the use of Hardy Schulz rule. 5. Classify emulsions and describe their preparation and properties. 6. Understand the uses of colloids.

Course	Outcomes
Inorganic chemistry **unit 1**	1. Students will able to state the de- Broglie relation and Heisenberg uncertainty principle. 2. Define an atomic orbital in terms of quantum numbers. 3. Derive an expression for Schrodinger wave equation. 4. Know the significance of ψ and ψ^2. 5. State Aufbau principle, Pauli Exclusion Principle and Hund's rule. 6. Write the electronic configuration of atoms. 7. Understand the meaning of atomic and ionic radii, ionization energy, electron affinity and electronegativity.
unit 2	1. Describe valence bond theory and its limitations. 2. Predict the directional properties of covalent bonds. 3. Determine shapes of simple inorganic molecules and ions and types of hybridization. 4. Describe the VSEPR theory and MO theory.
unit 3	1. Describe the lattice defects in solids and their effect on properties. 2. To understand Born-Haber cycle in determining lattice energy of ionic solids. 3. Know the meaning of lattice energy, solvation energy, polarizing power and polarizability of ions. 4. Understanding the intermolecular forces (hydrogen bonding van der wall forces. 5. To understand the various applications of noble gases.
unit 4	1. Understand the meaning of term diagonal relationship. 2. Explain the general characteristics of the compounds of the alkali metals. 3. Recognises the anomalous properties of lithium. 4. Illustrate the biological importance of sodium and potassium. 5. Describe structure and properties of some important compounds of boron.
unit 5	1. Understand the methods of preparation of diborane and higher boranes. 2. To understand the structure of diborane.

Course	Outcomes
Organic chemistry **Unit 1**	1. Understand the shapes of atomic orbitals. 2. Know the meaning of various terms hybridization, inductive effect, electrometric effect. 3. Distinguish between inductive effect and electrometric effect. 4. Distinguish between resonance and hyperconjugation. 5. Understand clathrate or cage complexes and their uses. 6. Understand the mechanism of organic reactions (S_N^1 and S_N^2).

Unit 2	1. Understand the nomenclature of alkanes and cycloalkanes and their methods of preparation. 2. Describe conformations in alkanes. 3. Describe the stability of cycloalkanes by using Baeyer's Strain theory. 4. Understand conformations of cyclohexane and their relative stabilities.
Unit 3	1. Understand the nomenclature of alkanes and their preparation methods. 2. Describe regioselectivity of dehydrohalogenation of alkyl halide. 3. Describe Markovnikov's rule and peroxide effect. 4. Understand the mechanism of hydroboration and uses of hydroboration oxidation. 5. To explain electrophilic addition and free radical addition reactions.
Unit 4	1. Describe the methods of preparation of cycloalkanes. 2. Describe the conformation of cycloalkanes. 3. Describe Diels Alder reaction. 4. Understand nomenclature and isomerism in dienes and alkadienes. 5. Describe the preparation of conjugated alkadienes. 6. Explain 1,2 and 1,4 electrophilic addition reaction of bromine on 1,3-butadiene.
Unit 5	1. Describe structural isomerism in organic molecules. 2. Describe stereoisomerism in organic molecules. 3. Explain optical isomerism and determine specific rotation of optically active compound. 4. Understand the concept of chirality. 5. Distinguish between meso compounds and racemic mixture. 6. Describe D/ L configuration. 7. Distinguish between enantiomer and diastereomers. 8. Recognise R and S configuration.

B.Sc. Second year chemistry	
Course	**Outcomes**
Paper 1 **Physical chemistry**	1. Describe law of thermodynamics. 2. Know the meaning of entropy and residual entropy. 3. Know the meaning of phase, component and degree of freedom. 4. Solve the cell reaction and calculate EMF. 5. Solve the numerical problem based on call Kohlrausch law. 6. Solve the numerical problem based on Nernst equation. 7. Realise the terms ionic strength and activity coefficient equation, DHO equation. 8. Realise the term adsorption, adsorbent and Freundlich and Langmuir adsorption isotherms. 9. Understand the adsorption of gases by solid type of isotherms. 10. Find out the acidity, basicity and pKa value on pH metre.

Paper 2 **Inorganic chemistry**	1. Know the meaning of various terms involved in coordination chemistry. 2. To understand Werner's formulation of complexes and identify the types of valences. 3. Know the meaning of effective atomic number, chelate effect and hapticity. 4. Draw the geometrical and optical isomers of complexes. 5. Study the electronic configuration of lanthanides and actinides. 6. Describe Frost, Latimer And Pourbaix diagrams. 7. Define Arrhenius, Bronsted Lowry acid and bases. 8. Describe the Lewis concepts of acids and bases. 9. Describe magnetic and spectral properties of lanthanides and actinides. 10. Know the meaning of lanthanide contraction and actinide contraction. 11. Understand reactions in non-aqueous solvents with reference to liquid ammonia and liquid sulphur dioxide.
Paper 3 **Organic chemistry**	1. Know the meaning of chromophore and auxochrome, bathochromic shift, hypsochromic, hyperchromic and hypochromic shift. 2. To study UV and IR spectroscopy. 3. Interpretation of IR spectra of simple organic compounds. 4. Understand the factors affecting UV absorption spectra. 5. Study the various name reaction with examples. 6. Study the preparation of alcohols, phenols, aldehydes, ketones, ethers, carboxylic acids and amines and their chemical properties. 7. Recognise the reagents for the transformation from aldehydes to carboxylic acid. 8. Recognise the reagents and conditions used for the reduction of aldehyde and ketone to alcohol. 9. Utilise reductive amination for the synthesis of amines. 10. Define keto- enol tautomerism.

B.Sc. third year Chemistry	
Course	**Outcomes**
Paper 1 **Physical chemistry**	1. Solve the Schrodinger equation to obtain wave functions. 2. Understand the role of uncertainty in quantum mechanics. 3. To determine whether or not two physical properties can be simultaneously measured. 4. Understand de Broglie hypothesis and uncertainty principle. 5. Derive Schrodinger equation. 6. Know the postulates of quantum mechanics. 7. Learn one dimensional box mechanics of particle. 8. Compare between M.O. and V.B. Models. 9. Understand the construction of M.O.'s by LCAO method. 10. Know the valence bond model of hydrogen ion. 11. Derive the expression for rotational spectra for the transition from J to J+1. 12. Understand Franck Condon principle. 13. Understand the application of UV spectroscopy to organic molecules. 14. To understand the harmonic oscillation.

	15. Able to recognise different regions for different spectroscopy. 16. Able to explain the concept used in black body radiation. 17. Able to use concept of polarizability. 18. Able to use concept of selection rules. 19. To understand the laws of photochemistry. 20. Know the meaning of fluorescence and phosphorescence and non-radioactive processes. 21. Able to explain photochemical reactions Norrish type-1 and type- 2 reactions. 22. To understand optical activity and Clausius Mossotti equation.
Paper 2 **Inorganic chemistry**	1. Understand the classification of hard and soft acid base. 2. Understand HSAB concept of Pearson. 3. To understand application of hard soft acid base theory. 4. To understand the preparation, classification, properties and applications of silicones. 5. Able to explain preparation and properties of phosphazenes and their uses. 6. Twin dust and limitations of VBT. 7. Get knowledge of crystal field theory. 8. To study crystal field splitting of d orbitals. 9. Able to explain factors affecting thermodynamic stability of complexes. 10. Able to explain factors affecting the rate of substitution reactions in square planar complexes. 11. Know the meaning of diamagnetism, paramagnetism, ferromagnetism and antiferromagnetism. 12. Able to determine ground state term symbol. 13. Able to explain LS coupling. 14. To study Orgel energy level diagram. 15. Able to explain oxidative addition and insertion reactions. 16. To understand the role of metal ions in biological system. 17. To understand the role of metal ions in oxygen transport. 18. Able to recognise role of porphyrin rings in haemoglobin. 19. Able to recognise role of haemoglobin and myoglobin in biological system.
Paper 3 **Organic Chemistry**	1. Able to explain common terms in NMR spectroscopy such as chemical shift, coupling constant and describe how they are affected by molecular structure. 2. Able to explain PMR spectra of simple organic molecules. 3. To understand applications of UV, IR and NMR spectroscopy for simple organic molecules. 4. To study organometallic compounds such as Grignard reagent and their applications. 5. To study preparation and properties of organic polymers and their uses. 6. Able to know general structure elements of cyclic monosaccharide and disaccharides. 7. Able to draw particular carbohydrate structure. 8. To understand application of hydrogenation reaction. 9. Know the meaning of saponification value iodine value and acid value. 10. Able to explain formation of synthetic detergents. 11. Able to explain mutarotation. 12. Know the meaning of amino acid, peptide, proteins and nucleic acid. 13. To understand isoelectric point and electrophoresis.

	14. Able to explain double helix structure of DNA. 15. Able to determine peptide structure. 16. To understand denaturation of proteins. 17. Able to classify dyes. 18. To understand and classify pericyclic reactions. 19. Get the knowledge of Woodward Hoffmann rule. 20. To study electrocyclic reactions cycloaddition reaction and sigmatropic shift. 21. To understand FMO approach.

commerce

Department of Commerce

Program Outcome

- This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements.
- After completing graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.
- Capability of the students to make decisions at personal & professional level will increase after completion of this course.
- Students can independently start up their own Business.
- Students can get thorough knowledge of finance and commerce.
- The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization.

B.COM

Program Specific Outcome

- The students can get the knowledge, skills and attitudes during the end of the B.com degree course.
- By goodness of the preparation they can turn into a Manager, Accountant , Management Accountant, cost Accountant, Bank Manager, Auditor, Company Secretary, Teacher, Professor, Stock Agents, Government employments and so on.,
- Students will prove themselves in different professional exams like CA, CS, CMA, MPSC, UPSC. As well as other cources.
- The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.
- Students will gain thorough systematic and subject skills within various disciplines of finance, auditing and taxation, accounting, management, communication, computer.
- Students will learn relevant Advanced accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

Course Outcome

B.Com Ist Year Business Organisation and Communication

- To make the students aware about the Business Organisation and Communication.
- To understand the Process and importance of communication.
- To develop awareness regarding new trends in business communication, various media of communication and communication devices.
- To extend business communication skills through the application and exercises.

Business Law

- The student will well verse in basic provisions regarding legal frame work governing the business world.
- To know the students with the basic concepts, terms & provisions of Mercantile and Business Laws.
- To develop the awareness among the students regarding these laws affecting trade business, and commerce.

Financial Accounting

- To enable the students to learn principles and concepts of Accountancy.
- Students are enabled with the Knowledge in the practical applications of accounting.
- To enable the students to learn the basic concepts of Partnership Accounting, and allied aspects of accounting.
- The student will get thorough knowledge on the accounting practice prevailing in partnership firms and other allied aspects.
- To find out the technical expertise in maintaining the books of accounts.
- To encourage the students about maintaining the books of accounts for further reference.

Business Mathematics

- To understand the concept of Ratio and to make students familiar with Calculation of various types of averages and variation.
- To learn the applications of matrices in business.
- To use Log, Simple Intrest and Compound Intrest.
- To understand the techniques and concept of Simultaneous Equations.

Department of Computer Application

PROGRAMME OUTCOMES: B. A./ B.Com. ComputerApplication

Department of Computer Application	**After successful completion of three year degree program in Computer Science a student should be able to.**
Programme Outcomes	**At the end of three year B.A/B.Com programme, the students will be able to :-** **PO1-** Build a strong foundation in accounting, management and business subjects. **PO2-** Seek variety of career options in accounting, management and business related fields. **PO3-** Equip with skills and knowledge to excel in their future careers. **PO4-** Develop critical thinking skills in students . **PO5-** Enter master programmes like M.Com, MBA and pursue professional programmes like C.A, CMA, C.S, etc. **PO6-** Develop entrepreneurial skills.
Programme Specific Outcomes	**At the end of three year B.A. /B.Com programme with specialisation in Computer Application, the students will be able to:-** PSO 1- Understand the application of business Knowledge in both theoretical and practical aspects. PSO 2- Determine the procedures and schedules to be followed on preparing financial statements of Companies. PSO 3- Understand the basic concepts and functions of accounting, trade and computer software PSO 4- Develop proficiency in the management of an organisation . PSO 5- Attain skills in conducting business transactions online. PSO6 – Analyse the scope of the business

	by adopting modern technology in the business practice. PSO7 - Follow the ethics pertaining to business transactions

Course Outcomes B.A./B.Com. Computer Application

Course	Outcomes
CA 101 FUNDAMENTALS OF COMPUTER AND PC SOFTWARE	**Upon completion of this course, the student will be able apply technical knowledge and perform specific technical skills, including:** 1) Describe the usage of computers and why computers are essential components in business and society. 2) Utilize the Internet Web resources and evaluate on-line e-business system. 3) Solve common business problems using appropriate Information Technology applications and systems. 4) Identify categories of programs, system software and applications. Organize and work with files and folders. 5) Describe various types of networks network standards and communication software.
CA102 DESKTOP PUBLISHING AND MULTIMEDIA	**Careers in desktop publishing range from jobs involving manipulating blocks of text, such as newsletter designers, to freehand designers designing the latest logo for a company.** Newsletter Designer. ... Font Designer. ... Graphic Designer. ... Web Designer.
CA 201 INTERNET AND E COMMERCE	CO1 Recognizes the impact of Information and Communication Technologies, on the Internet in business Operations. CO2 Acquire knowledge in identifying the

	main business and market place models for electronic Communications and Trading CO3 Understanding Electronic Payment System and its environment. CO4 Make ethical decisions related to ecommerce based on laws, privacy, and security. CO5 Analyze the steps, tools, and security considerations needed create an E-commerce websites
CA 202 RELATIONAL DATABASE MANAGEMENT SYSTEM	1. Master the basic concepts and appreciate the applications of database systems. 2. Master the basics of SQL and construct queries using SQL. 3. Be familiar with a commercial relational database system (Oracle) by writing SQL using the system. 4. Be familiar with the relational database theory, and be able to write relational algebra expressions for queries. 5. Mater sound design principles for logical design of databases, including the E-R method and normalization approach. 6. Be familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B-tree, and hashing. 7. Master the basics of query evaluation techniques and and query optimization. 8. Be familiar with the basic issues of transaction processing and concurrency control. 9. (optional) Master working successfully on a team by design and development of a database application system as part of a team. Texts and Other Course Materials:
CA301 WEB DESIGNING	**Become familiar with graphic design principles that relate to web design and learn how to implement theories into practice. Develop skills in analyzing the usability of**

	a web site. Understand how to plan and conduct user research related to web usability. Learn the language of the web: HTML and CSS. • You will discover how does web works really, what makes web sites work. • Simple and impressive design techniques, from basics till advanced to focus on goal oriented and user centric designs. • How to and where to start research, planning for website & actually build excellent web sites. • Pro level skills in SEO with keyword research and content strategy for your website. • To create web elements like buttons, banners & Bars and of course complete UI designs. • Forms and validations for your website. • Setting up page layout, color schemes, contract, typography in the designs. • Writing valid and concise code for webpages. • Best use of social media for revenue generation. • Setting up a perfect landing page for business, clients and yourself
CA 302 DIGITAL MARKETING	On successful completion of the course students will be able to: 1. Analyze the confluence of marketing, operations, and human resources in real-time delivery. 2. Demonstrate cognitive knowledge of the skills required in conducting online research and research on online markets, as well as in identifying, assessing and selecting digital market opportunities. 3. Explain emerging trends in digital marketing and critically assess the use of digital marketing tools by applying relevant marketing theories and frameworks. 4. Investigate and evaluate issues in adapting to globalized markets that are constantly changing and increasingly networked.

	5. Interpret the traditional marketing mix within the context of a changing and extended range of digital strategies and tactics. 6. Comprehend the importance of conversion and working with digital relationship marketing. 7. Analyze cross-cultural and ethical issues in globalized digital markets.

DEPARTMENT OF HINDI

OUTCOMES

PROGRAMME OUTCOMES : B.A. HINDI

Department of Hindi :- A fter successful completion of three year degree program in Hindi student should be able to

PO-1. छात्रों को हिन्दी भाषा के उद्भव, विकास तथा विभिन्न रूपों एवं बोलियों का ज्ञान प्राप्त हुआ।

PO-2. छात्रों को हिन्दी साहित्य के इतिहास के लेखन परम्परा के संबंध में जानकारी प्राप्त हुई।

PO-3. छात्रों को भाषा विज्ञान के माध्यम से हिन्दी भाषा के व्यवस्थित प्रयोग का ज्ञान प्राप्त हुआ।

Programme Outcomes:-

PO-1. छात्रों को हिन्दी गद्य ओर पद्य का विभिन्न साहित्य विधाओं से परिचित हुए।

PO-2. छात्रों को हिन्दी भाषा और साहित्य को समझने और मूल्यांकन क्षमता का निर्माण हुआ।

PO-3. छात्रों को सरकारी कार्यालयों में प्रयुक्त हिन्दी भाषा का परिचय प्राप्त हुआ।

PO-4. पटकथा लेखन विज्ञापन लेखन प्रकाशक, संपादक, संवाददाता, दुभाषिया प्रुफ शोधक आदि की जानकारी प्राप्त हुई।

Course Outcome B.A. Hindi

Couse outcome

CO-1. छात्रों को साहित्य के विभिन्न विधाओं के माध्यम से भावत्मक विकास हुआ।

हिन्दी सामान्य

CO-1. छात्रों में राष्ट्रीय एवं सामाजिक उत्तरदायित्व आदि मूल्यों की प्रतिष्ठा हुई।

CO-2. छात्रों में राष्ट्रीय भाषा हिन्दी मानक लिपि का प्रचार–प्रसार हुआ।

द्वितीय वर्ष :–

CO-1. छात्रों को हिन्दी के कहानीकार एवं कवियों तथा नई कविता की विशेषताओं का परिचय प्राप्त हुआ।

CO-2. छात्रों का पारिभाषिक शब्द युग्म का ज्ञान प्राप्त हुआ।

CO-3. छात्रों को भाषा के स्वरूप, परिभाषा विशेषताओं एवं राजभाषा हिन्दी के संवेधानिक स्वरूप का ज्ञान प्राप्त हुआ।

हिन्दी भाषा का विकासः–

CO-1. छात्रों में भाषा विज्ञान के वैज्ञानिक अध्ययन एवं विभिन्न बोलियों का परिचय प्राप्त हुआ।

CO-2. छात्रों को लिपि का स्वरूप, उत्पत्ति, विकास तथा इतिहास का ज्ञान प्राप्त हुआ।

उपन्यास नाटक :–

CO-1. छात्रों को हिन्दी नाटक उपन्यास स्वरूप तत्व आदि मानदंडों के आधार पर समीक्षा की क्षमता का निर्माण हुआ।

CO-2. छात्रों को संत एवं भक्तों के काव्य एवं कवियों के कृतियों व शिल्प एवं सोन्दर्य को देखने की दृष्टि विकसित हुई।

तृतीय वर्ष :–

हिन्दी सामान्य :–

CO-1. छात्रों को हिन्दी की आत्मकथा कविता एवं काव्य नाटक के विकास एवं सरकारी पत्र लेखन की विभिन्न विधियों का ज्ञान प्राप्त हुआ।

CO-2. छात्रों को पत्रकारिता के विभिन्न पहलुओं, अनुवाद करने का कौशल विकसित हुआ।

<u>हिन्दी साहित्य का इतिहास (S III) :-</u>

CO-1. छात्रों को हिन्दी साहित्य के इतिहास लेखन परम्परा कालखण्ड एवं उनके नामकरण का परिचय प्राप्त हुआ।

CO-2. छात्रों को हिन्दी साहित्य के प्रतिनिधि रचनाकारों का महत्व, प्रभाव आदि का ज्ञान प्राप्त हुआ।

CO-3. छात्रों को आधुनिक युग सामाजिक, राजनीतिक, धार्मिक साहित्यिक परिस्थिति का ज्ञान प्राप्त हुआ।

<u>काव्य शास्त्र (S-IV)</u>

CO-1. छात्रों को काव्यशास्त्र के स्वरूप काव्य प्रयोजन काव्य के तत्व, शब्द, शक्तियों का ज्ञान प्राप्त हुआ।

CO-2. छात्रों को रस के स्वरूप, भेद, अंग, शास्त्रीय ज्ञान प्राप्त हुआ।

CO-3. छात्रों में नाटक और एकांकी के रसास्वादन आलोचना का स्वरूप तथा आलोचक के गुण का ज्ञान प्राप्त हुआ।

Department of Mathematics

Sr. No.	Programme	Course	Course Title	Course objective	Expected outcome
1.	Bachelor of Science	B.Sc. I yr	Algebra & Trigonometry	(i) A student should be able To recall basic facts about mathematics and should be able to display knowledge of Conventions such as notations ,Terminology and recognize basic trigometrical figures and graphical displays, state important facts resulting from their studies. (ii) A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.	1. Solve various problems onproperties of integers and use the basic concepts of divisibility, congruence and their applications in basic algebra. 2. apply factor theorem, remainder theorem to solve problems on polynomials and by using given relations between roots he will find the roots of polynomials 3.solve the system of homogeneous and non homogeneous linear of m equations in n variables by using concept of rank of matrix, finding Eigen values and Eigen vectors.
2.			Calculus & Differential Equation	A student should get adequate exposure to global and local concerns that explore them many aspects ofMathematical Sciences.	1. Verify the values of limit of a function at a point using the definition of a limit. 2.Students will be familiar with the techniques of integration and differentiation of function with real variables 3. Identify and apply the intermediate value theorem, Mean value theorem and L‟Hospital‟s rule. 4. Identify types of differential equations and solve differential equations such as Exact, homogeneous, non-homogeneous, and linear

table 28

					and Bernoulli differential equations etc.
3.			Vector Analysis & Geometry	Use the various techniques of solving Integral problems of vector valued functions.	After completing this course student will be able to 1. Students developknowledge in the limit, continuity, differentiation of vector functions. 2. Assesstheoretical and practical problems that involves geometry. 3.Generalize basic notions of reflection, rotation, projection with real life examples
4.		B.Sc. II year	Abstract Algebra		1. Identify the various algebraic structures with their corresponding binary operations. 2.generalize the groups on the basis of their orders, elements, order of elements and group relations 3. Compare two groups of same orders on the basis of isomorphism Criteria. 4.Compute the possible subgroups of given group of specific orders and will recognize them.
5.			Advanced Calculus		1.Compute double integrals, applications to area and volume, Green‟s thm in the plane and the change of variables in double integrals 2.Understand basic notions such as derivative of the scalar field w.r.to vector field, gradient of scalar field,

table 28

					paths and line integrals 3.Recognize fundamental vector product, area of various parametric surfaces
6.			Differential Equation		1.Solve linear differential equations with constant coefficients, non-homogeneous differential equations, system of first order equations, solution of differential equations by Power series method
7.		B.Sc. III year	Linear Algebra & Numerical Analysis		1. Use the concept of basis and dimension of vector spaces linear dependence and linear independence, to solve problems. 2. Use the concept of inner product spaces to find norm of vectors, distance between vectors, and check the orthogonality of vectors, to find the orthogonal and orthonormal basis. 3. Apply the properties of linear transformations to linearity of transformations, kernel and rank of linear transformations, inverse transformations to solve the problems of matrix transformations, change of basis.
8			Real & Complex Analysis		1. After completing the course, students will able to -know sequence and series of real numbers and their convergence and divergence. 2. Prove the Cauchy-Riemann equations and apply them to complex functions in order to determine whether a given

table 28

					continuous function is complex differentiable. 3.Evaluate integrals along a path - directly from the definition and also via the Fundamental Theorem of Contour Integration and Cauchy's Theorem, 4. Compute the Taylor and Laurent expansions of simple functions, determining the nature of the singularities and calculating residues, prove the Cauchy Residue Theorem and use it to evaluate integrals.
9			Statistical Methods	Student will know about statistical inference probability distributions,computational statistics and design of experiment and data mining.	Using this subject student will come to know: Measures of central tendency, S.D.,Binomial ,Poisson and normaldistribution.

MSW

Social Work Department

MSW IIIrd Semester

Course Outcomes

Paper - Ist :- SOCIAL POLICY AND SOCIAL LEGISLATION IN INDIA.

1. Students get knowledge of social policy and social legislations in the country, legal provisions for special groups.
2. Students will participate and play roles in the procedure of making social policy.
3. Through this course student will know how to establish NGO's and its rules and procedures.

Paper – IInd :- Community organization

1. Students get acquinted with Concept, Nature, Structure and Functional aspects of comminuties.
2. Students able to understand the working method of students in community organization.
3. Objective of the syllabus is to aware the students about significance of community development in organization.

Paper - Ist (Group C) :- Development Mangement

The students of Masters of Social Work will able to

1. Understand the administrative structures Vision, Mission, Values and behaviour of any organization.
2. Know and get benifit from the legal and other requirements of various committees.
3. Get in touch with fund raising models, financial institutions and basics of micro-finance.

Paper – IInd (Group C) :- Rural community Development and Panchayti Raj

1. Students of MSW get the opportunity interact with community developments, its need and methods.
2. Students understand the role of Panchyati Raj in Rural development, 73rd amendments of the constitution functions of Panchyati Raj system and problems of Panchayti Raj institution,
3. Students will be able to learn the role of government and non-government organizations for community development.

MSW IVth Semester

Paper – Ist (Social Development) :- MSW Student will be able to

1. Analyze and understand the concept of Social welfare along with social welfare policy, its problems and prospects in India.
2. Interact with process involved in social policy formulation and also understand five year plans that lead India as a welfare State.
3. Study the role of voluntary organization, International organization, and the role of NGO's in Social development.

Paper – IInd :- Trainnig and Development

1. Students understand the need of training and development in the social welfare sector.
2. Students will be able to learn determination of training objectives, its techniques and aids.
3. Students get the knowledge of validation, implementation of training, assessment methods and most importantly its outcomes.

Paper :- Dissertation

1. This is an optional paper for Master of Social Work students. By studying this course students know the manner of research and findings.
2. To write a dissertection is the essiest way to improve subject knowledge it helps students to improve their analytical and cognitive abilities and to enhance skills of writing.
3. Students get themselves trained in data Collection, classification, critical analysis, argumentation and to make a proper conclusion.

Paper – Ist (Group C) :- **Development Management Part – II**

Studying the course students will be able to

1. Gain the information about manpower planning, recruitment, selection, placement and induction.
2. Study the commumication theories and practices, components of communication, organization development techniques and to understand the importance of compensation and rewards through training and development.

Paper – IInd (Group C) :- **Urban community Development and Municipal Administration**

Studying this course student is able to

1. Know urbanization and urban problems in India.
2. Learn urbanization in India and its problems.
3. To gather the information of urban community development, its need, origin and approaches.
4. Understand histrocal development of municipal administration in India, 74th Amendment and the municipal administration with its reforms and problems.

Department of Social Work

Programme Specific Outcomes

In the present time social work is emerged as one of the compulsory subject in Indian universities and colleges at masters level Studying this course student is able to –

- Develop the scientific approach towards social work, and attempt to learn skills of social work.
- Enhance the capacity to understand the phenomena of social work such as social issues, events, problems in society and its redemptions.
- Develop better understanding of reality of life through studying concept of social work, methods and theories.
- Accelerate communication ability, analytical approach, and observation strength.
- Travel for field work to indentify prevailing various problems in society and develops understanding of solving problems.
- Develops theoretical and social responsibilities.
- Create opportunities for carrier in governments, non- government and semi-government organization after completion this course.

PHYSICS
DEPARTMENT OF PHYSICS

PROGRAMME: B.Sc. PHYSICS

PROGRAMME OUTCOMES

Department of Physics	After successful completion of three year degree program in physics a student should be able to;
Programme Outcomes	**PO-1**. Demonstrate, solve and an understanding of major concepts in all disciplines of physics. **PO-2**. Solve the problem and also think methodically, independently and draw a logical conclusion. **PO-3**. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Physics experiments. **PO-4**. Create an awareness of the impact of Physics on the society, and development outside the scientific community. **PO-5**. To inculcate the scientific temperament in the students and outside the scientific community.
Programme Specific Outcomes	**PSO-1**. Gain the knowledge of Physics through theory and practical's. **PSO-2**. Understand good laboratory practices and safety. **PSO-3**. Develop research oriented skills. **PSO-4**. Make aware and handle the sophisticated instruments/equipments.
Course Outcomes B. Sc Physics **B. Sc. Ist year(Paper I)**	
Course	**Outcomes** After completion of these courses students should be able to;

Unit 1 Mathematical Physics	**CO-1**. Know the Cartesian, spherical polar and cylindrical co-ordinate systems. **CO-2**. Know the vector and scalar product of two and more than two vectors. **CO-3.** Know the scalar and vector fields. **CO-4.** know the line, surface and volume integrals. **CO-5.** Know the gradient of Scalar field, divergence of a Vector field and Curl of a vector field. **CO-6**. Know the Stokes theorem and Green's theorem.
Unit 2 mechanics	**CO-1.** Understand the State of Rest and Motion. **CO-2**. Understand the Distance, displacement, Speed, velocity, acceleration, Force. **CO-3**. Understand Newton's Laws of motion and Kepler's laws and their Applications. **CO-4**. Know gravitational potential energy and gravitational potential of different bodies. **CO-5.** Know about the Pseudo forces (Coriolis force) and its applications. **CO-6.** Know about the centre of mass, Central force and its properties. **CO-7**. Classify elastic and inelastic scattering. **CO-8**. Know the difference between Laboratory and centre of mass system.
Unit 3 Central properties of matter	**CO-1.** Differentiate between elastic and inelastic materials **CO-2**. Understand about the bending and bending moment. **CO-3**. To study the modulus of rigidity, surface tension. **CO-4**. To understand the concepts of viscous force and coefficient of viscocity.
Unit 4 Oscillations	**CO-1.** To understand about vibration, periodic and harmonic motions. **CO-2**. Know the differential equations of simple harmonic oscillator. **CO-3**. Graphical representation of simple harmonic motion. **CO-4**. To know about the rotatory motion of rigid body and Newton's laws in rotational motion.. **CO-5.** Rotational kinetic energy and angular momentum.

	CO-6. To understand the theorems of inertia like parallel axis theorem and perpendicular axis theorem. **CO-7**. Find the moments of inertia of regular bodie.
Unit 5 Relativistic mechanics and earlier development in physics	**CO-1.** Discuss the Galilean and Lorenz Transformations. **CO-2**. Discuss the Michelson- Morley Experiment. **CO-3.** To understand the Special Theory of Relativity **CO-4**. Establish the relation between rest mass and moving mass, mass and energy, length contraction and addition of velocities. **CO-5.** To study the relativistic Transformation of frequency and wave number.

Course Outcomes B. Sc Physics

B. sc Ist year (Paper IInd)

Course	**Outcomes** After completion of these courses students should be able to;
Unit 1 Thermodynamics-I	**CO-1.** To know the terms thermodynamic system, thermodynamic coordinates, equation of state, equilibrium, thermal equilibrium, internal energy. **CO-2**. To study the laws of thermodynamics and its applications. **CO-3.** To study the Reversible and Irreversible Process. **CO-4.** To study the heat engine and its Efficieny. **CO-5.** To study Carnot Cycle and its efficiency. **CO-6**. To study the Clausius-Clapeyperon Latent Heat equation. **CO-7**. To study diesel engine
Unit 2 Thermodynamics-II	**CO-1.** Study the concept of Entropy and disorder. **CO-2**. Second law of thermodynamics in terms of entropy. **CO-3.** To study the Zero point energy. **CO-4.** To study the Kelvin's thermodynamic Scale of temperature.

	CO-5. To study the thermodynamic relations.
Unit 3 Statistical Physics-I	**CO-1**. To study Ensemble, Micro-canonical Ensemble and Grand-canonical Ensemble. **CO-2**. Know the concept of probability in statistical mechanics. **CO-3.** To understand Principle of Equal a Priory Probability. **CO-4.** To understand the concept of Phase Space. **CO-5.** To study the equilibrium between two systems in thermal contact. **CO-6.** To study the Boltzmann Entropy probability relations and Boltzmann Canonical distribution law and its applications. **CO-7.** To study the thermo-dynamical potentials. **CO-8.** To study the Gibbs-Helmholtz Equation.
Unit 4 Statistical Physics-II	**CO-1**.to study phase space and probable distribution of no. of particles. **CO-2** to study boltzman's partition function and its various applications. **CO-3** to study applications of statistics in thermodynamics. **CO-4** To study difference between classical and quantum statistics such as; ● Maxwell's- Boltzman statistics ● Bose- Einstein's statistics ● Fermi-Dirac Statistics **CO-5** To study Fermi levels and Fermi energy.
Unit 5 Contribution of Physicists	**CO-1** To know about achievements of various scientists such as ● S.N. Bose ● Boltzman ● Einstein ● Planck ● Bohr ● Fermi etc.
B. sc. Second year (physics) **Paper-I Optics**	

Unit-1 Geometrical optics	**CO-1**. To understand the reflection and refraction of light (Fermt'sprinciple) **CO-2**. To know about dispertion and dispersive power and study the lens formula. **CO**-3. To study the different types of lenses.
Unit-2 Interference of light	**CO-1**. To know about the principle of superposition. **CO-2**. To understand about the interference of light. **CO-3**. To study the different sources for coherence conditions. **CO-4**. To study the applications of interference of light such as- Michelson's interferometer, Fabry Perot interferometer, Etalon and Newton's Ring.
Unit-3 Diffraction of light	**CO-1**. To understand basics of diffraction of light and its classification. **CO-2**. To understand diffraction at slit, circular aperture and circular discand their mathematical interpretation. **CO-3**. To know the Rayleigh criterion of resolution of images. **CO-4**. To know the diffraction at n parallel slits and intensity distribution (plane diffraction grating). **CO-5**. To know the resolving power of Telescope, microscope, grating andprism. **CO-6**. To compare resolving power of grating with resolving power of Prismand Fabry Parot etalon.
Unit-4 polarisation	**CO-1**. To know the polarisation of electromagnetic waves, transversenature of light waves. **CO-2**. To know the production and analysis of plane polarised light. **CO-3**. To know the description of linear, circular and elliptical polarisation. **CO-4**. To Understand the propagation of electromagnetic waves inanisotropic medium. **CO-5. To** know the uni axial and biaxial crystals. **CO-6.** To understand the dielectric tensor. **CO-7.** To know the double refraction, Huygen's principle, ordinary and extra ordinary refractive indices. CO-8. To know the Fresnels's formula, to know the light propagation of uniaxial crystal, Nicol Prism.

	CO-9. To know the production of circularly and elliptically polarised light. CO-10. To study the babinet compansator and its applications. CO-11. To know the optical rotation, optical rotation in liquids and its measurement through polarimeter.
Unit-5 Lasers and Photo sensors	**CO-1.** To know the history of Laser, characteristics of laser light. **CO-2.** To know the Einstein's predictions, relationship between Einstein's coefficients. **CO-3.** To know the pumping schemes, resonators and different types of LASER such as RUBY, He- Ne Lasers and its applications. **CO-4.** To understand the principles of Holografy. **CO-5.** To understand the working of PHOTO-DIOD, PHOTO-TRANSISTORS, and PHOTO-MULTIPLIERS.
B. sc. Second year (physics) **Paper-II Electrostatics, magneto statics and electrodynamics**	
Unit-1 **electrostatics**	**CO-1**. To study Coulomb's law. **CO-2**. To study electric field for different charge distributions. **CO-3**. Work done on charge in electric field. **CO-4**. To study the relation between the electric field and electric poteitial. **CO-5. To** study Guass's law and its applications. **CO-6.** To study the various capacitors and its applications. **CO-7.** To know about the Polarisation vector **P,** relation between **D, P and E.** CO-8. Claussius-Mollotti equation.
Unit-2 magnetostatics	**CO-1**. To study the Lorentz force and its applications. **CO-2**. To study the force on current carrying conductor in uniform magnetic field. **CO-3**. To study the torque on a current loop. **CO-4**. To study the magnetic dipole moment, angular momentum and gyro magnetic ratio.

	CO-5. To study Biotsevert law, and its applications. **CO-6.** To study the Ampere's circuital law and its applications. **CO-7.** To study the field due to magnetic dipoles, free and bound currents, magnetisation current. **CO-8.** To study the relationship between **B, H and J.**
Unit-3 Current electricity and Bio electricity.	**CO-1**. To study steady and non steady currents and continuity equations. **CO-2**. To study Kirchhoff's laws and its applications. **CO-3**. To study the growth and decay of current in LR, CR and LCR circuits. **CO-4**. To study the different types of AC circuits and its problems. **CO-5.** To study the electricity observed in living organism and origin of bioelectricity.
Unit-4 Motion of charged particles in electric and magnetic field.	**CO-1**. To Motion of charged particle in electric field and study of electron gun, discharge tube and linear accelerators and CRO. **CO-2**. To study the transverse magnetic field and its applications. **CO-3**. To study the mutually perpendicular and parallel electric and magnetic field and their applications.
Unit-5 electrodynamics	**CO-1**. To study the electromagnetic induction, Faradays laws, self and mutual induction, transformer. **CO-2**. To study the Maxwell's displacement current. **CO-3**. To study the Maxwell's equations. **CO-4**. To study the electromagnetic field energy density, and Poynting vector. **CO-5. To** study the electromagnetic wave equations in different media. **CO-6.** To study the reflection, refraction, polarisation and total internal reflection of electromagnetic radiation. **CO-7.** To study the reflection and refraction by ionosphere.

Bsc III Physics Paper I

QUANTUM MECHANICS AND SPECTROSCOPY

Unit 1 Quantum mechanics 1	● To establish the connection between classical mechanics and quantum mechanicssuch as photoelectric effect and specific heat of solids at low temperature ● To know about the dual nature of light. ● To study the schrodinger equation finding the probability of a particle in given conditions Heisenberg uncertainty principle wave particle duality
Unit 2 Quantum mechanics 2	● To study one dimensional potential well and barrier ● Reflection and transmission coefficient of a rectangular barrier ● To study the quantum phenomenon of tunneling and alpha decay ● To study the one dimensional simple harmonic oscillator problem and to find the eigenvalue from hermit differential ● To study a particle in spherically symmetric potential ● To study the particle in a three dimensional box, angular momentum and properties of Paoli spin matrices
Unit 3 atomic spectroscopy	● To study quantum numbers model and selection rules stern gerlachexperiment ● To explain spin as a intrinsic quantum number ● To study orbital angular momentum fine structure total angular momentumand Pauli exclusion principle ● To study the symmetric and antisymmetric wave functions ● To study the atomic shell model ● To study spin orbit coupling LS and JJ coupling ● To study the characteristics of x-rays and mausolus law
Unit 4 molecular spectroscopy	● To study the various types of spectra rotational spectra intensity of spectrallines and the determination of bond distance of diatomic molecules ● To study the isotope effect ● To study the zero point energy ● To study Raman effect stokes and antistokes lines and their intensitydifference ● To study the born oppenheimer approximation ● To study the franckcondon principle singlet and triplet States ● To study the fluorescence and phosphorescence ● Introduction to the the laser Raman spectroscopy

	● To study the elementary concept and applications to NMR and EPR
Unit 5 nuclear physics and elementary particles	● To study the basic properties of nucleus such as set size mass and charge of the nucleus ● To study the stability of the nucleus and binding energy ● To study the alpha particle spectra such as velocity and energy of alpha particles geigernuttall law ● To study the nature of the beta spectra the neutrino and its physics ● To study the positron emission and electron capture selection rules beta absorption and range of the beta particles ● To study the nuclear reaction cross section examples of different types of reaction and their characteristics ● to study the compound nucleus postulates of compound nuclear reaction semi empirical mass formula ● To study the different types of models like shell model liquid drop model ● To study the classification of elementary particles and their interactions - conservation laws quark structure of hydra elementary ideas about unification of forces

B sc III Paper II

SOLID STATE PHYSICS AND ELECTRONIC DEVICES

Unit 1 Solid state physics 1	● To study the crystal structure and bonding - crystalline and amorphous solids translational symmetry lattice and bases unit cell reciprocal lattice fundamental types of lattice ● Crystal structure 2D and 3D. Miller indices ● To study Laue and Bragg equations ● To determine the crystal structure with x-rays by x-ray spectrometer ● To band theory of solids periodic potential and Blochs theorem ● To study qualitatively the Kronig-Penny model
Unit 2 Solid state physics 2	● Specific heat of solids by Dulong and Petit's law, Einstein's theory and divide theory of specific heat of solids. ● To study the specific heat of electron, wiedemann Franz law ● To study hall effect ● To study the diapera and ferromagnetic substances ● Classical langevin theory of dia and paramagnetic substances ● Weiss theory of ferromagnetism and ferromagnetic domains ● Today's cuss the Hysteresiss loop ● To study the superconductor of materials at higher temperature, meissner effect etc

Unit 3 Semiconductor devices 1	● To study the pure and impure semiconductor ● To study energy level diagram of p and n type semiconductor ● To study forward biasing and reverse biasing ● To study the different type of diodes like PN junction diode, schottky diode, zener diode, tunnel diode etc ● To study the CB CC and CE mod of NPN and PNP transistors ● To study the characteristics of a transistor
Unit 4 Semiconductor devices 2	● To study the amplifiers of bipolar junction transistors in CB CC and CE configuration ● To study the Q point ● To study the input impedance output impedance, current gain, voltage gain, power gain ● To study the class A, B and C type of amplifiers ● To study RC coupled amplifier, class B push pull amplifier ● To study the feedback amplifiers, voltage feedback and current feedback ● To study the voltage series negative feedback ● To study the oscillators barkhausen criteria of oscillation ● To study the colpitt oscillator, RC phase shift oscillator ● To study the amplitude, phase and frequency modulation
Unit 5 Nano materials	● To introduce the nano materials ● To study Structure and size dependence properties of 3D 2D 1D and 0D materials ● To study the surface and interface effect of nanomaterials ● Modelling of quantum size effect ● To study the synthesis of nanoparticles - bottom up and top down approach ● To study the Wet chemical method ● To study themetal and semiconducting nanomaterials ● To study the essential difference in structural and properties of bulk and nanomateria ● To study the naturally occurring nano materials

B.A I st Year

COURSE OUTCOMES

Paper : I Basic Principles of Political Science (I)

1. Understand basic Principles, Definations of Political Science.
2. Interdisciplanary aspesct of Political science, its relation with other social sciences such as History, Sociology, Economics, Geography etc.
3. Know the salient features of state nation, Nationality, Soverignity Citizenship and Civil Society.
4. Acquaint with Rights and Duties, Liberty & Equality, Justice.
5. Understand the basic Philosophy of Indian Constitution.
6. Identify Various types of Government Unitary & Federal, Parilamentary and Presidential.
7. Evaluates the theory of Democracy.
8. Evalutes the evolution and functionary of political parties and Pressure Groups.

B.A I st Year

COURSE OUTCOMES

Pepar II : Indian Government and Politics (II) Student Enable to

1. Understand the philosophy of Indian constitution.
2. Appreciate the various phases of Indian national movement.
3. Know the fundamental rights and duties and directive principles of state polioy.
4. Evaluate the Functioniry and structural information regarding Indian parliament.
5. Accquaint with Union and state Executive & legislature.
6. Understand salient features of the supreme count & election commission.
7. Identify how electoral rules in india affects election outcomes.
8. Understand Right to information, Judicial activism.

B.A II st Year

COURSE OUTCOMES

Pepar I : Representative Political Thinkers Student Enable to

1. Salient features of manu & Kautilya Thoughts.

2. Examine Political thought based on works of Plato, Aristotle, Machiavelli, Hobbes, Locke, Rouseau

3. Compare and contrasts the concept of Justice, Sovereignty, Equalitym, Liberty & Citizenship in the work of Hobbes, Loke, Rousseau & Machiavelli.

4. Explain Karl mark's world view, his critique of democracy and capitalism.

5. Explain Utilitarianism and how it apply to Society and the state; views of benthem and J.S. Mill.

6. Understand thoughts of Indian Political Thinkers with special ref. to Gandhi, Ambedkar, Lohiya and Pt. Upadhyay.

B.A II nd Year

COURSE OUTCOMES

Pepar (II) Constitutions of major contries . Students enanle to

1. Understand salient features of british patily & American polity.
2. Knows salient charcterstice of swiss ching and Pakistan .
3. Understand featute of nepal ,Bhutan and afganistan constitution
4. Understand features of mojor countries political parties.
5. Understand the significance of the comparative methodology.

B.A III th Year

COURSE OUTCOMES

Paper (I) Indian foreign policy Student enables to

1. Knows development of Indian foreign policy and its principle & determinants.

2. Indentify and assess india's relation with its neighbors, Nepal , Bhutan, Srilanka , Bangladesh , Afghanistan , pak

3. Knows india's reletion with world super power: American, Russia and china .

4. Understand various types of regional organization and their in regional cooperation and prosperity.

5. Enaluate contemporary international issues, globalization , human rights environment , disarmament, terrorism.

B.A III th Year

COURSE OUTCOMES

Pepar (II) Public Administration Student enables to

1. Basic Concepts of Public Administration.
2. Understand Organization Principles and its implementation.
3. Knows Personnel Administration such as Training, Promotion, Recruitment.
4. Knows Financial Administration like Budget, Accounts and Auditing.
5. Identify and Assess Development Administration.
6. Compare and Contrasts Role of burequcracy, Panchayat Raj Institutions.
7. Evaluate Lokpal and Lokayukt: Good Governance and E-Governance.

Program Specific Outcomes of Sociology

Specific Outcomes of B.A. Sociology are as follow:-

1. It develops the deeper insight towards the society and social issues.
2. It develops moral value and sense of responsibilities in students.
3. To prepare the students for scientific research in sociology
4. It develops analytical ability.
5. This programme lays foundation for further study in sociology, social work, rural development programme and other allied subjects.

Course Outcomes of B.A. Sociology

Studying the course students will able to understand:-

B. A. First Year concepts of Sociology-

1. Define sociology and demonstrate nature, scope, development, significance of sociology.
2. Know the basic social concepts- like society, community, and groups institute culture.
3. Explain the process of socialization, stratification, social control and mobility.
4. Enable to understand social change.

Indian Society

1. Learn about the religion, Varna Ashrams, karma Sanskar.
2. Know the basic social institutions like caste, family, marriage, kinship.
3. Understand and analyze the structure of Indian society.
4. Know the problems faced by family and society.

B. A. Second Year Social Processes and change

1. Demonstrate social structure and social function.
2. Students enable to understand different processes of social organization and social disorganization.
3. Develop an understanding about trends of social movements, urbanization, modernization, industrialization.
4. Students enable to understand different acts like domestic violence, atrocities, human right, right to information act.

Rural Urban and Tribal Society

1. Understand and analyze social economic and political aspects of rural society.
2. Know the problems faced by urban society
3. Demonstrate impact of information technology on society.
4. Students learn about the life style of tribes and enable to understand its problems.

Final Year B.A. Basic Sociological Thinkers

Studying the course students will able to: -

1. Define sociological theory understand its features.
2. Know the contribution of foreign and Indian sociologist in the development of sociological thought.
3. Know the contribution of founding fathers of sociology in developing sociology as an academic discipline.

Research methodology

1. Define meaning, aims, significance, types of social research and survey.
2. Students know how to collect and analyze data and how to write a field report.
3. Define different methods and tools of social research.
4. Learn about the graphical and diagrammatical presentation.
5. Able to understand about measurement of central tendencies.

Department of Urdu Outcomes
Programme Outcomes: B.A. Urdu
B.A. I year

Q. 1 उर्दू नज्म और नस्र के मुताल्ले के ज़रिये बच्चो में उर्दू जबान व अदब की तफहीम में इजाफा हुआ|

Q. 2 सिंफ ए शायरी के जरिये जबान व अदब की तश्हीर में इजाफा हुआ |

Q. 3 तुल्बा में उर्दू नस्र के मुताल्ले का रुजहान पैदा हुआ साथ ही मुख्तलिफ असनाफए नस्र के इरतिका की तफहीम में इजाफा हुआ |

Q. 4 मुख्तलिफ नस्र निगारो की नस्र के ज़रिये तुल्बा को जबान व अदब और उसकी तारीख से रोशनाई हुई |

SPECIFIC OUT COMES

तुल्बा में अख्लाकी समाजी और कौमी इकदार के जरिये आपसी भाई चारा , कौमी हम अहंगी के अनासिर में इजाफा हुआ |

COURSE OUTCOMES

1. उर्दू गज़ल के ज़रिये जबान व अदब कि नस्र व इशाअत में इजाफा हुआ |
2. तुल्बा में उर्दू गजल की तफहीम और अशआर को ज़बानी बोलने का शऊर पैदा हुआ|
3. में ग़ज़ल गो शोअरा के हयात कारनामो और उनकी शायरी के तनाजूर में तारीखी व अदबी शनासाइ में इज़ाफा हुआ|
4. जदीद ग़ज़ल गोई के मुतालिक मालूमात में इजाफा दर्ज किये गए |
5. सवानेह, खाके , इन्शाइया के इल्म में इजाफे के साथ उस्दु नस्र निगारी के फरोग में दिलचस्पी पैदा हुई |
6. तुल्बा में नस्री असनाफ का इल्म हुआ , जुमले मुहावरे और इकतेबासात की तफहीम की सतह बुलन्दतर हुई |

Department of Urdu Outcomes

Programme Outcomes: B.A. Urdu

B.A. II Year

Q.1 उर्दू शायरी और नस्र की मुख्तलिफ असनाफ के मुताल्ले के ज़रिए तुल्बा में जबान व अदब के मुतालिक गर्म जोशी और तफहीम में इजाफा हुआ |

Q.2 शायरी की सिन्फ़ नज़्म निगारी और मसनवीयात में मुताल्ले के ज़रिए उर्दू ज़बान व अदब के इल्म में इज़ाफा हुआ |

Q.3 उर्दू नस्र की इब्तेदाई तारीख और उसकी मुख्तलिफ असनाफ में इजाफा हुआ |

Q.4 मुख्तलिफ नज़्म निगारो , मसनवी निगारो दास्तान नवीसो , नाविल निगारो और अफसाना निगारो व हयात व कारनामो के तारीखी व असरी तनाज़ुर के इल्म में इज़ाफा हुआ|

SPECIFIC OUT COMES

तूल्बा में ज़बान व अदब के जरिये अख्लाकी समाजी और कौमी इकदार के ज़रिये आपसी भाईचारे ; कौमी हम आहंगी के अनासिर में इजाफा हुआ |

COURSE OUTCOMES

Q. 1 उर्दू दास्तान, नाविल और अफसाना की तफहीम हुई मजकुरह कोर्स के जरिये ज़बान व अदब की तशहीर व नशर व इशाअत के बाब खुले ?

Q. 2 तूल्बा में मजकुरा नशर के जरिये अलफ़ाज़ का इस्तेमाल, जुमले , मुहावरे और इक्तेबासात को समझने का शौक पैदा हुआ और उनके इल्म में इजाफा दिखाई दिया ?

Q. 3 दास्तान, नाविल, अफसाना के तारीखी पस मंजर के साथ असरी आगाही में भी इजाफा देखने में आया है ?

Q. 4 उर्दू नज्म की तारीख उसके मुख्तलिफ अदवार उनके तारीखी पस मंजर और मौजूदा सूरत ए हाल से तूल्बा को आगाही हुई ?

Q. 5 मसनवी की इब्तिदा इरतिका और मजकुरा के मुताल्लिक तूल्बा के इल्म में इजाफा हुआ ?

Q. 6 तूल्बा में नसरी अदब,नज्म निगारो , मसनवी निगारो के कारनामो और उनके तारीखी पस मंजर से आगाही में इजाफा हुआ ?

Department of Urdu

Outcomes

Programme Outcomes: B.A. Urdu

B.A. III Year

Programme Outcomes

Q. 1 तूल्बा में उमूमी तौर पर उर्दू नस्र व नज्म के मुताल्ले में इजाफा साथ ही ज़बान व अदब की तफहीम से आगाही हुई |

Q. 2 नस्र की मुख्तलिफ असनाफ के साथ नज्म की असनाफ की जानकारी में इजाफा हुआ |

Q. 3 तूल्बा नस्र व नज्म की असनाफ से फैजयाब हुए |

Q. 4 नस्र व नज्म के असनाफ की आम मालूमात के साथ कोर्स की मालूमात के जरिये अपने इल्म में इजाफा कर सके |

SPECIFIC OUT COMES

Q. 1 तूल्बा मजकुरा कोर्स के जरिये उर्दू ज़बान व अदब की नसरी और मंजुम अदबी तारीख से रोशनास हुए - उनके इल्म में इजाफा दिखाई दिया -

COURSE OUTCOMES

Q. 1 तूल्बा में उर्दू खुतूत निगारी के इल्म में और उसकी तारीखी हकीकत से आगाह हुए |

Q. 2 तूल्बा में खुतूत निगारी के ज़ोक में इजाफा हुआ |

Q. 3 उर्दू मजमून निगारी के उसूल व ज़ाब्ते से तूल्बा आगाह हुए |

Q. 4 मुख्तलिफ इकसाम के अदबी तनकीदी और तहकीकी मज़ामीन को समझते उनके तारीखी पस मंजर की गहराई में जाने के काबिल हुए |

Q. 5 मरासी व कशीदा के इरतिका से रोशनास हुए |

Q. 6 मुखतलिफ मकतूब निगारो , इन्शा परदाज़ो , मर्सिया निगारो, कशीदा निगारो के सवाहनी खाके के साथ उनके अदबी व तारीखी पस मंजर से रोशनास हुए |

Course Outcomes B.sc. Zoology

Course outcomes – 1st year

Animal Systematic and Diversity and Non-Choards Paper I st

After completion of these courses students should be able to:-

Co.1- Understand the Zoological nomenclature- International code.

Co.2 - To understand about the lower and higer non-chordates.

Co.3- To study external and internal characters of nonchoradates.

C0.4- To understand the various internal system like Digestive, Excretory, Respiratry, Ervous and Reporoductive system of nonchordates with the help of chart and models.

Co.5- To understand the economic importance of protozoan,annelid, arthropods and echinoderms.

Co.6- To understand the economic importance of minor phyla.

Cell Biology Paper 2nd

Co.1- To understand the scope of cell biology, main Distinguish character of plant and animal cell.

Co.2- To understand the whole cell organelles with their structure and function.

Co.3- To understand the cell cycle and known the importance of various cells in body of organisms.

Co-4- To understand the nucleus different types of chromosome.

Co-5- To understand the different stages of developmental biology.

Co.6- To study and understand of development of frog and chick.

Course Outcomes B.sc. Zoology

2nd year

Vertebrates of Evoluction

Co.1- To understand about the origin & systematic position of chordates.

Co.2- To study external and internal characters of chordates.

Co.3- To understand about comparative account of different system as well as Skeletion, Digestive system. Respiratotry system, Circulatory system and urinogenital system of different phyla of vertebrate.

Co.4- To understand origin of life evedances and theory of organic evolution.

Co.5- To understand Geological time cycle. Geographical distribution and methods and classification of animal distribution.

Co.6- To understand fossile, evolution of man and study of extinct forms like Dinosaurs and Archaeopteryx.

Animal Physiology and Biochemistry

1. To understand the importance of physiology and Bio-chemistry.
2. To study Digestive, Respiratory, Excretory and Nervous system of Vertebrate.
3. To study and understand the. Process of metabolism like as protein, carbohydrate and lipid.
4. To study enzyme and its regulatory mechanism end role of vitamins.
5. To study physiology of nerve. Impulse conduction and theory of muscles contraction and its biochemistry.
6. To understand structure and function of different endocrine glands as well as Pituitary, Thyroid, Adrinal, Parathyroid and Thymus.

Course Outcomes B.sc. Zoology

3rd year 1st paper

Genetics

1. To understand Heredity and Genetic material.
2. To study Structure, Moleculer organization and DNA Replication and Prokaryotes.
3. To study and understands Transcriphos Translation in Prokaryotes.
4. To study Genetic code and Gene Expresion.
5. To study linkage, crossing over, sex determination, sex linked inheritance and mutation.
6. To understand detail study of human genetics and genetics diseases like sickle Cell anemia, Albinism and Thalasmia.
7. To understand Recombination DNA technology, PCR, DNA, Finger printing and Genetherapy.

Ecology and Applied Zoology

1. To understand Concept of Ecology like as energy flow, component of Ecosystem, energy flow in Ecosystem, biogeochemical cycle and Population Concept.
2. To understand habitat ecology (fresh water,marine teristrial) and biodiversity with special reference to forest.
3. To understand wild life and Environment.
4. To study pollution urbanization and effect of human population on environment.
5. To study Aquaculture, like as Prawn culture Pearl culture, Frog culture and Carp culture.
6. To study Economic entomology like as sericulture, apiculture and lacculture.
7. To study common Pest and biological control of insect pest.

Molecular cell Biology and Genetics

1. To Understand Molecular composition Functions of Biomembrane Cell-Cell Signaling, Cell, Cell Adhesion and Communication.
2. To study sex Determination in Drosophila and Mammals Cryogenetic of human Chromosomes Human Genome Project (HGP) and Trangenic animals and their application.
3. To Understand Genetic disease and Genomics,Gene therapy Genetic counseling, Genetic screening and Gene libraries.

III SEM Morphology

Comparative anatomy of vertebrates

1. To understand origin evolution morphology and concept of protochordats chordate.
2. To understand competetive anatomy of digerative respiratory, circulatory and nervous system of vertebrates.
3. Evalutions of Heart, Arotic arches Portal system and urinogenital system.
4. To understand comperative account of diff receptors Orgenus of vertebrales.
5. To understand origin, evolution and general organizations of Ostraco cyclostomes, Gnathostomes Elasmobranchil Dipros Holocephalai & crossopterygi

Limnology

1. To understand limnology Definition, historical development and scope of Limnology, Methods of water quality Bioindicators.
2. To study physio chemical characteristics Abiotic factors
3. to study of biology aquatic flora & fauna
4. pollution, aquatic resources & Their conservation.

Eco- Toxicology

1. To study of general principles of environmen communities of environment Ecosystem, environmental conservation.
2. To understand productivity production & analysis. recycling and reuse technology, remote sensing.
3. To study kinds of environmental pollution & their control method.
4. toxicology – basic concept , principle ,public health hazands agrochemical use & misuse alternatives.

Zoology aquaculture

1. To understand Aquaculture – Hurlogy , fishey resources of India & MP in particular.

2. To study fish culture - mono poly & composite fish culture.

3. fish breeding in artificial and natural condition .

4. To understand fresh water fish farm engineering, different types of fish pond.

5. Fish preservation, by product and fish industry.

IV SEM

Animal behaviour and neurophysiology	1. To understand Ethology, Perception of environment. 2. To understand naural & hormonal control of behaviour Motivation Communication 3. To Ecological accept and behaviour, learning and memory. 4. To study reproductive behaviour, social behaviour Receptor phyriology.
Gamete biology,development and differentation	1. To study of development and differentiation of Gonads. 2. To understand ovarian follicular growth & differently multiple ovalution embryo transfer technology (IVF). 3. To study Hormonal Regulation of Ovalution, Pregnancy & Parturition, cry Preservation and Placenta. 4. To understand cell commitment and Differention Creating new cell types, embryonic Stem cells, Stem cell Disorders.
Ichthyology(fish) structure and Function	1. origin, evolution and classification of fishes. 2. To understand fish integument, Digestive system Respiratory system, Excretory system and osmoregulatory system in fishes. 3. Receptor organ, reproductive system and development of fishes. 4. To study Deep Sea Adaption, Hill Stream Adaption Migration and venomous fishes.