Dr. Rafiq Zakaria College for Women, Aurangabad

Course outcomes

BSc.

Subject: Chemistry

Name of Paper	Course Outcomes
I Inorganic Chemistry	• After completion of this course students able to: • To understand atomic structure, quantum numbers, Heisenberg uncertainty principle, shapes of s, p, d orbitals. Aufbau and Pauli exclusion principles. Hund's multiplicity rule. • To explain periodic properties, trends in periodic table and application in predicting and explaining the chemical behavior. • To understand comparative study, diagonal relationship, solvation and complexation tendencies including their functions in biosystems. • Know interhalogen compounds and its types.
II Organic Chemistry	• Know structure and reactivity relationship. • To explain nomenclature and structures of compounds. • To understand reactivity and mechanism of organic reactions. • To explain stereo chemistry. • To understand chemistry of alkanes, alkenes, alkynes, arenes and aryl halides their reactivity, aromaticity, chemical & biological recognition.
Sem II	
IV Physical Chemistry	• To understand mathematical concepts like derivation, integration, curve sketching (graphical representation) use of logarithm is there. • To explain state of matter (Gaseous, Liquid, Solid and Colloidal state): States of matter explained by using different laws. Nature of liquids, bonding present in it. Liquid crystals and its types. Explains types of solids, crystal structure, and determination of crystal structure. • Explanation of colloidal state of matter by different examples, types of colloidal system. • Write an expression for rate constant K by studying chemical kinetics. • Investigate how different experimental conditions can

	influence.
V Inorganic Chemistry	• To understand chemistry of nobel gases. • To understand types of bonding in molecules. • To solve problems of volumetric analysis. • To understand theory of Nuclear Chemistry.
Sem III	
P-VII Organic Chemistry	• To explain chemistry of Alcohol, Phenol, Aldehyde-Ketone and Carboxylic acids their reactivity and applications. • Chemistry of Organic compounds of Nitrogen its chemical reactions.
P-VIII Physical Chemistry	• Know the relation between heat and other forms of energy. • To Explain First law of thermodynamics. • Know the key concepts of internal energy and heat. • To understand second law of thermodynamics able to explain the concept of entropy. • To understand the chemical equilibrium. • To solve the problems of chemical equilibrium.
Sem IV	
P-X Inorganic Chemistry	• To understand chemistry of d-block and f-bolck elements. • To understand and co-ordinate bonding in metal and ligands. • Know the meaning of various terms involved in co-ordination chemistry. • To understand Werner's formulation of complexes and identify the types of valencies. • Know the applications and limitations of VBT • Understand chemistry of acids and bases. • Know the theory of non-aqueous solvents.
P-XI Physical Chemistry	• To understand phase equilibrium • Know the meaning of phase, component and degree of freedom. • To understand the relation between electric and chemical phenomenon by studying electrochemistry.
Sem V	
P-XIII Physical Chemistry	• To understand structure of atom and nature of bond formation by studying quantum mechanics. • To interpret the structure of molecules by using spectroscopic techniques. • To understand chemical effects of light. • Explains fluorescence, phosphorescence phenomenon. • To explain applications photochemistry.

	• To predict the molecular structure by using physical properties like dipole moment, optical activity, magnetism. • To define nanomaterial their applications and preparations.
P-XIV Organic Chemistry	• To use spectroscopic methods in structure determination. • To define chemical shift, shielding deshielding. • To understand application and preparation of organo metallic compounds. • To know chemistry of Fat, oil & Detergent. • To manufacture soaps and food preservatives.
Sem VI	
P-XVI Inorganic Chemistry	• To learn metal-ligand bonding in transition metal complexes. • To explain electronic spectra of transition metal Complexes. • To understand reactivity and structures of organometallic compounds. • To learn the concepts of bioinorganic chemistry. • To understand the chromatographic techniques.
PXVII Organic Chemistry	• To understand reactions of heterocyclic compounds. • To know carbohydrates and its types. • To study types and applications of synthetic polymers. • To understand concepts of synthetic dyes and drugs.
Analytical Chemistry	
Sem I	
P-I Fundamentals of analytical chemistry	• Scope and Importance of Analytical Chemistry: Useful tool for all human beings. • Sampling of Analytical samples: Quality control department of pharma, Chem, Agro, Food, etc. • Reagents Solvents and their Classification: In distillation plant, Homeopathic preparation • Working in Analytical Chemistry: Quality Control of Industries • Digital electronics and Computers: As a tool in laboratories
P-II Basic concepts of analytical chemistry	• Balance: Weighing in laboratory, pharmaceutical analysis, Research centre • Chemical Apparatus and Laboratory Note Book for Analytical Chemistry: In Quality control laboratories, bulk drug manufacturing, forensic laboratories • Chemical Calculations: All chemical pharmaceutical

	laboratories, research institutes • Common Apparatus: All chemical pharmaceutical laboratories, research institutes • Acid-Base Equilibria: Surgical preparations
Sem II	
P-III Statistical treatment & modern methods of analysis	• Data Handling : Mathematical tool for chemists • Chromatography: As a tool in pharmaceutical industry, chemical, agriculture, pesticide, forensic laboratory etc • Electrophoresis: Protein analysis, separation of compounds • Flame Photometry: Estimation of alkali metals • Environmental Pollution: Analysis of industrial waste, Vehicle effluent control, Waste management
P-VI Classical & spectral methods of analysis	• Titrimetric Methods of Analysis: As a tool in quality control department • Gravimetric Analysis: Metallurgical industry • Spectral Method of Analysis: Research centres, pharmaceutical industries • Precipitation Titration: As a tool in quality control department • Complexometric Titrations & Some basic concepts of redox titrations: In agricultural industries, Biochemical industries
Sem:III	
P-VII Laboratory Techniques: Inorganic and Organic Analysis	• Theory of Redox titration and Iodometric titration: Metallurgical industries • Complexometric titration: Water Analysis • Organic Estimations: Food & Chemical industries • Common Laboratory Techniques: As a tool for all laboratories • Theory of Redox titration and Iodometric titration:Metallurgical industries
P-VIII Advance Analytical Techniques	• To understand Solvent Extraction, Gas Chromatography, Column Chromatography, Biotechnological Companies • Ion Exchange Chromatography: Water purification, Biomedical preparation • Affinity Chromatography:Biochemical industries
Sem:IV	

P-XI Instrumental methods of Analysis-I	• Conductance measurements: Water Analysis, Soil Analysis • Potentiometry: Pathological lab • High Frequency Titrations: Metal industires • Atomic Absorption Spectroscopy: Ayurvedic pharmulation • Nephlometry:Distilleries
P-XII Instrumental methods of Analysis-II	• Polarography: Drug, Metal industries • Physical methods of analysis: Organic laboratories • Thermal methods of analysis: In Metallurgical industries • Radio chemical methods of analysis: In Medical preparations, Pharmaceutical industries, Fluorimetry: Paint industries
Sem:V	
P-XV Modern Techniques in Analysis	• I.R. Spectroscopy: Research study, Pharmaceutical industries, Determination of functional group, probable structure of compounds • NMR-Spectroscopy: Research centres, determination of protons Mass Spectroscopy: Determination of mass of new compounds in Research centre/pharma chemical laboratories • Fluorescence Spectroscopy: Surface analysis, life of the geochemical, Archeological department
P-XVI Industrial, Microbiological & Biochemical Analysis	• Industrial Analysis: Analysis of waste management, bulk drug analysis • Microbiological analysis: Microbial count in water i.e. E. Coli, etc • Biochemical analysis: Estimation of Proteins, Carbohydrates, Blood Chemistry
Sem:VI	
P-XIX Applied Analytical Chemistry-I	• Inorganic Analysis: Estimation of metals, Non-metals etc. • Analysis of cement and coal: Estimation of Ca, Mg, Proximate analysis • Analysis of fertilizers: Estimation of Na, K, P • Environmental Analysis: Air sampling, Analysis of SO_x , NO_x , CO, Water Analysis, Waste and waste, Acid Rain: • water analysis, Estimation of BOD, COD, • Analysis of soil: Estimation of Na, K, P, Fe, pH, Water holding capacity
P-XX Applied Analytical Chemistry-II	• Introduction to food analysis: Food Industry, Food & Drugs Department • Analysis of food and food products: Bakery Products,

	Food Beverages • Pharmaceutical analysis: Analysis of Tablets, Capsules, Injections etc. • Clinical chemistry or analysis: Blood Analysis, Urine Analysis, Forensic Laboratory.
Physics	
Paper	**Course Outcome**
PHY 101 - Mechanics, Properties of Matter, Ultrasonics and Acoustics of Buildings	• Acceleration due to gravity can be determined by Kater's pendulum. • Newton's law of gravitation is the universal law helpful in studying classical mechanics. • Clears the concept of gravitational field and gravitational potential. • Helps to understand Universe. Elastic moduli can be calculated for different materials. • Basic relation between the three moduli is given. Physical property of elasticity of solid can be determined, Useful in physical analysis. • Helpful in determining the property of liquids. Designing of good acoustical structure, helpful in constructions of buildings. • Designing of ultrasonic generators and wide applications of ultrasonic waves in different fields or industries.
PHY 102 - Heat and Thermodynamics	• Concept of heat transfer is explained. • Different values of conductivities of metal are given. Ideal gas equation is modified to give Vander Waals equation, critical constants of a gas are defined, thermal conductivity and viscosity are explained on the basis of transport phenomenon, and different types of process like isothermal, adiabatic reversible, irreversible are explained along with work done equations. • Concept of heat engines and their efficiencies is introduced. Concept of entropy is explained. Maxwells thermodynamical relations along with their applications helps to determine other constants.
Sem II	
PHY 104 Geometrical and Physical Optics	• Cardinal points of an optical system is explained, • Huygen's eyepiece and Ramsden's eyepieces along with their cardinal points are given. • Newton's rings and Michealson's interferometer is explained and they are helpful in checking the plainness of optical surfaces.

	• Resolving power of instruments is defined, care can be taken while using the optical instruments to increase their resolving powers. • Phenomenon of polarization is explained in detail.
PHY 105 Electrostatics and Magnetostatics	• Differential operators are defined; Vector identities are given, helpful in studying mechanics. Coulomb law and Gauss law are introduced, • Polarization in dielectric is explained in detail. Different laws like Biot –Savart's and Amperes law are discussed, construction and working of Moving Coil ballistic galvanometer is discussed. • Growth and decay of current in the circuits like, LR, RC and LRC helps to understand the working of the components.
PHY 103 and PHY 106 Practical	• Develops the skill of the students, helps them in determining the Physical parameter of the matter. • Practical based on determining the moduli of elasticity helps them determine these values with different methods.
Sem III	
PHY 201 : Paper VII (Mathematical, Statistical Physics and Relativity)	• Differentiation and their types helps students to understand mechanics of a body. 1^{st} and 2^{nd} order differential equation are solved. • Baisc rules of statistical distribution are described. • Helps to understand Quantum concepts. • Need for quantum statistics, • Distribution laws like B.E. and F.D. are explained along with an example Frame of references is introduced, theory of relativity is explained in detail along with length contraction, time dilation and the famous Einstein's energy mass relation. Helps students to clear the concept of relative motion.
PHY 202 Paper VIII – Modern and Nuclear Physics	• Different cells that can generate current using Photoelectric effect is explained. Laws of Photoelectric effect are given. • X-ray production. Its characteristics and use is explained. • Helpful in understanding nuclear models and nuclear reactions. • Particle accelerators and various accelerators are explained. • Interested students can further continue their studies in

	nuclear Physics and can appear for exams of research centre like BARC, TIFR etc.
PHY 205 XI – General Electronics	• Helpful in the construction, working and characteristics of transistors, FET and MOSFET. • Helpful in understanding the various sensors that are developed by modifying the fabrication of transistors. • Helpful in understanding the operation of transistors, Various circuits with op-amp as adder, subtractor can be designed; amplifiers of different purpose can be designed. Oscillators, their principle and types are described. • Different types of oscillators and multivibrators circuit can be designed. Oscillators and multivibrators have wide applications. • Modulation, one of the key aspect of communication world is introduced, need for Modulation is explained.
PHY 206 Paper No. XII –Solid State Physics	• Helpful in understanding the crystal structure of the materials. Basic terms like unit cell, basis, and symmetry operations are made clear. • Concept of inter atomic forces and energies is made clear, types of bonding is useful to the students in understanding crystal structure. • Different theories regarding heat capacities help students to understand the thermal properties of solids. • Theories based on free electron property helps to understand certain natural phenomenon --- like electrical, thermal conductivity, Hall effect and its importance.
PHY 207 - Practical Paper No. XIII PHY 208 - Practical Paper No. XIV	• Theory and practical go side by side hence many of the theoretical concepts are made clear practically. • Learns to use instruments like polarimeter, Spectrometer, CRO. • Helpful in understanding the characteristics of active component of electronics. • Attempt is made to understand the designing of circuits like adder, subtractor, amplifiers and oscillators. • Develops research skill, numeracy and computation skills. • Helps develop critical thinking and problem solving ability.
V Sem	
PHY 301 - XV Classical and Quantum Mechanics	• Motion of an object can be expressed in terms of differential equations • Various examples of Lagrangian equations are given. • Failure of classical theory and planck's radiation law is

	expressed, • Photoelectric effect is explained by Quantum radiation law. • Dual nature of em radiation is introduced, Various experiments that establishes the nature are described. • Certain examples that verify the dual nature helps students to understand the concept. shows the quantised nature of the energy as well momentum of the matter wave. It is a good tool to understand the dual nature of wave and show its quantization.
PHY 302 Paper XVI : Electrodynamics	• Basic electrostatic laws are described. • The fundamental laws of electrodynamics, Maxwell's equations are explained with derivation. • This helps the students to understand the inter relation between electric and magnetic field. Helps in understanding the properties of EM waves. Very useful in understanding the EM waves as em waves are having wide applications in almost all the fields of life • EM waves help in passive as well as active remote sensing. • Interaction of em waves with matter gives rise to different phenomenon • Helpful in understanding these phenomenon.
PHY 305 Paper No. XIX Atomic, Molecular Physics and Laser.	• Helpful in understanding the spectra of materials, Line and band spectra is introduced. Crystal or molecular structure can be understood. • Can be employed as data Analyst. • Can work as Laser operator**.**
PHY 306 Paper No. XX Non-Conventional Energy Sources and Optical fiber.	• Importance of energy and how energy can be generated by different methods is described. Need of the hour. • Basic theory behind the working of solar cell and its characteristics helps students to understand its efficiency. • Optical fiber, their construction and working helps to understand how they are useful in communications**.**
Practical Papers (PHY 303 XVII + PHY 304 XVIII) Practical Papers (PHY 307 XXI + PHY 308 XXII)	• Helps to understand the properties of lasers. • Students learn to plot graphs using excel.
Botony	
Paper	**Course Outcome**

Paper-I Diversity of Cryptograms	• Students understand about basic primitive living organism that is smallest bacteria, lichen, fungi and algae. • To give information about lower plants and their life cycle. • Students Understand diversity among algae. • Students get knowledge about useful and harmful activities of algae. • Students understand biodiversity of their structure reproduction classification and life cycle. • Students get knowledge about the economic importance of fungi.
P-II -Morphology of Angiosperm	• Students understand morphological Structure of Plant basic body plan. • Students proper knowledge of plant part right from root stem leaves flower fruit and seed • Morphological aspect of plant is a key for the classification of plants • Students understand the Modification of root of angiosperm stem leaves. • Students can understand the vegetative and reproductive parts of plant. • Students learn the various types of fruits. Understand the mode of pollination.
Semester II paper V- Diversity of Cryptogams II	• Understand the morphological diversity of bryophytes. • Students understand the economic importance of bryophytes. • Students understand taxonomic position their occurrence thallus structure, reproduction of bryophytes.
Paper VI Histology Anatomy and Embryology.	• Students are able to understand about tissue histology their origin and function. • Students are known about Anatomical structure. • Students understand the embryological structure of their development. • Students and the various histological organisation and vascular bundles. • Students get information about the development of embryo to mature seed and original plant.
B.Sc Second year **Semester III Paper IX.** **Taxonomy of Angiosperms**.	• Plant classification gives information about plant to classify different families. • Plant description about morphological and reproductive sketch of plants and identify the different families with specific key character. • Herbarium techniques knowledge to help in

	identification of plants. 4.Students determine economic and medicinal plants in agriculture and medicine. • Students are able to know characteristic of various plants and classification of different plant groups to understand different taxonomic group and evolutionary. • Student understand Basic concept of taxonomy. • Students illustrate the type merits and demerits of various system of classification.
Paper -X Plant Ecology	• Students able to understand environmental problem along with finding solution. • Environmental principles that provides and in death understanding of our environment. • The scientific basis for understanding how environmental system work, population and wealth of our natural resource. Environmental educate pollution effects and control, monitoring and assessment of environment. • Understand the scope of environmental biology and come to know how ecosystem works. • Students understand how elements are in the environment by the biogeochemical cycle. • Students are able to identify the natural resources and importance of, national parks, sanctuaries and biosphere reserve. • Students understand by edaphic factor of environment. • Students know the botanical regions of India and vegetation types of India and Maharashtra. • Students understand plant communities and ecological adaptation in India. • Students understand the Food Chain and Food Web energy pyramid energy flow in ecosystem .Students understand the biogeochemical cycle.
IV Sem **Paper XIII. Gymnosperm and Utilization of Plants**	• Course will provide a comprehensive knowledge of plant of gymnosperm. • Student can describe silent feature and classification of gymnosperm. • Student reviews critically the biology and Fossil group of plants. • Students can identify the Fossil forms of gymnosperm. • Students understand the evolutionary significance of gymnosperm. • Students understand the role of plants in human welfare.

	• Students know importance of plants and plant products. • Students know about the utility of plant resource.
Paper XIV. Plant physiology	• Students understand the physiological mechanism of plants. • Students understand various biochemical pathways of plants. • This course provides nautical knowledge in Plant Structure and their function. • Student gets knowledge of different biochemical pathway. • Students are able to relate the characteristic structure and their function along with classification. • Students are able to give role of enzymes. Students can understand nomenclature and classification of enzymes. • Students understand various physiological actions of plants such as absorption transpiration photosynthesis and respiration. • Students come to know about growth hormone and their role in promoting growth. • Students Acquire knowledge on physiological response of plants to various factors. • Students understand respiration in higher plants with particular emphasis on aerobic and anaerobic respiration.
B.Sc III Year Semester V **Paper -XVII. Cell Biology and Molecular Biology**.	• The students get knowledge about cell science. • Students understand cell wall plasma membrane cell organelles and cell division. • Students learn the scope and importance of Molecular Biology. • Students understand DNA and RNA. • Students understand the biochemical nature of nucleic acid and their role in living system and experimental evidence to prove DNA genetic material. • Students understand what is chromosome, chromosomal aberration and its role in evolution. • Student gets complete knowledge of karyotype.
Paper -XVIII Plant Pathology	• Students understand the concept principles and types of sterilization methods. • Students know the concept and characteristic of antiseptic disinfectant and their mode of action. • Students learn the cultivation methods of bacteria, fungi

	and viruses. • Students understand the principle working and application of instrument, pH metres autoclave spectrophotometer, laminar flow centrifuge machine viscometer Shaker and seed germinator. • Students understand scope and importance of plant pathology.
B.Sc III Year Semester VI Paper XXI Genetics And Biotechnology.	• Students understand the Mendelian principles laws with statistics data. • Students understand sex determination in plants human insects Birds. • Students able to import the knowledge of interaction of genes. • Students are able to know about multiple alleles. • Students learn DNA Recombinant Technology. • Students come to know about amino sentences and genetic counseling. • Students learn the application of genetic engineering. • Students can understand inborn error of genetic metabolism.
Paper -XXII Microbiology And Disease Management	• Students understand the sterilization methods. • Students learn the methods of media preparation. • Students understand the pathogen and their life cycle. • Students understand the prevention and control measures of plant diseases and its effects on Economy of crops.
Zoology	
Paper	Course Outcome
Protozoa to annelida Arthropoda to echinodermata and protochordata	• Came to knowing the basic concept of biosystematics and procedure in taxonomy. • Identified the taxonomic status of the entire non-chordates up to annelids and discuss the evolutionary model of the group. • Described the general biology of few selected non-chordates useful to mankind. • Know about some of the important and common protozoans, helminthes of parasitic nature causing diseases in human beings. • Understood the importance of metamerism in annelids. • Understood the anatomy and physiology of invertebrate animals by dissection.

	• Described the structural study and mounding of organs. • Came to knowing the rules of taxonomy and the principle of animal classification. • Understood the diversity morphology, biological characters and taxonomical importance some selected museum specimens of different animal groups. • Acquired knowledge of principles and working mechanisms of microscopes. • Understood the mechanism of mitosis and meiosis. • Gained slide preparation to observe of Giant chromosome, epithelial and blood cells
CELL BIOLOGY GENETICS - I **(Paper II &V)**	• Understood the structure of cells and cell organelles in relation to the functional aspects and understanding of the working principles and applications of microscopes. • Described the composition of prokaryotic and eukaryotic cells. • Understood the structure and functions of chromosome; mitotic and meiotic cell divisions and their significance. • Understood the properties and treatment of cancer cells. • Described the principle and applications of pH meter, centrifuge, chromatography and electrophoresis. • Understood the theories of classical genetics and blood group inheritance in man. • Described the genetic variation through linkage and crossing over, chromosomal aberrations and sex determination. • Understood the genetic defects and inborn errors of metabolism and genetic counseling.
Protozoa to annelida & cell biology **Arthropoda to echinodermata and protochordata & genetics -i (paper iii & vi)**	• Understood the anatomy and physiology of invertebrate animals by dissection. • Described the structural study and mounding of organs. • Came to knowing the rules of taxonomy and the principle of animal classification. • Understood the diversity morphology, biological characters and taxonomical importance some selected museum specimens of different animal groups. • Acquired knowledge of principles and working mechanisms of microscopes. • Understood the mechanism of mitosis and meiosis. • Gained slide preparation to observe of Giant chromosome, epithelial and blood cells. • Described the structural study and mounding of organs. • Came to knowing the rules of taxonomy and the

	principle of animal classification. • Understood the diversity morphology, biological characters and taxonomical importance some selected museum specimens of different animal groups. • Understood the anatomy and physiology of invertebrate animals by dissection. • Understood the inheritance of Mendelian traits by direct observation among students. • Acquired knowledge skill development and observation of blood group identification. • Understood of the mechanism of phenotypic expression in Drosophila. • Gained genetic knowledge on the observation of specimens and models.
VERTEBRATE ZOOLOGY (Paper VII & IX)	• Identified the taxonomic status of the entire chordates. • Imparted the knowledge on ecology of some important fishes, amphibians, reptiles, birds and mammals. • Impart knowledge in comparative anatomy and development systems of chordates. • Make able to discuss some and very important phenomena in Chordates. • Know about the conservation and management strategies of the chordate fauna. • Described the structural study and mounding of organs. • Came to knowing the rules of taxonomy and the principle of animal classification. • Understood the diversity morphology, biological characters and taxonomical importance some selected museum specimens of different animal groups. • Understood the anatomy and physiology of vertebrate animals by dissection. • Understood the process of development of animals. • Understood the process of organogenesis of selected organs, development of extra embryonic membrane and the nature and physiology of placenta.
GENETICS -II (Paper VIII & X)	• Understood the molecular structure of genetic materials and understood the mechanism of gene expression and regulation character formation. • Described the knowledge of recombinant DNA technology. • Understood the tools of gene manipulation and gene transfer. • Knowledge of construction and labeling of molecular probe, construction of genomic library and protein engineering.

	• Understood the techniques of recombinant DNA technology and its applications. • Came to know about the techniques and applications of human genome projects. • Attained knowledge the history, branches and scope of biotechnology and gene transfer technique. • Understood the recombinant technology, gene integration into the vector and with host genome and creation of transgenic animals. • Attained knowledge about in-vitro fertilization and embryo transfer. • Understood the principle and applications of biotechnology techniques. • DNA finger printing, plotting technique micro array. • Described the applications stem cells and gene therapy and biotechnology devices.
ANIMAL PHYSIOLOGY (Paper XI & XIII)	• Understood about the composition of food and mechanism of digestion absorption and assimilation. • Attained knowledge of respiration and excretion and understood the mechanism of transport of gages and urine formation. • Described the mechanism of circulation and composition of blood. • Knowledge of neuromuscular coordination and the mechanism of osmoregulation in animals and endocrine system and their function are attained. • Understood the menstrual cycle and the role of contraceptive in population control. • Attained knowledge of qualitative analysis of macromolecules, excretory products, blood glucose and cholesterol. • Understood the enzyme reaction and influence of temperature on enzyme action. • Skill development for the observation of blood cells and haemin crystals. • Understood the working principle and applications of physiological instruments. • Attained knowledge on the observation of preserved specimens and instruments of sericulture and fisheries.
BIOCHEMISTRY & ENDOCRINOLOGY (Paper XII & XIV)	• Comprehended the energy source, chemical bonds and the principles of thermodynamic understood the importance of acid base balance. • Attained the knowledge of macromolecule such as carbohydrates, protein and fat, their types and significance.

	• Understood the knowledge of cholesterol and its biological significance. • Described the enzymes, mechanism of enzyme action and factors affecting the enzyme activity. • Understood the types and importance of vitamins • Described the principle and applications of pH meter, centrifuge, chromatography and electrophoresis. • Attained knowledge of qualitative analysis of Proteins, Carbohydrates and Lipids. • Attained knowledge of qualitative analysis Excretory products. • Understood the concept of chromatography and finding Rf values of different compounds.
ECOLOGY **(Paper XV & XVII)**	• Understood and appreciate the environment and ecological services of life on earth. • Understood the abiotic factors of environment and biogeochemical cycle and intraspecific relationships of animals. • Acquired knowledge of ecosystem, food chain, energy flow and productivity and understood pond as a model ecosystem. • Imparted knowledge of habitat ecology, pollution and bioremediation of polluted environment. • Attained knowledge of data collection, tabulation and presentation of data and measures of central tendency, probability and Chi-square test.
EVOLUTION **(XIX & XXI)**	• Understood the process of development of animals. • Understood the process of organogenesis of selected organs, development of extra embryonic membrane and the nature and physiology of placenta. • Came to know the inducer and inductor role in embryogenesis and knowledge about metamorphosis and the process of regeneration. • Understood the theories of evolution and highlighted the role of evidences in support of evolution. • Described the evolutionary knowledge through the concepts of coloration and mimicry. • Obtained the knowledge about direct observation of fossils and evolutionary important specimen by which evolutionary relationship of animal groups.
FISHERY SCIENCE-I & II **(Paper XVI, XVII, XX & XXII)**	• Described the fisheries and fishery industries. • Understood the various types and methods of aquaculture practices. • Understood the physiology and reproductive

	mechanisms of important fishes. • Understood the modern techniques and methods of fishery industries. • Attained knowledge about important cultivable fin fishes, shell fishes and importance of value added fishery products.
FISHERY SCIENCE	• After Possessing of degree of B.Sc. Fishery Science, Can apply for the Post instructor, Research assistant, Biochemistry, Biologist Technician Etc. • Also can apply in the fisheries department of state government for the post of • Inspector of fisheries/Research Assistant , • Sub Inspector of Fisheries. • Assistant Directors. • Assistance Fisheries Director Officers. (AFDO) • Fisheries Extension Officers(FEO) • Fisheries Development Officers (FDO) • Central Agencies also recruits fisheries graduate as technical officers and assistant Directors. • Marine Portal Export Development Authority (MPEDA) • Export- Inspection Agency EIA. • Coastal Agriculture Authority of India (CAAI). • Food Safety and Standards Authority of India (FSSAI). • Fisheries Survey of India (FSI) • Indian National Center for Ocean and Information Services. (INCOIS) Hyderabad • National institute of Oceanography (NIO)

Computer Science	
Paper	**Course Outcome**
BSc-I Digital Electronics	• Students will be able to learn number system with different types of conversions. Students will be able to explain basic circuit concepts and responses. • Students will be able to explain the basic logic operations of NOT, AND, OR, NAND, NOR, and XOR. Students will be able to interpret logic functions, circuits, truth tables, and Boolean algebra expressions. will be able to interpret logic functions, circuits, truth tables, and Boolean algebra expressions. will be able to apply the laws of Boolean algebra to simplify circuits and Boolean algebra expressions. . • Students will be able to use the methods of systematic reduction of Boolean algebra expressions including Karnaugh maps. • Students will understand the basic electronics of logic circuits

	and be able to use integrated circuit packages. Student will be able to model, analyze, and test a digital circuit using a computer software application • Students will demonstrate understanding of flip-flops, one-shots, and oscillators • Students will be able to analyze, build, and troubleshoot counters • Students will be able to analyze, build, and troubleshoot shift registers
BSc.II Adv C programming	• Students are able to- • Read, understand and trace the execution of programs written in C language. • Write the C code for a given algorithm. • Implement Programs with pointers and arrays, perform pointer arithmetic, and use the pre-processor. • Write programs that perform operations using derived data types. • To make the student learn a programming language. • To learn problem solving techniques. • To teach the student to write programs in C and to solve the problems • Name of the paper:- Software Engineering.
BSc.III Basic of android o.s	• This paper helps the students to learn and have an ability to apply knowledge of mathematics, science, and engineering Fundamental knowledge in mathematics, computer Science, and programming and computer systems. • Ability to design and conduct experiments, as well as get the job to analyze and interpret data Basic knowledge and understanding of the analysis, synthesis and design of complex systems. • Ability to design a system, component, or Software engineering principles and techniques. • Learn the software life cycle phases (project management, requirements engineering, software design, prototyping and testing). Create and specify a software design based on the requirement specification that the software can be implemented based on the design. • Get familiar with UML (modeling language for analysis and design). • Make a testing plan for the software.
BCS	
Paper	**Course Outcome**
BCS-I Statistical Method	• Students will **summarize** data visually and numerically. • Students will frame problems using multiple mathematical and statistical representations of relevant structures and

	relationships and **solve** using standard techniques. • Students will clearly **communicate** quantitative ideas both orally and in writing to a range of audiences.
BCS-II Ddata base management system	• The learner will be able To describe data models and schemas in DBMS • To understand the features of database management systems and Relational data model • To understand the functional dependencies and design of the database • To understand the concept of Transaction and Query processing • Helps the students to create a database and query it using SQL, design forms and generate reports. • Understand the significance of integrity constraints, referential integrity constraints, triggers, assertion • Student can become a database administrator.
BCS-III Basics of computer graphics	• Students will able to list the basic concepts used in computer graphics. Types of graphics devices • To introduce the use of the components of a graphics system and become familiar with building approach of graphics system components and algorithms related with them with graphic functions • To learn the basic principles of 2 -dimensional computer graphics. • To implement various algorithms to scan, convert the basic geometrical primitives, transformations, area filling, clipping.

Mathematics	
Paper	Course Outcomes
Differential Calculus	• Prerequisite, Function, Limit and Captivity. • Differentiation. • Successive Differentiation. • Mena Value Theorems. • Partial Differential operators. • Acquired to Different operation on functions • Important of function and its properties • Ability to under the operation of different kind of function Competency developed • Apply knowledge of function as a basic tools to higher Mathematics • Available to apply and recognize knowledge to solve differentiation. • Applying knowledge of Differentiation to nth derivation terms

	• Recognizing different types of severable variable file.
Differential Equation	Knoweledge gained • Prerequisite, ordinary and partial different equations, order and degree & Types. • Equation of first order and the first degree. • Linear equation with constant coefficient. • Linear equation with variable coefficient. • Excel differential equations of particular forms • Ordinary different equations with more than too variables • Particular differential equations. Skilled gained • Reorganization of types of differential equation • order and degree of differential equations • ordinary differential equation with constant and variable coefficient • Exact and Particular form • Introduction to partial differential equation Competency developed • Solution of Differential equation • Uses and application of ordinary differential equation • Type of differential equation with constant and variable coefficient • Application of two or more than two variable of differential equation
Semester II	
Integral Calculus	Knowledge gained • Method of integration, Reduction formula • Integration of algebraic ration function • Integration of trigonometric function • Definite integral as limit of a sum • Areas of plane Region • Rectification, Length of plane curves • Volumes and surfaces of revolution • Integral Transformation Skilled gained • Type of Integration • Understanding the structure of problem and a method of Solution • Different type of function and its integral solution • Solution of Area, Volume and Surfaces of Revolution • Transformation Competency developed • Applying the Reduction Method and solving Polynomial

	equations. • Higher power of Trigonometric function and its solution. • Fundamental Theorem • Find the Areas, Volumes and Surfaces Revolution of Structural surfaces.
Geometry	Knowledge gained • The Plane • Right Line • Sphere • Cones,Cylinder • The Coincoid Skills gained • Three Dimensional Geometry • Relation Between The Line and plane • Properties of Sphere • Application to conical Form Competency developed • Uses and Application of three dimensional Geometry • Properties of conic section • Behavior of plane passing through conic section • Application of line, Plane, Sphere and Cylinder
Semester III	
Number Theory	Knowledge gained • Divisibility Theory in the integer • Primes and their Distributions • The theory of congruence • Fermat's Theorem • Number Theoretic Functions • Euler's Generalization of Fermat's Theorem Skilled gained • Behavior of Number system • Uses of Number and its essential application • Application of Number system in day to day life Competency developed • Acquired to Process to apply Number System in a Compact way • Development of writing a Algorithms • Basic Fundamental properties of arithmetic behavior • Fermat theorem, Eulers Theorem and some other well known theorems
Integral transform	Knowledge gained • Beta and Gamma Function • Laplace Transformation • Inverse Laplace Transformation

	• Applications of Differential Equation • Fourier Transformation Skilled gained • Transformation and its Properties • Higher order Factorial process • Properties of Definite and indefinite integral • problems related to ordinary differential equations • Sine and Cosine Transformation system Competency developed • Uses of Integral system • Application of Beta and Gamma function • Relation between integral equation and Beta, Gamma function • Transformation of system from one domain to another domain • Application of transformation by using Trigonometric properties
Mechanics-I	knowledge gained • Forces acting on a particles • Equilibrium of forces acting on a particles • Forces acting on a rigid body • Centre of Gravity Skilled gained • Force acting on a particle • Properties of states • Law of forces in a direction and it state • Equal and opposite reaction of force on the particles Competency developed • Types of forces and its states • Like forces, parallel forces and its conditions • Weight acting on the particles • Relation between force and centre of gravity
Semester IV	
Numerical Method	Knowledge gained • Solution of Algebraic and transcendental equation • Curve fitting and Approximation • Solution to linear system of equations • Numerical solution of ordinary differential equation Skilled gained • Method of solving a polynomial equations • Tabulation of Data • Behavior of system of equation • Solution of system of equations • Numerical solution to Differential equation Competency developed • Different methods of solutions

	• Prediction of data analysis • Uses of system of equations • Solving Ordinary Differential equation
Partial Differentail Equation	Knowledge gained • Prerequisite (Partial differential equation) • Partial differential equations of order one (linear equation) • Linear Partial differential equations • Partial differential equations of second order Skilled gained • Method of differential equation • Solution of Partial differential equation • Linear and Non-linear solution of Partial differential equation Competency developed • Known to solve servable variables function • Complete and particular solution • Linear and non-linear solution based upon various methods
Mechanics-II	Knowledge gained • Kinematics and dynamics of a particle in two dimensions • Kinetics of a particle • Motion of a projectile and motion in a resisting medium • Central Orbits Skilled gained • Effect of energy • Efficient uses of energy with minimum afford • Types of projection Competency developed • Physical properties of vector quantity • Law of Motions • Projection and type of projectile • Gravitation effects on object.
Semester V	
Real analysis(I)	Knowledge gained • Prerequisite, Operation on sets • Functions • Sequence of real Numbers • Series of Real Numbers • Jacobians Skilled gained • Operation on the functions • Properties of sequence in real numbers • Series and its solution Competency developed • Ability to handle the functions • Solution technique of sequence and series

	• Mertic spaces,continuity of metric spaces
Abstract Algebra (I)	Knowledge gained • Group theory • Subgroup • Normal and Quotient Group • Homomorphism,Automomorphism Skilled gained • Solving problems by using concept of group theory • Understanding the nature of problem • Ability to understanding types of mapping Competency developed • Facility of understanding the natural nature of algebraic problems • Understanding basic theorem and properties of fundamental elements • Nature and method of Mapping
Ordinary differential equation	Knowledge gained • Preliminaries • Linear equation of first order • Linear equation with constant coefficient Skilled gained • Handling of complex number and polymial solutions • Linear First order differential equation • Equation with constant coefficient Competency developed • Solution of linear equation in one variable • Equation with constant coefficient • Solution to the system of n^{th} order linear equation The convergence related properties • Uses of metric space • Fundamental properties and theorem of calculus
Semester VI	
Analysis (II)	knowledge gained • Connectedness, Completeness and Compactness • Calculus • Fourier Series Skilled gained • Properties of finite and infinite sets. • Application and used of metric spaces • Fundamental theorem and properties of calculus • Application to infinite and finite sum Competency developed • Ability to solve the sequence and series of infinite terms • The convergence related properties

	• Uses of metric space • Fundamental properties and theorem of calculus • Ability to solve the convergence and divergence of series • Properties and important of metric spaces • Application of sine and cosine series
Abstract Algebra (II)	knowledge gained • Vector spaces • *Modules Skilled gained • Properties of scalar and vector quantities • Uses of abstract from concrete and its solution with vector spaces • Linear system of equation and its dependability Competency developed • Solving the linear system equations • Vector space, dependence and independence • Application and its properties of normed linear spaces
Ordinary differential equation (II)	Knowledge gained • Linear equation with variable coefficients • Linear equation with Regular singular points Skilled gained • Solution of initial valve problems • The Wronskain and linear independence and dependence o differential equation • Legendre equation • Euler's and Bessel's equation Competency developed • Handling of initial value problems and its uses • Homogenous and Non-Homogenous system of ordinary differential equation • Point of singularity • Application of Euler's and Bessel's Function

B.A.	**Political science**
Paper	**Course Outcomes**
I **BASIC CONCEPTS OF POLITICAL SCIENCE**	• After completion of this course students should be able to: • Analyzing what is Political theory and explaining the Meaning nature and scope of political theory. • -Explaining the meaning and definition of Government, it's organs, legislature, Executive and Judiciary.

	• -Describing the meaning, types of citizenship and method of acquisitions. • -Understanding the meaning and features of Democracy, it's merits and demerits. • Assessing the theories of State (Origin, Nature, Functions): • -Explaining the Concept of State Sovereignty: Monistic and Pluralistic Theories. • Analysing the changing concept of Sovereignty in the context of Globalization. • -Understanding basic concepts of Liberty, Equality, Rights and justice
SEM-I,II B.A I Year GOVENMENT AND POLITICS OFMAHARASHTRA	• Introducing the historical and political background of Maharashtra. • Examining Sanyukt Maharashtra Movement and state Reorganization Commission. • Studying the role of cooperative movement, peasant Movement, Dalit Movement and Feminist movement • Assessing the historical background of Pancreatic Raj System with reference to Maharashtra. • Studying the Ideology and programme of political parties and their role in Democracy
SEM-III, IV B.A. II Year	
INDIAN GOVERNMENT AND POLITICS	• Examining the Fundamental Rights and Duties of Indian citizens and its significance. Also to study status of Directive Principles of state policy. • Looking at the Constitutional Institutions with focus on the functions of Attorney General and Comptroller and Auditor General of India. • Critically analyzing the important institutions of the Indian Union: the Executive: • President; Prime Minister, Council of Ministers. The legislature: Rajya Sabha and Lok Sabha. .Analysing budgetary process and explaining parliamentary committees public Accounts committee and Estimate committee . • Evaluating the role of various forces on Indian politics: religion; language; caste; tribe; regionalism; business; working class and peasants. • Evaluating the Electoral Process in India with focus on the Election Commission:
SEM III, lV. B.A. II. YEAR	
INTERNATIONLRELATIONS	• To understand the meaning nature and evolution of International Relations, studying its scope and significance. • To analyze the Idealist and Realist approaches for the study of international relations

	• Examining Indian Foreign Policy: Basic Principles, Evolution and Bilateral Relations. • Evaluating the Determinants of National power and national interest. • Studying the developments in third world countries in post world war II era like NAM, ASEAN, SAFTA and SAARC, OPEC, OAU, West Asia-Palestine • To acquaint with the international organizations and their member nations. • To identify various issues and challenges in international relations • To analyze the international security Arms Race. Arms control and Disarmament. • To understand the emerging area in international relations
SEM .V, VI B.A.III YEAR	
WESTERN POLITICAL THOUGHT	• Introducing western Political Thought with focus on Aristotle and Plato's Political ideas and their contributions. • Critically examining Machiavelli's political thoughts, Hobbes as the founder of the science of materialist politics; Locke as the founder of Liberalism with focus on his views on natural rights, property and consent. • Rousseau's views on Freedom and Democracy; • Bentham's Utilitarianism; and John Start Mill's views on liberty and representative government. • Explaining Dialectical Materialism and Historical Materialism with special reference to relationship between base and superstructure. • Analyzing the concept of class struggle and surplus value. • Discussing Marx's views on State and Revolution.
SEM .V, VI B.A.III YEAR	
MODERN POLITICAL THOUGHT	• Tracing the evolution of Indian political thought in modern India. • To understand the nature, methods and significance of political thought. • To acquire knowledge about modern political thinkers and theirs view on state craft. • Analysing the nationalist thought of Raja Rammohun Roy and also as an Architect of Indian Renaissance, along with his social, political and religious views. • To understand the political religious and social views of Dayanand Saraswati. • Describing the Social ,Liberal and Nationalist ideas of Gopal Krishna Gokhale • Lokmanya Tilak's views on Nationalism, Politics and Social

	reform. • Analysing the Gandhian views on religion, satya ,ahimsa,satyagraha,and concept of ramrajya. • Estimating the contribution of Maulana Abulkalam Azad's views on Religion, politics,Hindu-Muslim unity and synthesis of Nationalism. • Describing the contribution of Jawaharlal Nehru's views on Nationalism, Democracy and socialism, secularism and Internationalism • To understand the concept of radical humanism, radical democracy and critique of Marxism by M.N.Roy. • Describing the movements against caste and untouchability, Ambedkar's views on Social Justice and the depressed classes as well as his views on democracy and economy. • To acquire knowledge about the political thoughts of J.P.Narayan and the concept of Total revolution.
SEM .V, VI B.A.III	
YEAR.POLITICAL IDEOLOGIES	• The study of political ideologies gives the student a window through which to view complex political phenomena. • This course examines the origins and impact of ideologies on the development of societies. • To study the meaning ,development, features and the criticism of the Major ideologies such as Nationalism, Liberalism, Conservatism, Anarchism, Marxist theory, Socialism, Marxism, Fascism, Nazism, Feminism and Environmentalism • Explain the philosophical and intellectual roots of contemporary political ideologies. • To Examine and analyze the conditions that create the rise of ideologies. • To interpret and analyze political ideologies as they apply to modern political problems. • To apply their knowledge of ideologies to current political issues.

History	
Course Outcomes After completion of this course students should be able to:	
SEM-I, BA I year	Course outcome
Paper no.01 : Shivaji and his times (a.d 1630-a.d 1707)	• Understanding the nature and development of Maratha power. • Understanding the concept of History, socio-religious, political and geographical conditions of Maharashtra. • Knowledge of Marathas struggle for swaraj, their wars, peace

	treaty, sacks etc. • Analyzing of Social, Political, Economic and Religious Condition. • Evaluation of Historical Knowledge or Information. • History Knowledge is useful to built their today and future. • Develop Interest to visit places of Historical Interest, Archaeological sites. • Development to read local document, maps, and chart etc. • The study of Marahta history help to impart moral education. • Maratha history install the feeling of patriotism in the hearts of the students.
SEM-I, BA I YEAR	
PAPER NO.02 : History of Modern Maharashtra (A.D 1818 to A.D 1905)	• Understanding the socio-religious and economic conditions of Maharashtra. • Analyzing the early phase of British Rule, Administration, education, press activities of Christian missions. • Knowledge of early socio-religious reformers. • Knowledge of earearly resistance to colonial rule. • Information about national movement in Maharashtra. • Evaluating the work of Different political organisation, Association oar sabhas in freedom movement • Able to play active roles in different originations and Association. • History installs the feeling of patriotism, idealism, and morals in hearts of the students. • Prepare for various types of competitive examinations. • Evaluating the Electoral Process in India with focus on the Election Commission:
SEM-II, BA I YEAR	
PAPER NO.03: History of Marathas (A.D 1707 to A.D 1818)	• Understanding the foundation of expansion and transfer of Maratha Power. • Knowledge about the Transfer of Maratha power, and achievement of Peshwas. • Analyzing the third Battle of Panipat, Causes and Consequences. • Evaluating the role of Different Peshawa. • Evaluating the causes of declined of Maratha power. • Criticize the Peshwas administration, social structure religion and judicial systems of peshwas. • Prepare for various types of competitive examinations. • History installs the feeling of patriotism, idealism, and morals in the hearts of students.
SEM-II, BA I YEAR	
PAPER NO.04: Twenthieth	• Understanding the National Movement and Revolutionary

Century Maharashtra (A.D 1905 to A.D 1960)	movements. • Analyzing the National Movement from 1920-1947 AD • Knowledge of Social Movemeent i.e Non-Brahmin Movement, Dalit Movements and Education. • Analyzing the Hyderabad Freedom Struggle. • Knowledge of "Making of Maharashtra State", and Independent Bombay State. • Knowledge about the samyukta Maharashtra Movement. • History installs the feeling of Patriotism in the hearts of pupils. • Students develop the ability to think critically and historically when discussing the past. • Prepare for various types of competitive examinations. .
SEM-III, BA II YEAR	
PAPER NO.05: History of Early India – V (upto B.C 300)	• Understanding of Religions and Secular Litrature, Foreign Accounts, Archaeology, Numismatic Sources,. • Knowledge of Stone Culture, Harappa, Civilization and Town Planning. • Information of Socio-Religious and Economic Life of Harappa Civilization. • Analyzing the Vedic Culture of early and later phase. • Understanding the religious movement in India. • Evaluating the Janapadas and Mahajanpadas. • Criticize the Economy, Administration, Art and Architecture of Mahajampadas. • Prepare the students for various types of competitive examinations.
SEM-III, BA II YEAR	
PAPER NO.06: British Rule in India (A.D 1757- 1857)	• Understanding of advent and foundation of British rule in India. • Understanding the Political Condition of India during 18th Century. • Knowledge about the review of administrative polices of colonial rules. • Evaluating economic policy of the colonial rule. • Criticize the expansion and consolidation of British rules. • Analyzing the uprising of 1857. • Students applies relevant historical fats and context. • History installs the feeling of patriotism in the heart of the students. • Prepare for various types of competitive examination.
SEM-III, BA II YEAR	
PAPER NO.07: History of	• Understanding and distinguish between primary and

Mughal India (AD 1526-AD 1757) VII	secondary sources. • Students identify and Evaluate Evidences. • Knowledge of a brief survey of political History of Mughal Period. • Knowledge of Mughal Administration. • Evaluating the civil, Military, Judiciary administration. • Knowledge of Economic Development in Mughal Period. • Understanding of Social and Religious life in Mughal period. • Knowledge of Art and Architecture of Mughals. • Knowledge of Arts and Architecture of Mughals • Prepare for various types of Competitive Examination
SEM-IV, BA II YEAR	
PAPER NO.08: History of India (BC 300- AC 650|) – VIII	• Students will understand and distinguish between primary and secondary sources, and identify and evaluate evidence. • Knowledge of the brief survey of political changes in mention period. • Studying in invasions of Sungas, Kanvas, Allexanders and about other rulers. • Understand the Socio-Economic life of people. • Students understand the teaching and ideologies of different religions and interpretive differences. • Critically examining the development of Arts, and Architecture. • Knowledge and introduction of languages and literature i.e Sanskrit, Prankrit, Kannad and Sangam. • Prepare for various types of competitive examinations.
SEM-V, BA III YEAR	
PAPER NO.09: **Histography – IX**	• Understanding the definitions, nature, scope and kinds of History. • Critically examining History as a Sciences and History as an Art. • Knowledge of History and its different branches of History. • Evaluation and Classification of sources, Authenticity and Credibility. • Discussing the modern thinkers of History and their ideology. • Critically examining the uses and abuses of History. • Studying history research method. • Students applies interpretation based on different categories on analysis. • Students will distinguish between primary and secondary sources. • Prepare for various types of competitive examination.
SEM-III, BA II YEAR	

PAPER NO.06: British Rule in India (A.D 1757- 1857)	• Understanding of advent and foundation of British rule in India. • Understanding the Political Condition of India during 18th Century. • Knowledge about the review of administrative polices of colonial rules. • Evaluating economic policy of the colonial rule. • Criticize the expansion and consolidation of British rules. • Analyzing the uprising of 1857. • Students applies relevant historical fats and context. • History installs the feeling of patriotism in the heart of the students. • Prepare for various types of competitive examination.

English	
Paper	**Course Outcomes**
B.A I/ B.Sc I Compulsory Learning language Skills-I/II	• Prose, Poetry Grammar, Précis and Paragraph writing. • This paper enhances the basic abilities of speaking reading and writing in English. Grammar unite includes Parts of speech, noun verbs adjectives etc. which help students to use English languages in appropriate way. Précis helps in comprehension and logical connections of thoughts and paragraph writing helps in writing answers. Apart from this sentence arrangements, Direct indirect speech, Para completion, usage of articles are part of MPSC syllabus, (group B) written exams.
B.A. I/ B.Sc I Additional I/II	• Paraphrasing, expansion, letter writing and Essay writing. • Animal farm (fable) Naga Mandala (mythical drama). • The section on writing composition helps students to enhance their writing abilities. • They learn to write formal and informal letter and applications. This will help them in their future prospects for jobs. • Paraphrasing and expansion helps them to understand the source of proverbs and write it in own words. It expands vocabulary and knowledge of language.
B.A I Optional I & III	• They will gain knowledge of speech sounds, correct pronunciation and intonation. • They can know the correct pronunciation of words

The Structure of English	through phonetics. • They will get a knowledge of advanced grammar • Students will be able to impart accent and voice training
B.A I Optional II & IV Reading Literature	• Poetic type, lyric, sonnet, novel ,Shakespearean sonnets, The Guide(R.K Narayan) • Drama tragedy comedy, ode, keats odes, Arms and The Man(G.B Shaw) • This paper includes basic forms of literary genres, its origin, history, structure and subject matter. • This paper also discusses the purpose of teaching novel drama and different forms of poetry. • This paper helps students to understand and identify different types and techniques of writing. This will be very helpful in creative writing. • Students learn to write the basic technique of poetry short stories and drama.
	Sem III & IV
B.A. II Compulsory Learning Language Skills-II	• Students will be able to develop a taste for short stories and novel through prose. • They will learn to appreciate poetry. • They will improve their writing skills. • Students can converse in English and frame dialogues in English. • They will acquire an understanding of basic grammar.
B.A II Additional III& IV	• The students will be able to understand the difference between general literature and world classics. • Through stories of James Joyce they will understand modernism and its features. • They will understand life in Dublin in early 20 century and establish its contemporaneity with the present • They will understand the various narrative techniques. • They will be able to write formal and informal letters • They can write resume. • They will improve their understanding of situational English.
B.A. II Optional V &VII Literature in English-1550-1750	• Essay ,Epic, Shakespearean tragedy ,feature of restoration literature, Bacon's Essay, Julius Caesar , The Rape of Lock, Robinson Crusoe. • This paper helps students to understand the origin history

	and different types of essay. Writing essays are the part of student's curriculum from very beginning but this unit polishes their skills of writing. They will also learn different types and this will help them in competitive exams. This even help student writing and constructing answers in exams. Essay writing and learning the details of travelogue will help them in essay writing competition, and essay writing is also important part of UPSC civil service Main Paper I.
B.A II Optional VI & VIII Literature in English-1750-1900	• The students will be introduced to the different ages of English and be introduced to the literary aspect of the language they have been studying. • They will begin to understand the origin of English language, literature and the different ages and the significance of it. • The introduction of classic British writers will enhance their mastery on literature. • The introduction of classic British texts will enhance their proficiency in language. • The study of literary backgrounds will input and encourage researching qualities in the students.
	Sem V & VI
B.A III Optional IX & XIII Twentieth century English Literature	• Modern Poetry , Drama and Fiction Poems of T.S Eliot and W.B Yeats, LITERATURE OF D.H Lawrence, John Osborn, Kingsley Amis, G.B Shaw. • As the objective of this paper suggests, this paper make the students of literature understand the modern trends technique and types of literature. • This paper is design to help students in preparing NET/SET exams and develop critical thinking.
B.A III Optional X & XIV Introduction to Literary Criticism & Terms	• The introduction of critics like Aristotle and Sydney. F.R. Levis and Wordsworth will create the strong ideas of what literary criticism entitles. • The students will get exposed to new terminology through literary terms. • On learning literary terms student will be able to critically analyze any text they come across. This paper is design to help students in preparing NET/SET exams and develop critical thinking.
B.A III Main XI(B) & XV(B)	• The students will get exposed to Indian writers who write in English • They will understand the importance of the Indian brand

Indian Writing in English	of English • They will appreciate the prose written by Indian writers • They can get of Indian political and cultural history through the texts • They will be encouraged towards research in Indian writings.
B.A III Main XII & XVI Project Work on History of English Literature (From Renaissance Age to the Age of T.S. Eliot)	• The students will be able to understand the literary trends during the different literary ages • The students will be exposed to a variety of English writers • They will understand the different genres of writing • They can write research papers • They will acquire a better critical and research aptitude
Economics	
Paper	**Course Outcomes**
P-101 Micro economics	On completion of the course the student will be able to: • Develop ideas of the basic characteristics of o Indian economy, its potential on natural resources. • Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development • Grasp the importance of planning undertaken by the government of India have knowledge on the various objectives, failures and achievements as the foundation of the ongoing planning and economic reforms taken by the government. • Understand agriculture as the foundation of economic growth and development; analyze the progress and changing nature of agricultural sector and its contribution to economy as a whole. • Not only be aware of the economy as a whole, they would understand sources of revenue, how the state government finance its program and projects • Demonstrate marginal productivity theory of distributions, theory of wages, identify different types of rent , illustrate different theories of interest and profile • Understand how factor market works, identify the various determinants of firms demand for factor services, bilateral monopoly, demonstrate monopsony in factor market and factor market equilibrium. • Identify the various types of investment function analysis and understand the elements of social cost benefit analysis.
P- 102 Indian economy	• Develop ideas of the basic characteristics of Indian

	economy, its potential on natural resources • Understand the importance, cases and impact of population growth and its distribution, translate and relate them with economic development. • Grasp the importance of planning undertaken by the government of India, have knowledge of the various objectives, failures and achievements as the foundation of the ongoing planning and economic reforms taken by the government. • Understand agriculture as the foundation of economic growth and development, analyze the progress and changing nature of agricultural sector and its contribution to the economy as a whole.
P- 103 Price theory	• Understand the theory of production • The law of returns to scale. Internal and external economies and diseconomies • Study the analysis of Costs and Revenue • Study modern approach to short run and long run cost curves • Relation between marginal cost, average cost and total cost • Understand market, its meaning and classification • Study monopoly and monopolistic competition • Understand the marginal productivity theory of distribution • Understand pricing methods and multiple product pricing.
P- 104 Money and banking	• Understand the meaning and function of money, types of money • Study the paper currency and kinds of paper currency • Understand the structure of bank • Study the functions of foreign banks, regional rural banks, district central cooperative banks, primary agricultural cooperative credit societies, state cooperative banks and NABARD • Understand the meaning and functions of RBI • Understand the meaning, structure and functions of money market and capital market in India.
P-105 Macro economics	• Define and explain the process of calculating national income, identify the components demonstrate circular flow of income, analyse the various income identities with government and international trade, define the

	concept of green accounting. • Understand Say's law of market, classical theory of employment and Keynes objection to the classical theory, demonstrate the principle of effective demand and income determination. • Explain the meaning of consumption, function, relationship between APC and MPC, consumption and income, concept of multiplier and analyze the theories of absolute and relative income h6ypothesis. • Understand the relationship between investment and savings, demonstrate investment multiplier and understand the meaning of MEC and MEI. • Illustrate the meaning of interest analyze the various theories of interest. • Demonstrate the meaning and function of money, high powered money, monetary and paper system, illustrate various versions of quantity theory of money. • Analyze different phases of trade cycle, demonstrate various trade cycle theories understand the impact of cyclical fluctuation on the growth of business, and lay policies to control trade cycle. • Illustrate the meaning of inflation, deflation, stagflation and identify different kinds of inflation. • Illustrate Harrod- Domor and Solow growth model, distinguish between economic growth and technical progress.
P- 106 Economics of development	• Know about the meaning of economic development and growth. • Difference between development and growth • Understand the different theories of development like Adam Smith, Malthus, Karl Marx, and Schumpeter etc. • Understand different factors in development process like natural resource4, population saving and investment • Study the growth models of Ragnar Nurkse, W.W. Rostow , Rosestein Rodan • Study the role of agriculture in economic development • Understand the role of industrialization in economic development and the role of service sector in economic development.
P- 107 Public finance	• Understand the resources of finance both public and private, demonstrate the role of government to correct market failures and possible advantages of public financing

	• Attain the advantages and knowledge of public investments and other governments expenditures . understand the causes of growing public expenditures for various programmes and policies within and outside the country • Understand the possible burden, benefits and distribution of various types of taxes among various classes of people , know the general trend and impact on general welfare and arouse them to suggest good and bad tax system • Understand the needs of public borrowing from all possible sources to meet necessary public investment expenditures. • Deliver effectively the preparation of budget and how they are passed in the house. Understand the changes in size and flexibility of state and central budget along with the role played by finance.
P- 108 Statistical method	• Organize, manage and present data • Analyze, statistical data graphically using frequency distribution and cumulative frequency distribution • Use discrete and continuous probability distribution, including requirements, mean and variance and making decisions. • Identify the characteristics of different discrete and continuous distribution. • Use the normal probability distribution including standard normal calculations of appropriate areas. • Use different distribution to solve simple practical problems.
P- 109 International economics	• How the gains from trade is measured and distributed. • Understand trade as an engine of economic growth • Different types of tariffs and quotas and their impact in partial equilibrium analysis • Understand the concept of balance of pyayments and equilibrium and disequilibrium in the balance of payment and various measures to correrect deficit in the balance of payments.
P-110 Agricultural Economics	• Sensitize the overall development and engine of growth in agriculture. Draw distinctive features of rural and urban economy on agricultural and non-agricultural which can influence the whole of economy. • Learn and identify the opportunities available in those sectors such as forestry,find new investment opportunities

	to add income and employment. • Understand limited resources available in the economy. Realize the need to exploit and utilize through development and improvement of production techniques. • Make them aware of the rich natural endowments to achieve sustainable agricultural development, with this knowledge they can challenge the problems of unemployment, inequality, shortage of food productions,poverty and be useful to compete advanced agricultural economics.

Sociology	
Paper	**Course Outcomes**
I : Introduction to Sociology	• Define Sociology and demonstrate nature, scope and subject matter of Sociology. • Acquaint themselves with the basic concept of sociology like society, community, association, culture social change, social stratification etc. • Perspective in Sociology: Understand and demonstrate how self develop through various process of interaction. • Demonstrate how social and structural factors influence and functionalist and conflict on individual behaviors.
II Introduction to Sociology	• To understand the importance of cultural its definition and characteristic. • Know the Definition of socialization and agencies of socialization and agencies of socialization. • To understand its aims. • To understand definition of social structure • It help to instill among the students of sociology a sense of ethical and social responsibility. • To know the status, role norms and values in society. • Social Stratification • To understand the concept and definition of social change. • Understand the social change that are taken place in our society. • To understand the Barriers in social change. • Social Control • To understand the definition of social type of social control formal and informal understand conformity and deviance.
III : Introduction to Subfields of Sociology	• Define urban sociology and demonstrate nature, scope and significance of urban sociology. • Define rural sociology and demonstrate nature, subject matter and significance of rural sociology. • To understand the definition of social psychology and

	demonstrate its nature, scope and subject matter of social psychology. • To understand the nature and scope and subject matter of political sociology • Students have to clear about meaning, scope and social anthropology. • To learn and know about development of social anthropology in India. • Develop an understanding of the applied sociology and its meaning. • Develop an understanding of the process and trends of industrialization in India and its impact on the Indian Society.
IV : Introduction to Subfields of Sociology	• Introduce them bonds of unity in India with geographical, religious and traditions unity. • To understand the forms of diversity in India and diversity f language, ethnicity, religious and tribes. • To understand the value of Indian society. • Know the characteristics of Indian population. • To understand the quantitative problems and its factor affecting its like over population, density, migration. • Define democracy and understand its characteristics. • Define social justice and understand its concepts. • Learn about the constitutional provision for the protection of minorities and other weaker section in India.
V : Problems of Rural India	• To understand the disintegration of rural families. • To make aware of rural women their education and health. • To understand domestic violence and dowry systems. . • To understand the dropout in education problem of illiteracy in India. • Acquaint themselves with community health and malnutrition. • To understand about the problems of landless labours. • Know economy, polity, society ancient, medieval and modern India. • Understand corruption in government schemes and inbedtness (Non-Indusril Finance)
VI: Contemporary Urban Issue	• Define urbanization and understand why there is emergence of cities. • Learn about eh demographic and migration and its factors. • To understand the various social problems • Various socal problem in India live, poverty, illiteracy, domestic violence etc. • Make aware of violence against women, and measures taken

	to eradicate the problems. • Know about urban planning like housing and slums. • To understand urban infrastructure and scarcity of space • Define globalization and analyze its impact on social, economic, political and cultural spheres.
VI: Population in India	• To understand factors affecting mortality and fertility. • Theories of population, density of population. • Population growth and environment. • To understand sex ratio and female feticide. • To understand age structure and problem of aging. • Key concepts of Social Demography • Develop an understanding of the process and trends of preindustrial industrial and postindustrial stage in India and impact of industrialization on Indian Society. • Develop awareness about urban population policy of India. • To develop awareness about family welfare proramme and policies adopted to solve such problems.
VIII: Sociology of Development	• Conceptual Perspective on development • To understand development and underdevelopment. • To understand of sustainable development and social audit. • Understand development and socio economic disparities, genders and development. • Understand social, economic and cultural features of minorities other weaker section in India. • To understand different view capitalist social and mixed approach. • Government Schemes, problems and impact. • To understand developmental issues of Marathwada, ex. Infrastructure, Education and Unemployment.
IX Sociological Traditions	• To provide information to the students with the understanding of historical, socio economic and intellectual forces of the rise of sociological theories. • To provide the students with the basic understanding of emergence of sociological of thought and to know about pioneer sociologist stated theories with their contributions to sociology. • Sociology as a scholarly discipline emerged primarily out of the Enlightenment thought, shortly after the French Revolution, as positive science of society. • Modern academic sociology arose as a reaction to modernity, capitalism, urbanization, secularization, colonization and imperialism. • Define Sociological Theory

	• Understand its feature and describe and illustrate the role of theory in building sociological knowledge. • To learn about different sociologist and their theory. • Know about founding father of sociology in developing sociology as an academic discipline • Introduce themselves to the classical theories of sociology and contributions of different thinkers in this regards.
X Introduction to Research Methodology	• To know about pure and applies research. • Qualitative and quantitative research • Descriptive research and exploratory research. • To understand the research process like formulation of problem, hypothesis sampling and data collection. Data analyses and statement.
XIII Sociological Theories	• Understand the concept and contributions of Indian Social Thinkers in the reforms of Indian Society as well as to enhance knowledge about society. • Introduce themselves to the conflict theories of different sociologists. • Social conflict, violence, class conflict in industrial society. • To understand the different theory like primary group, looking glass self theory. • Introduce self consciousness, self and functions of self.

Psychology	
B.A I year	**Outcome**
General Psychology	• To provide solid foundation for the basic principles of psychology. • Making familiar with the filed of general psychology. • To familiarized students with eh historical trends in psychology, major concepts, theoretical perspectives, empirical findings. • To provide an overview of the application of psychology. • To identify that basic structure of neuron, the function of each structure and how messages travel through the neuron. • Describe the role of the nervous system and endocrine systems. • Identity and describe the parts of the brain. • Explain how nature and epigenetic influence personality and behaviours • Explain the process of vision and how people see colour and depth. • Explain the basic of hearing. • Describe the basic anatomy and function of taste, smell, touch, pain and vestibular sense.

	• Define perception and give examples of gestalt principles & multimodal perception • To understand the psychological behaviours expression and subject types of emotions.
Basic Concept of Psychology	• To provide solid foundation for the basic principles of psychology. • To provide an overview of the application of psychology. • Understand the theories, assessment and projective technique of personality. • Increasing self efficiency through goal setting. • To explain learning and the process of classical conditioning. • Explain operant conditioning, reinforcement and punishment. • To describe latent learning and observation learning. • To explain the process & types of memory. • Explain & give examples of forgetting and memory failure. • Recognize and apply memory enhancing strategies. • To describe cognition and problem solving strategies. • To describe language acquisition and role language plays in communication and thought.
BA II Year	
Basic Concept of Social Psychology	• To enable student to appreciate how individual behaviours is influenced by social and cultural contexts. • To enable student to develop an understanding of auctioning o groups and organization. • To understand the unique features of the Indian socio cultural context. • To understand how social problems can be analyzed in terms of various social psychological theories. • To understand the concept of power of prejudice and racial prejudice. • Acquaintance with the knowledge of consequences of prejudice. • To understand the concept of aggression theories of aggressions • Acquaintance with the knowledge about influences on aggression. • To understand the technique to reduce the aggression. • To understand the concept of personality traits, religion faith. • To understand the concepts of socializing altruism. • To train the students in eyewitness testimony. • Understanding the concept of misinformation effects. • To get knowledge about the factors influence Juror Judgements.

Psychology for living	• To enable students to make the connection between psychology and its practical application to everyday life. • To train students how psychological principles can help t hem to face life's challenges. • To enables students to relate what they are learning in class to issues that they encounter in their everyday life., such as stress, health, work personal relationship communication and self-esteem. • Understand the concept of self – discrepancies. • Understanding the concept of self-regulation. • Understanding the nature of stress, types of stress. • To get the knowledge about the factors influencing stress tolerance, monitoring the stress. • Understanding the nature of constructive coping • To get the knowledge about the self-control, constructive coping. • To understand the concept of stress, personality and illness. • To understand the effects of Drugs, habits lifestyles and Health.
BA III Year Abnormal Psychology Leadership in Organization	• To understand the concepts of DSM and ICD-10 • Understanding the problem of labelling. • Understanding the causes of abnormal behaviour i.e necessary, sufficient and contributory causes. • Understand the brief history of abnormal behaviour and panic, anxiety disorders • Treatment and outcomes of this disorder. • Understand the brief history of somatoform and dissociative disorders, treatment and outcomes. • To understand the nature and types of leadership. • To understand the behavioural theories, contingency theories and contemporary issued in leadership.
-Psychopathology -Organizational Behaviour	• Understand the brief history of mood disorders. • To impact knowledge about the concept of mood disorders. • To enable students to develop their personality. • To make students understand the nature and course of personality. • Understand the brief history Schizophrenias and delusion disorders. • To make students understand the nature and course of various abnormal conditions. • To make students understand the nature and level of mental retardation • To understand brain defects in mental retardation. • To understand treatment, outcome and prevention of mental retardation

	• To impart knowledge and will needed for psychological assessment of different abnormal conditions. • To understand the behaviour of individual along with organization assets. • To understand the biological characteristics, personality, awareness and matching personality and job. • To acquaints the measurement concepts of skill, self-awareness and matching personality and job. • To understand the communication model, barriers and sources. • To get the knowledge about the cross-cultural communications, skill involved in communicating.
Home Science	
B.A First year	Course outcome
I Family Resource Management II Food and Nutrition	• To Unable student to understand the family Resources • To acquire knowledge about the management process. • To develop the ability to improve the work within less time and fatigue • To understand the ability how to make household budget to each income group. • Student will acquire knowledge in the field. • Role of food and function of nutrients. • Different sources and deficiencies of nutrients. • Students can improve the nutritional quality of food and nutrition.
III Human Development IV Textile and Clothing Construction	• To study the meaning and scope of Human Development • To understand the importance of prenatal development. • To know the adjust mental problems of Infancy • To develop and understand the need and importance of early childhood education to gain insight into the organization and management of preschool center. • To enable students for proper choice of fabrics. • To impart knowledge regarding textile and clothing. • To impart creative and technical skills in clothing construction. • To enable students to develop skills in embroidery. • To encourage entrepreneurship • To acquire knowledge of various embroideries done in India with the historical background of each.
V Extension Education VI Textile and Clothing	• To understand the meaning importance and need of Home Extension Education. • To impart knowledge of extension education. • To understand the process of communication in development work.

	• To get acquainted with the terms in extension approaches and models. • Understand the importance and process of programe planning and management in extension. • Develop and ability to plan, implements, monitor and evaluate extension programme. • To impart knowledge about basic principles of design and painting. • To enable students to know about important aspects of clothing. • To impart knowledge about wardrobe planning. • To impart knowledge about selection of cloth for different age group, texture and fabric to encourage entrepreneurship to impart creative and technical skills in textile.
VII Human Development	• To appreciate the sequential stages of development during late childhood. • To implement the techniques for disciplining the child. • To understand behavioral problems during late childhood. • To aware the need and skills to developed for self-improvement. • To know the development and behavior during Adolescence.
VIII Food Nutrition	• To gain acquaintance with human gastro intestinal tract. • To understand the concept of an adequate diet and importance of meal planning • To aware of nutrient deficiencies. • To know the different method of food preservation. • To be aware of the effect of food poisoning and food adulteration. • To gain the knowledge about the nutrient need for various age group • Learn various preservation technique and their applications.
XI Nutritional Management In Health & Diseases XV Communication Process in Home Science	• To know the principles of diet • Therapy and effect of food habits • To understand the role of dietician. • To understand the modification of normal for therapeutic purpose. • To understand the role of communication in development • To know the process of communication and effects of media • To enable the qualities of leadership in the students. • To know the importance of programme planning, implementation of programme and evaluation.
Home Science Practical	• To know therapeutic and modified diet. • To understand the diet in common ailments • To understand the modification, in regular cooking

	• To develop the skill in the students about the audio visual aid.

Hindi	
Paper	**Outcome**
B.A I Year P-I, P-II	• Understand the interaction between literature and society. • Explain the nature language and literature. • Obtain the skill of literacy criticism. • To improve the Essay Writing skills. • Illustrating the nature of literacy from like one act, play and short story.
B.A II Year	• Understanding the meaning concept and importance of function Hindi. • Understanding various from of functional Hindi according to its area of application. • Understanding the official Language and importance of translation. • Understanding Veils forms of Writing in media. • Understanding the Concept of proof Vending.
B.A III Year	• Understanding the origin of Hindi language and its literature. • Analyzing the development of khariboli Hindi. • Understanding the Concept of history of literature. • Understanding the basis of the classification of Hindi literature. • Understanding the features of Adikal bhaktii kal Riti kal and Adhunik kal in Context of socio-cultural and Political Condition of that period. • Identifying the eminent Hindi writers of each period. • Understanding the literary trends of each kaal.

Urdu	
B. A. First Year	Outcome
	• Urdu Nasr ka Umumi Taaroof • Muqtalif asnaafe nasr ka mutaala • Sahi aur acchi Urdu smajhne aur bolne ki slaahiyat paida karna • Urdu ki muatalif asnaafe nasr ka mutaala • Mutaala matan nasr • Kisi aam adabi masherati saada wa sales baa mahwera Urdu Tehrir karna • Mazmoon nigari ki mashq • Scienci siyasi ilmi wa adabi tanziya aur mizhiya mauzu par 400 alfaz mazmoon likhna • Afsanvi adab se dilchapi paida karna

	• Urdu adab ki nasho numan mein novel ki ahmiyat aur rifdiyat ko waze karna • Sinfe adab ki nasho numan mein hissa lene wale mashirati, tahzeebi anaasir ki nishandahi karna • Novel ka fan aurr technique aur uske ajzaye tarkibee ko waze karna • Urdu mein novel nigari ke agaaz wa irteqa se bahas karna • Dastan aur novel ka farq zaher karna • Nisaab mein shamil novel Umrao Jaan Ada ka Tafseeli aur tanqeedi mutaala karwana • Mirza Muhammad Haadi Ruswa ka bahaesiyate novel nigar taaruf pesh karna • Nazm nigari ki ahmiyat ko waze karna • tulaba mein taqliqi salahiyat ko parwan chadana • Nazm go shuora ki nazm nigari ki aham qusoosiyaat ko waze karna • Nazm nigari ke mauzooaat se bahass karna • Urdu nazm ka irteqa shumali hind aur junubi hind mein tafseeli jaayeza lena • Nisaab mein diye gaye nazm go shuora ka matani mutaala karna • Urdu mein qitaa nigari ke aagaaz wa irteqa se bahas karna
B. A. Second Year	• Masnavi ba haisiyate sheree sinf tulaba ko wqif karwana • Ghazal ki ahmiyat ifaadiyat aur uski manviyat ko waze karna • Masnavi ke qulaasa, tajziya aur tabsera waze andaaz mein bayan karna • Ilm-e-bayan, taarif aur misaal se tulaba ko waqif karwana • Nisaab mein shamil masnavi Sehrul Bayan aur Gulzare Naseem ka tafseeli mutaala karwana • Shamile Nisaab Ghazal go shuora se waqifiyat karwana • Ilm-e-bayan mein tashbi, mushba, mushbabe, mustarla aur majaze mursal ko wazahat ke sath pesh karna • Nazm nigari ki ahmiyat ko waze karna • Marsiya Qaseeda aur Rubayi ke qulase tajziye tafseere se tulaba ko waqif karwana • Rubayi aagaz wa irteqa se tulaba ko mutaruf karwana • Nisaab mein shamil nazm go shuora ka tafseeli wa matani jayeza pesh karna • Shamile Nisaab marsiya go aur qaseeda go ke sath sath Rubayi go shuora ka ijmali jayeza pesh karna
B. A. Third Year	• Tulaba mein inshayiya nigar ka zauq paida karna • Inshayiya nigaron ki zindagi kea ala paheluon ko ujagar karna • Inshayiya tarif, technique

	• Inshayiya nigaron kin inshayiya nigari ka jayeza • Shamile Nisaab Inshayiyon ka tkziyati mutaala • Zarai Iblagh ke tawassutt se tulaba ke tajrube mein wusat paida karna aur tulaba ko zaman eke etebaar se Zarai Iblagh se waqif karwana • Ek zubaan se doosri zuban mein tarjuma karne ki salaahiyat ko ujagar karna • Iblagh ki ibteda, ahmiyat • Iblagh ke zaraye • Sahafat • Jamhoori daur mein Zarai Iblagh ki zaroorat • Electronics media – radio, television, internet, radio ki ibteda, All India Radio ka qayaam, aur Urdu majlis • Television ki nashiriyat Bharat mein • Televion aur Urdu zaban • Internet ki ibteda – Urdu mein internet ka istemaal • Tarjuma nigari ka fan aur uski qisme • Classroom mein angrezi se Urdu tarjume ki mashq

Master of Science (M.Sc.)
Chemistry

Paper	Outcome
CHE-101 Analytical Chemistry	• After completion of the course, the students will be able to • Explain different chromatographic techniques • Discuss basic separation techniques • Discuss role of analytical chemistry in various fields • Discuss the effect of pH and reagent concentration on the solvent extraction of metal chelates
CHE-102 Inorganic Chemistry	• Discuss the function of essential and trace element in biological system • Describe classification of point groups • Discuss in detail the mechanism involved in electron transfer reaction • Explain factors affecting stability constant • Describe in details synthesis of anticancer agents
CHE-103 Organic Chemistry	• Explain the nature of bonding in organic molecules • Discuss various types of substitution reaction • Explain ambient nucleophile • Explain elements of symmetry • Explains effect of conformation on reactivity
CHE-104 Physical Chemistry	• Able to understand collision theory and can determine rates of reactions • Explains thermodynamics of biochemical reactions • Classify surface active agents • Understand applications of polarography
CHE-205Spectroscopic method of	• Understand interaction of radiation with matter

analysis	• Distinguish between different spectroscopic techniques • Explain in detail photoelectron spectroscopy • Able to solve numerical problems of spectroscopy
CHE-206 Inorganic Chemistry	• Able to understand weak and strong field approach in metal ligand chemistry • To understand magnetic properties of metal complexes • Discuss electronic spectra of metal complexes • Able to calculate EAN of metal compounds • Understand chemistry of metal nitrosyls and carbonyls
CHE-207 Organic Chemistry	• Explain general mechanistic consideration of rearrangement reactions. • Discuss mechanism of elimination reactions • Explain mechanism of metal hydride reduction of saturated and unsaturated carbonyl compound in ester and nitrile • Understand substitution reactions
CHE-208 Physical Chemistry	• Describe classification of solids on the basis of shapes and bonding • Explain the selection rule and spin orbital coupling • Discuss the properties of quantum mechanical operators • Explain the effect of increase of voids on the crystals
CHE-313 Structural elucidation by spectral methods	• Explain principles of H1 NMR, C13 NMR and Mass Spectroscopy • Discuss elucidation of structure by spectral methods • Explain Principle of ESR Spectroscopy, Hyperfine splitting, Kramer's degeneracy • Explain Principle of Mossbauer spectroscopy, Quadruple splitting
CHEO-314 Organic Synthesis	• Explain reaction intermediates and preparation and uses of organometallic reagents • Explain mechanism of different reactions. • Discuss uses organic reagents • Explain concept of oxidation and various oxidative reagents
CHEO-315 Asymmetric synthesis and Bio-organic chemistry	• Explain asymmetric hydroxylation and asymmetric reactions • Describe aspects of Bio-organic chemistry and enzyme chemistry • Explain chiral pool, chiral auxillary, asymmetric hydrogenation • Describe enzyme models, chiral recognition, cyclodextrins
CHEO-316 Photochemistry, Free radicals And Pericyclic reactions	• Explain concept of Free radical reactions • Discuss Pericyclic and Electrocyclic reactions • Describe Cyclo-addition reactions • Describe electro-cyclisation, sigmatropic rearrangements, photofries rearrangement
CHEO-417 Organic Synthesis: Retro-synthetic Approach	• Discuss Retro-synthetic analysis of different molecules • Describe disconnection approach, protecting group, C-

	C disconnections • Describe synthesis of 3,4,5,6 membered ring • Discuss ring synthesis, rearrangements, photochemistry in synthesis
CHEO-418 Advanced Organic and Heterocyclic Chemistry	• Discuss five member hetero-cycles and fused hetero-cycles • Describe mechanism of rearrangements and name reactions • Describe fused heterocycles • Explain nomenclature of hetero-cycles
CHEO-419 Chemistry of Natural Products	• Describe plant pigments and Biogenesis • Explain Diel's hydrocarbon, Bile acids, hormones • Explain Synthesis of Anthocyanins with mechanism • Describe Terpenoids and carotenoids

Master of Arts (M.A.)
English

M.A I & II English	
Paper	**Course Outcome**
M.A I Paper I Literature in English (1550-1798)	• The learner community will become acquainted with the development of English literature through different ages through this course. • This paper will enlighten the students about different social, political and literary periods of history and English literature. • The students will be introduced and acquainted with culture, thought, literary trends and movement of the period through the prescribed text. • The period between 1550 and 1798 also gave birth to some very unorthodox political ideas. To input the texts like Paradise Lost, Culture and Anarchy, Absalom and Achitophel in their text would develop proficiency in the learners to analyze the politics today.
M.A I Paper II Literature in English (1800-2000)	• The understanding of the literary works in English within the literary period of 1800-2000 will be enhanced amongst the learners through this course. • The students will be exposed to the theories and the major genres of literature that emerged during this period. • The students will be informed on major genres in literature as they are introduced to poetry, prose, fiction and dramas in both the semesters. • Introduction to theories like Romanticism, Modernism and Post- Modernism will be beneficial to the students in Competitive Examinations like NET, SET, MPSC and UPSC.

M.A. I Paper III Structure of Modern English	• The students will gain knowledge of speech sounds, correct pronunciation and intonation. • They can know the correct pronunciation of words through connected speech. • They will get knowledge of advanced grammar and varieties of English. • Students will be able to impart accent and voice training, formation of sentences and words.
M.A I Paper IV-B Colonial and Postcolonial Literature	• The students will be introduced to the meaning of colonialism and its impact on the colonized countries. • The students will be introduced to different texts written during different countries during the period of colonization. • They will also get acquainted with text which was written in the postcolonial period when the colonized countries were finally liberated. • The main aim of the course is to enhance the student's understanding of colonial and postcolonial literature, resistance and representation, colonial discourses reflected in different texts written during and after the colonial times.
M.A. II Paper V Critical Theory	• The course intends to introduce the modern critical schools which have been influencing literary productions and immensely contributing to the various branches of knowledge to render the multidisciplinary face to the literary and cultural studies in the learners. • It attempts to enhance the students understanding of multi-dimensional and multidisciplinary nature of literary texts of recent time. • The course also attempts to sharpen the intellectual sensibility of the students with the confrontations of the multifaceted critical and intellectual positions of the theoreticians. • It intends to acquaint students with the intrinsic, extrinsic complexities and the sharp dichotomies in socio-political and cultural situations and the corollaries of the various shifts in the literary and cultural relations and connotations in contemporary time.
M.A II Paper VI Indian Writing in English	• The course deals with the literary forms of Indian Writing in English, the students will get introduced to the Indian Writers. • The learners will be familiarized with the texts and its nuances to study critically, analytically and logically. • The students are introduced to poets, dramatist, fiction and non-fiction prose and novel writers of Indian origin. • The students get acquainted with the history of Indian sub-continent, they get an Indian perspective in literature and are made aware of the current scenario of Indian writer.
MA. II	• The course will enhance the learner's community with the

Paper VII English Language Teaching	learning process, the nature and structure of language • Teaching of English language in terms of more effective methodologies of classroom management, material selection and evaluation. • It will acquaint the learner's community with a brief history of language teaching and detailed knowledge of methods and grammatical aspects of English language teaching and learning. • Different types of methods and disciplinary techniques distinctly focusing on learner's community is introduced. • The main aim is to focus on classroom management, lesson planning, material handling and rich learning experience through various presentations and interaction, especially classroom interactions. • It will enable the learner's community and to develop their communicative and study skills and give them a thorough grounding in all aspects of English language learning and teaching.
MA. II Paper VIII-E Major Form: Fiction	• The course intends to familiarize the students with various trends and movements in fiction. • Fiction reads the social barometer and it is the due to the nature of social culture. This helps students understand that it reflects the society and shapes of the society. • Study of fiction will help the students develop the basic understanding of the genre's literary history, especially important shifts in styles and themes. • Reading Fiction from the other countries can help the students to see new things in life, the similarities and differences between day to day life.