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Madha Taluka Shikshan Prasarak Mandal's

**K. N. Bhise Arts, Commerce and Vinayakrao Patil Science  
College, Vidyanagar, Bhosare**

NAAC Re-accredited 'A' Grade (CGPA -3.10)

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**2.6.1 – Teachers and students are aware of the stated programme and course outcomes of the programmes offered by the institution.**

**Academic Year 2023-2024**

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outcomes of the programmes offered by the institution.**

<b>Sr. No.</b>	<b>Name of the Department</b>	<b>Page No.</b>
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<b>3</b>	Department of Geography	<b>12-17</b>
<b>4</b>	Department of Botany	<b>18-19</b>
<b>5</b>	Department of Economics	<b>20-24</b>
<b>6</b>	Department of English	<b>25-27</b>
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<b>14</b>	Department of Commerce	<b>60-64</b>
<b>Total Number of Departments</b>		<b>14</b>

## Department of Chemistry

### Programme Outcomes and Programme Specific Outcomes

Sr. No.	Programme	Programme Objectives	Programme Specific Outcomes
1	B. Sc. Chemistry	<b>PO1. Scientific attitude:</b> To develop our thinking, our attitude, our interests, our outlook have undergone tremendous changes.	<b>PSO1.</b> Understand the knowledge of chemistry, <b>Chemistry</b> majors are able to recognize and apply the principles of atomic and molecular structure to predict chemical properties and chemical reactivity.
		<b>PO2. Effective Communication:</b> Speak, read, write and listen clearly in person through electronic media in English and in one Indian language and make meaning of the word by connecting peoples, ideas, books, media and technology	<b>PSO2.</b> Chemistry majors are able to employ critical thinking and scientific enquiry in the performance, design, interpretation and documentation of laboratory experiments, at a level suitable to succeed at an entry level position in a chemical industry or a chemistry graduate programme.
		<b>PO3. Laboratory and calculation skills:</b> Demonstrate competency in the laboratory expected of a practicing chemist. Develop good skills in laboratory such as observation and evaluation.	<b>PSO3.</b> Upon completion of a chemistry degree, chemistry majors are able to interpret and analyze quantitative data.
		<b>PO4. Integrate the big ideas and themes:</b> Structure representation, energetics, rates of processes, and Connect neutral network across courses.	<b>PSO4.</b> The students are able to understand theoretical concepts of instruments that are commonly used in most chemistry fields as well as interpret and use data generated in instrumental chemical analyses.
		<b>PO5. Effective use of ICT:</b> Use of ICT tools to communicate, create, disseminate, store and manage information.	<b>PSO5.</b> Application of chemical knowledge to explain observation and solve the problem.



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### Course Outcomes

Sr. No.	Course	Course Outcomes	
1.	<b>B. Sc.- I Sem- I</b>	<b>Paper-I</b> Physical Chemistry	<ol style="list-style-type: none"> <li>1. To study the basic concepts order and molecularity of reaction.</li> <li>2. To understand the methods to determine the order of reaction.</li> <li>3. To study the basic concepts of graphical representation, Derivative and Integration.</li> <li>4. To introduce the processes, laws of thermodynamics.</li> <li>5. Explanation of ideal, non-ideal and liquification of gases.</li> </ol>
		<b>Paper-II</b> Inorganic Chemistry	<ol style="list-style-type: none"> <li>1. To understand the atomic structure, shape of orbital, position of elements in periodic table, electronic configuration and characteristics.</li> <li>2. Introduction of chemical bonding, types of bond and crystal structure of NaCl &amp; CsCl, Unit cell.</li> <li>3. To study the VBT, understand concept of hybridization.</li> <li>4. To study the MOT, understand the concept of orbitals.</li> <li>5. VSEPR Theory- assumption and application.</li> </ol>
2.	<b>B. Sc.- I Sem- II</b>	<b>Paper-III</b> Organic Chemistry	<ol style="list-style-type: none"> <li>1. Fundamentals of organic chemistry- bond energy, bond angle, bond length, types of arrow, and types of reactions.</li> <li>2. To understand the Structure and Bonding in organic compounds.</li> <li>3. To introduce the term isomerism, nomenclature.</li> <li>4. To identify Aromatic, Non-aromatic and Anti-aromatic compounds by using Huckels rule.</li> <li>5. To study the alkenes, dienes and alkynes.</li> </ol>
		<b>Paper-IV</b> Analytical Chemistry	<ol style="list-style-type: none"> <li>1. To introduce physical properties of liquids.</li> <li>2. Introduction of environmental chemistry and different treatments on water.</li> <li>3. To study qualitative and quantitative analysis. Detection of Carbon, Hydrogen, Nitrogen And Halogen in different organic compounds by qualitative and quantitative measurements.</li> <li>4. To study the petrochemical-.composition of petrochemicals, application of petrochemicals.</li> </ol>
3.	<b>B. Sc.- I</b>	<b>Practical</b>	<ol style="list-style-type: none"> <li>1. To introduce the basic concepts of Physical, Inorganic and Organic chemistry practicals.</li> <li>2. To provide practical information to students about titration, preparation and estimations.</li> <li>3. To expose students to handle the glassware, instruments and apparatus.</li> <li>4. To improve the practical knowledge of the students</li> </ol>



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4.	B. Sc.- II Sem- III	Paper-V Organic Chemistry	<ol style="list-style-type: none"> <li>To introduce the UV-Visible spectroscopy.</li> <li>To study the conformation, configuration and isomerism.</li> <li>Brief idea about name reactions with mechanism.</li> <li>To study of alcohols, phenols, aldehydes, ketones, ethers, epoxides and carboxylic acids.</li> <li>To introduce various dye i.e. Methyl orange, Congo-red.</li> </ol>
		Paper-VI Inorganic Chemistry	<ol style="list-style-type: none"> <li>To study the co-ordination chemistry-to understand the Ligand, co-ordination number, Werners theory.</li> <li>To introduce chelation, structure of DMG and EDTA.</li> <li>To introduce acid &amp; bases and different concepts.</li> <li>To study of d-block elements- position, electronic configuration and characteristics of d-block elements.</li> </ol>
5.	B. Sc.- II Sem- IV	Paper-VII Physical Chemistry	<ol style="list-style-type: none"> <li>The study of Resistance and Conductance.</li> <li>Knowledge of transport number, Kohlrausch's law and its applications, Onsager equation.</li> <li>Describe the term Entropy, second law and third law of thermodynamics.</li> <li>To study the cell, lattices, crystal structure.</li> <li>Introduction of distribution law.</li> </ol>
		Paper-VIII Analytical Chemistry	<ol style="list-style-type: none"> <li>To introduce volumetric analysis-understand term of titrant, titrand, mole concept, primary &amp; second standard substance. To study acid base indicators &amp; acid base theory.</li> <li>To introduce gravimetric analysis-understand the general steps dilution, precipitation, digestion, ignition in gravimetric analysis. To understand the co-precipitation &amp; post precipitation.</li> </ol>
6.	B. Sc.-II	Practical	<ol style="list-style-type: none"> <li>To synthesis, estimation and analysis of unknown organic compounds.</li> <li>To prepare, and estimate gravimetrically inorganic compounds.</li> <li>To detect the unknown acidic and basic radicals.</li> <li>To perform the experiments by instrumentally and non-instrumentally.</li> <li>To study conductivity, refractivity, viscosity, specific rotation practically.</li> </ol>
7.	B. Sc.- III	Paper-IX Physical Chemistry	<ol style="list-style-type: none"> <li>To understand Phase rule, phase diagram, one component and two component systems.</li> <li>To acquire a knowledge of Thermodynamics, types of electrodes, metal- metal ion electrode.</li> <li>explain the Oxidation- Reduction electrodes, reversible and irreversible cell and applications of emf.</li> <li>Explain the thermal and photochemical processes, Laws of photochemistry and Joblonski diagram.</li> </ol>



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	<b>Sem- V</b>	<b>Paper-X</b> Inorganic Chemistry	<ol style="list-style-type: none"> <li>1.To understand the basic concept, factors, applications and limitations of CFT.</li> <li>2. Describe the basic concepts, assumptions, examples, applications and limitations of MOT.</li> <li>3. To understand the nuclear reaction and its types, applications radioisotopes.</li> <li>4. To study the essential, non-essential and trace elements in biological process.</li> <li>5. To describe the basic concepts of polymers, and nanoparticles.</li> </ol>
		<b>Paper-XI</b> Organic Chemistry	<ol style="list-style-type: none"> <li>1. Brief idea about Spectroscopy i.e. IR, NMR, Mass.</li> <li>2.To introduce Shielding and Deshielding, Chemical Shift.</li> <li>3. To describe various conformations- chair, boat, half-chair, twist-boat etc.</li> <li>4. To understand the name reactions with mechanism.</li> <li>5. To synthesis and reactions of AAE and Malonic ester.</li> </ol>
		<b>Paper-XII</b> Analytical Chemistry	<ol style="list-style-type: none"> <li>1. To provide basic information of colorimetry.</li> <li>2. to study the titrations by potentiometrically.</li> <li>3. Explain the electrolysis and electroplating.</li> <li>4. Discuss the Flame photometry and titrations by conductometrically.</li> </ol>

<b>8.</b>	<b>B. Sc.- III</b> <b>Sem- VI</b>	<b>Paper-XIII</b> Physical Chemistry	<ol style="list-style-type: none"> <li>1. To introduce the Rotational and Vibrational spectroscopy of diatomic molecules.</li> <li>2. To study the basic ideas about different solutions.</li> <li>3. Explain the terms- free energy, enthalpy, phase equilibria, law of mass action, fugacity and activity.</li> <li>4. Describe effects on rate of reactions, theories and order of reactions.</li> </ol>
		<b>Paper-XIV</b> Inorganic Chemistry	<ol style="list-style-type: none"> <li>1. To study the Lanthanides and Actinides with IUPAC nomenclature of super heavy elements.</li> <li>2. To understand the theories of bonding in metal, Types of Semiconductor, applications of Semiconductor and Superconductor.</li> <li>3. Recognise the structural studies of Boranes, Xenon compounds and oxides of sulphur and Phosphorus.</li> <li>4. To study the corrosion of metals and Passivity.</li> <li>5. To introduce Organomettalic chemistry.</li> </ol>
		<b>Paper-XV</b> Organic Chemistry	<ol style="list-style-type: none"> <li>1. To study the Five membered, Six membered and Condensed heterocycles.</li> <li>2. Brief idea about the monosaccharide, disaccharide and polysaccharide.</li> <li>3. To understand the concept Dyes of Drugs.</li> <li>4. To understand the analytical evidences and synthesis of Vitamins and Hormones.</li> <li>5. To study the pesticides and plant growth.</li> </ol>



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		<b>Paper-XVI</b> Analytical Chemistry	<ol style="list-style-type: none"><li>1. To introduce soap and detergents.</li><li>2. Describe the process of polymerisation and rubber.</li><li>3. To explain the manufacture, refining of sugars and their by- products.</li><li>4. To study the Sizing, Bleaching and Dyeing of fibres.</li><li>5. To study the basic of Green Chemistry and Chromatography.</li></ol>
<b>9.</b>	<b>B. Sc.- III</b>	<b>Practical</b>	<ol style="list-style-type: none"><li>1. Apply quantitative reasoning skills to determine quantities of matter and energy involved in physical and chemical change.</li><li>2. Analyse and interpret experimental data using instruments.</li><li>3. To synthesize and Estimate Inorganic compounds.</li><li>4. To synthesize and estimate Organic compounds.</li><li>5. Separation and analysis of binary organic mixtures.</li><li>6. Preparation of derivatives of Organic compounds.</li></ol>



  
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### Department of Microbiology

### Programme Outcomes

Sr. No.	Programme	Programme objectives	Programme specific outcomes
1.	B.Sc. Microbiology	<p><b>PO.-1-Knowledge and Understanding-</b>                      Core principles of bacterial and viral structure, physiology. Details of their interactions with mammalian host at the molecular level. Principles of prevention and treatment of microbial diseases</p>	<p>PSO1.The fundamental concepts of microbiology, such as the classification, identification and laboratory manipulation of microbes.</p>
		<p><b>PO2. Teaching/learning methods and Strategies-</b>                      Formal lectures and practicals supported by tutorials in specific areas related to microbiology. Assessment Most knowledge is tested through a combination of coursework and unseen formal examinations</p>	<p>PSO2. Rational thought and logical analysis is developed throughout the programme. Find out solutions to key problems in biology through the application of experimental procedure. Assessment A mixture of written examinations, and continuous assessments such as practical write ups, essays and poster and oral presentations.</p>
		<p><b>PO3-Skills and other attributes-</b>                      To develop intellectual &amp;practical skills                      Transfer appropriate knowledge and methods from one topic to another within the overall subject. The ability to formulate and test hypothesis of microbiological and biochemical laboratory tasks and techniques.</p>	<p>PSO3- Should be focus on transferable skills through use of ICT, Communicate scientific ideas and Work as part of a team. Plan experiments and carry them out in the laboratory Plan experiments and carry them out in the laboratory</p>
		<p><b>PO4- Deep discipline knowledge-</b> accredited or validated against national or international standards</p>	<p>PSO4 informed and infused by cutting edge research, scaffold throughout their program of studies acquired from personal interaction with research active educators.</p>



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	<b>PO5-Critical thinking and awareness-</b> To develop scientific approach for the development of knowledge. To encourage research through the application of empirical evidences	PSO5- Encourage students to think logically, Organize tasks in a structured form to analyse and solve problems.
	<b>PO6Carrier and leadership readiness-</b> To provide the platform to have knowledge regarding opportunities in health, pharmaceuticals & to take initiative to solve social problems	PSO6-To develop an attitude of forward thinking & code of proficiency. Adapt technology to test and validate the relevant work. Student become technology savvy to plan their career
	<b>PO7Intercultural &amp; ethical competency</b> To inculcate the indigenous knowledge to understand national & international standards & desirable social outcomes	PSO7-To adept the students comfortable with different nationality and social context.
	<b>PO8- Self-awareness and emotional intelligence-</b> The aim is to make abled students to tackle difficult social situations, avoid conflicts and engage them positively in demanded work.	PSO8-Encourage students to prepare their own self –appraisal & support to achieve their constructive objectives



  
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### Course Outcomes

Sr. No.	Course Code	Course title	Course Outcomes
1	B. Sc. part I- Sem.-I Paper-I	Introduction to Microbiology & Microbial Diversity	To aware student to understand the basic microbial structure and function. And study the comparative characteristics of prokaryotes and eukaryotes. To understand the structural similarities and differences among various physiological groups of bacteria/archaea. To know General bacteriology and microbial techniques for isolation of pure cultures of bacteria.
	Paper-II	Microbial Techniques	To demonstrate theory and practical skills in microscopy and their handling techniques and staining procedures. To provides knowledge various Culture media and their applications and also understand various physical and chemical means of sterilization. To make expertise in maintaining aseptic techniques and be able to perform routine culture handling tasks safely and effectively. To comprehend the various methods for identification of unknown microorganisms
	Sem.-II Paper-III	Microbial biochemistry & physiology	To introduce major biomolecules –carbohydrates, lipids, proteins, amino acids, nucleic acids. Their classification, structure & functions. To Conceptualize knowledge of properties, structure, function of enzymes.
	Paper-IV	Applied Microbiology	To familiarize the students the basic principles of applied microbiology and be able to apply these principles to understanding and solving environmental problems – waste water treatment. To provide the knowledge to students about Microorganisms responsible for water pollution especially Water-borne pathogenic microorganisms and their transmission.
2	B.Sc. Part-II- Sem.-III Paper-V	Cytology & Physiology of Microorganism	Understand the microbial transport systems and the modes and mechanisms of energy conservation in microbial metabolism – Autotrophy and heterotrophy Know the various Physical and Chemical growth requirements of bacteria and get equipped with various methods of bacterial growth measurement. Conceptual knowledge of aerobic and anaerobic respiration and various intermediary mechanisms involved, oxidative phosphorylation
	Paper-VI	Bacterial Genetics	To know the terms and terminologies related to bacterial



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			<p>genetics and to understand the properties, structure and function of genes in living organisms at the molecular level.</p> <p>To have a conceptual knowledge about DNA as a genetic material, enzymology, and replication strategies.</p> <p>To understand the importance of genetic code and wobble hypothesis.</p> <p>To discuss the molecular mechanisms underlying mutations, detection of mutations and DNA damage and repair mechanisms.</p> <p>To explain the concept of recombination.</p>
	Sem.-IV Paper-VII	Immunology & Medical Microbiology	<p>To demonstrate an understanding of key concepts in immunology.</p> <p>To provide the knowledge to understand the overall organization of the immune system</p> <p>To Conceptualize the students how the collection of individual clones of lymphocytes the Ig gene in B cells and the antigen receptor in T cells.</p> <p>To make them understand the salient features of antigen antibody reaction &amp; its uses in diagnostics and various other studies.</p>
	Paper-VIII	Industrial Microbiology-I	<p>Know about design of bioreactors, factors affecting growth and production, heat transfer, oxygen transfer • Understand the rationale in medium formulation &amp; design for microbial fermentation, sterilization of medium and air</p> <ul style="list-style-type: none"> <li>• Appreciate the different types of fermentation processes</li> <li>• Understand the biochemistry of various fermentations</li> </ul>
3	B.Sc. Part-III Sem.-V Paper-IX	Virology, Extremophiles & Bioinformatics	<ul style="list-style-type: none"> <li>• Understand the architecture of viruses and their classification</li> <li>• Know the methods used in studying viruses</li> <li>• Comprehend the intricate interaction between viruses and host cells</li> <li>• Understand the interactions between viruses and the host immune system</li> <li>• The terms Oncogenes and cause of oncogenes is.</li> <li>• Explain use of bioinformatics to study the biomolecules</li> </ul>
	Paper-X	Industrial microbiology-II	<p>Understand the beneficial role of microorganisms in fermented foods and in food processing and the microbiology of different types of fermented food products – dairy.</p> <ul style="list-style-type: none"> <li>• Know the spoilage mechanisms in foods and thus identify methods to control deterioration and spoilage</li> <li>• Recognize and describe the characteristics of important pathogens and spoilage microorganisms in foods.</li> <li>• Identify ways to control microorganisms in foods and thus know the principles involving various methods of food</li> </ul>



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		<p>preservation • Get equipped with a theoretical and practical understanding of industrial microbiology</p> <ul style="list-style-type: none"> <li>• Appreciate how microbiology is applied in manufacture of industrial</li> <li>• Identify techniques applicable for Improvement of microorganisms based on known biochemical pathways and regulatory mechanisms</li> <li>• Comprehend the techniques and the underlying principles in downstream processing</li> </ul>
Paper-XI	Agricultural Microbiology	<ul style="list-style-type: none"> <li>• Understand various biogeochemical cycles – Carbon, Nitrogen, Phosphorus cycles etc. and microbes involved</li> <li>• Understand various plant microbes interactions and their applications especially the bio fertilizers and their production</li> </ul>
Paper-XII	Immunology	<p>Demonstrate an understanding of key concepts in immunology.</p> <ul style="list-style-type: none"> <li>• Begin to appreciate the significance of maintaining a state of immune tolerance sufficient to prevent the emergence of autoimmunity.</li> <li>• To understand about hypersensitivity and help the students to understand its immune prophylaxis and immune therapy.</li> <li>• To make them understand the salient features of immunohematology &amp; its uses in diagnostics and various other studies.</li> <li>• Learn about immunization and their preparation and its importance • Demonstrate scientific quantitative skills, such as the ability to evaluate experimental design, read graphs</li> </ul>
Sem.-VI Paper-XIII	Microbial Genetics	<p>Know the terms and terminologies related to molecular biology</p> <ul style="list-style-type: none"> <li>• Explain the significance of central dogma of gene action • Have a conceptual knowledge about DNA as a genetic material, enzymology, and replication strategies</li> <li>• Understand the molecular mechanisms involved in transcription and post transcriptional modification.</li> </ul>
Paper-XIV	Microbial Biochemistry	<ul style="list-style-type: none"> <li>• Understanding the Conceptual knowledge of properties, structure, function of enzymes, enzyme kinetics and their regulation</li> <li>• Conceptual knowledge of aerobic and anaerobic respiration and various metabolic pathways</li> <li>• Overview of cycling of element</li> <li>• Discuss the biosynthesis and the degradation pathways involved.</li> </ul>
Paper-XV	Environmental Microbiology	<p>Appreciate the diversity of microorganism and microbial communities inhabiting a multitude of habitats and occupying a wide range of ecological habitats</p>



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		<ul style="list-style-type: none"><li>• Understand the basic principles of environment microbiology and be able to apply these principles to understanding and solving environmental problems – waste water treatment and bioremediation</li><li>• Know the Microorganisms responsible for water pollution especially Water-borne pathogenic microorganisms and their transmission and sewage treatment methods employed in waste water treatment</li></ul>
Paper- XVI	Medical Microbiology	<ul style="list-style-type: none"><li>• This course provides learning opportunities in the basic principles of medical microbiology and infectious disease.</li><li>• It covers mechanisms of infectious disease transmission, principles of aseptic practice, and the role of the human body's normal micro flora.</li><li>• The course provides the conceptual basis for understanding pathogenic microorganisms and the mechanisms by which they cause disease in the human body.</li><li>• It also provides opportunities to develop informatics and diagnostic skills, including the use and interpretation of laboratory tests in the diagnosis of infectious diseases.</li><li>• To understand the importance of pathogenic bacteria in human disease with respect to infections of the respiratory tract, gastrointestinal tract, urinary tract, skin and soft tissue</li><li>• Explain the methods of microorganisms control, e.g. chemotherapy</li></ul>



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# K.N. Bhise Arts, Commerce and Vinayakrao Patil Science College, Bhosare

Paranda Road, Bhosare, (Kurduwadi) Tal-Madha Dist.-Solapur Pin-413 208 (Maharashtra)

## Department of Geography


### Programme Outcomes, and Programme Specific Outcomes

Sr. No.	Programme	Programme Objectives	Programme Specific Outcomes
1	<b>B. A. Geography</b>	<p><b>PO 1. Human-Environment Relationship:</b> To aware about environment and how environment affect on human processes and how human activities are effect on environment.</p>	<p><b>PSO1.</b> Teaching should bring about importance of environment and human activities operating over the Earth Surface.</p>
		<p><b>PO2. Understanding of The Complexities of Our World:</b> Geography provides students with a highly transferable set of skills and an understanding of the complexities of our world. Learn how economic, social and cultural processes affect health and wellbeing</p>	<p><b>PSO2</b> Teaching and practical knowledge bring and to understand the different process active on the earth surface and within the Earth with a high and low magnitude.</p>
		<p><b>PO3.Social Interaction:</b> Importance of listening to others, Using different ways while speaking in society, Skills of disagreements and to assist in reaching to conclusion in group Settings.</p>	<p><b>PSO 3</b> General issues from the syllabus are chosen for discussions and debates. In these activities the ability to form opinions, views, to express agreement, disagreement, etc. in socially acceptable ways.</p>
		<p><b>PO4. Communication Skills:</b> Students will demonstrate the ability to communicate geographic information utilizing both oral and written outlets.</p>	<p><b>PSO 4</b> The intension is to develop an approach about Social, Political, and Cultural issues after learning various ideas in the classrooms.</p>
		<p><b>PO5. Ethical and Social Responsibility:</b> To know value system. To take moral decisions and accept the responsibility for them.</p>	<p><b>PSO5</b> To teach ethical values to students belong to different backgrounds and maintain balance Between / among different ethical views.</p>



		<p><b>PO6.Environment and Sustainability:</b> To understand the issues of environmental consciousness and Sustainable development.</p>	<p><b>PSO6</b> The aim is to teach importance of ecological balance. The prescribed texts, lessons and poems can be used by teachers for this purpose.</p>
		<p><b>PO7.Self-directed and Life-long Learning:</b> To gain the ability to engage in independent and life-long learning.</p>	<p><b>PSO7</b> To inspire students to gain knowledge and wisdom and teach them that gaining knowledge and wisdom is continuous and unending process apart from financial gain from the acquired knowledge and wisdom</p>



  
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## Course Outcomes

Sr. No.	Course	Course Outcomes
1.	<b>B. A. Part – I Sem. I &amp; II Geomorphology and Human Geography</b>	<ol style="list-style-type: none"> <li>1. To sensitize the students about background knowledge of Geography and Geology.</li> <li>2. To familiarize the students with some geomorphological concepts and processes takes place on the earth surface and within the earth crust.</li> <li>3. To sensitize the students about background knowledge of Geography.</li> <li>4. To provide Knowledge about Human and Environmental relationship.</li> </ol>
2.	<b>B. A. Part – I Sem. I &amp; II STD</b>	<ol style="list-style-type: none"> <li>1. Provide knowledge to students about the development of science and technology and contribution of some scientist.</li> <li>2. To make acquaint the student with the dynamic aspects of development of science and technology.</li> <li>3. To understand the scope and content STD in relation to agriculture, transport and communication etc.</li> <li>4 Provide knowledge to students about the importance of resources, human health and contribution of various scientific research institutes in India.</li> </ol>
3.	<b>B.com Part – I Sem. I &amp; II Commercial Geography and Marketing Geography</b>	<ol style="list-style-type: none"> <li>1. To understand the scope and content of Commercial Geography.</li> <li>2. To Study the various types of Resources as the basis for various economic activities.</li> <li>3. To integrate the various factors of economic development and to acquaint the student about dynamic aspects of Economic Geography</li> <li>4. To understand the scope and content of Commercial Geography.</li> <li>5.To integrate the various factors of Marketing Geography and to acquaint the student about dynamic aspects of Commercial Geography</li> </ol>
4.	<b>B. Sc. Part – I Sem. I &amp; II Geomorphology and Human Geography</b>	<ol style="list-style-type: none"> <li>1) To introduce new concept of Geomorphology.</li> <li>2) To give the knowledge about geomorphology to the students.</li> <li>3) To give the basic knowledge about disasters occurred at different places on the earth.</li> <li>4) To make the students familiar with new terms &amp; concepts of Geomorphology.</li> <li>5) To sensitize the students about background knowledge of Human Geography.</li> <li>6) To provide Knowledge about Human and Environmental relationship</li> </ol>
5.	<b>B. Sc. Part – I Practical Cartographic Techniques</b>	<ol style="list-style-type: none"> <li>1.Student will be able to appreciate the use of Landform analysis,</li> <li>2.Student will be able to appreciate the use statistical data</li> <li>3. To familiarize the students with remote sensing in cartography.</li> </ol>



6.	<b>B.A. II Sem. III &amp; IV Geography of India and Environment Geog.</b>	<ol style="list-style-type: none"> <li>1. To familiarize the students with Physiography and Climate of India.</li> <li>2. to understand the students Soil, Vegetation and Resource of India</li> <li>3. To Familiarize the Students with Agriculture and Industries in India.</li> <li>4. To acquaint the student with the Population,</li> <li>5. To Familiarize the Students with Man and Environment relationship</li> </ol>
7.	<b>B.A. II Sem. III &amp; IV Climatology and Economic Geog.</b>	<ol style="list-style-type: none"> <li>1. To sensitize the students about background knowledge of Climatology.</li> <li>2. To familiarize the students with some Climatological concepts</li> <li>3. To sensitize the students about background knowledge of Climatology.</li> <li>4. To acquaint the student with the basic concepts in Climate, Temperature, Rainfall.</li> <li>5. To introduce &amp; understand the components Climate</li> <li>6. To familiarize the students with some economic activities</li> <li>7. To acquaint the student with the different economic factors.</li> </ol>
8.	<b>B.A. II Sem. III &amp; IV Introduction to Tourism Geography and Tourism in India</b>	<ol style="list-style-type: none"> <li>1. To Acquaint the Student with Basic Concept of Tourism Geography</li> <li>2. To Understand the Factor Affecting the Tourism Geography</li> <li>3. To Familiarize the Students above Classification of tourism</li> <li>4. To Acquaint the Student with tourist places in India</li> </ol> <p>Main Objective of the course is to Synthesize Students with various factors of Maharashtra in respect of various resources.</p>
9.	<b>B.Sc. II Sem. III &amp; IV Climatology and Economic Geography</b>	<ol style="list-style-type: none"> <li>1. To sensitize the students about background knowledge of Climatology.</li> <li>2. To familiarize the students with some Climatological concepts</li> <li>3. To sensitize the students about background knowledge of Climatology.</li> <li>4. To acquaint the student with the basic concepts in Climate, Temperature, Rainfall.</li> <li>5. To introduce &amp; understand the components Climate</li> <li>6. To familiarize the students with some Economic Geography</li> <li>7. To sensitize the students about different economic activities</li> </ol>
10.	<b>B.Sc. II Sem. III &amp; IV Geography of India and Environment Geog.</b>	<ol style="list-style-type: none"> <li>1. To familiarize the students with. Physiography and Climate in India.</li> <li>2. to understand the students Soil, Vegetation and Resource of India</li> <li>3. To familiarize the Students with Agriculture and Industries in India.</li> <li>4. To acquaint the student with the Population</li> <li>5. To familiarize the Students with Man and Environment relationship</li> <li>6. To familiarize the students with different types pollution</li> </ol>
11.	<b>B.Sc. II Geography Practical III &amp; IV</b>	<ol style="list-style-type: none"> <li>1. To introduce the students about statistical data and tabulations.</li> <li>2. Acquaint the student with statistical techniques.</li> <li>3. To introduce the students about field techniques and tools.</li> <li>2. To introduce the students to design the field report</li> <li>3. Acquaint the student with writing of project report</li> </ol>




12.	<b>B.A. Part III Sem. V Regional Planning and Development</b>	<ol style="list-style-type: none"> <li>1. The students were known the importance of regional planning.</li> <li>2. The students understood the concepts of region, regionalization, regional planning &amp; development and detailed knowledge of region</li> <li>3. The students were familiar with indicators of measurement of development.</li> <li>4. Detail understanding of Growth Pole Model, Center place Theory and Growth Foci Model in Indian context.</li> </ol>
13.	<b>B.A.III Sem. V Urban Geography</b>	<ol style="list-style-type: none"> <li>1. The students were known the importance of urban settlements through urban geography.</li> <li>2. The students understood the types of urban Settlements, Site and situations.</li> <li>3. The students were familiar with an idea of relationship between human activities and urban development</li> <li>4. Detail understanding of students regarding present urban problems and students are capable to handling of present problematic situations in urban areas.</li> <li>5. The students are developed as a good urban planner and environmental conservator.</li> </ol>
14.	<b>B.A.III Sem. V Population Geography</b>	<ol style="list-style-type: none"> <li>1. This paper would bring an understanding of population geography along with relevance of demographic data.</li> <li>2. The students would get an understanding of distribution and trends of population growth in the developed and less developed countries, along with population concepts.</li> <li>3. The students would get an understanding of the dynamics of population and understanding of the implications of population composition in different regions of the world.</li> <li>4. An appreciation of the contemporary issues in the field of population studies</li> </ol>
15.	<b>B.A.III Sem. VI Evaluation of Geographical Thought</b>	<ol style="list-style-type: none"> <li>1 Students were able to visualize the basic theme, ideas and approaches of geographic knowledge with relation to historical juncture, varying schools and era of their emergence.</li> <li>2. Detailed knowledge about the debates in the geographical studies.</li> <li>3. Understanding of recent trends in Geography</li> </ol>
16.	<b>B.A.III Sem. VI Political Geography</b>	<ol style="list-style-type: none"> <li>1. Student will understand the history and development of political geography.</li> <li>2. Get knowledge about evaluation of state and nation.</li> <li>3. Get knowledge of Geo-political theories.</li> <li>4. Investigates problems and disputes of India with the most current research topics in political geography.</li> </ol>
17.	<b>B.A.III Sem. VI Social Geography</b>	<ol style="list-style-type: none"> <li>1. In depth understanding the problems and prospects of society in India.</li> <li>2. The students are fully aware about the technological, occupational and migration changes of peoples in India.</li> <li>3. Detailed knowledge about the social categories and their spatial distribution.</li> <li>4. Understanding concepts of social wellbeing, welfare and social problem in India.</li> </ol>
18.	<b>B.A.III GEOGRAPHY Practical Paper I</b>	<ol style="list-style-type: none"> <li>1. In depth understanding the map, concept of scale and projection.</li> <li>2. Detailed knowledge about the analysis of landforms and its identification.</li> <li>3. The students are deeply aware about basic information to the students about S.O.I. topo sheets and I.M.D. weather reports and obtained the skills about map interpretation.</li> </ol>



19.	<b>B.A.III Geography Practical Paper II</b>	<ol style="list-style-type: none"> <li>1. In depth understanding the importance of field work and advanced Techniques in Geography.</li> <li>2. The students are trained to implement modern tool and techniques in Geography.</li> <li>3. The students are deeply aware about the basics and trained in instrumental survey.</li> <li>4. The students are deeply familiar with computer, GIS, GPS and Remote Sensing.</li> </ol>
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## Department of Botany

### Programme Outcome and Programme Specific Outcomes:

Sr. No	Course	Programme Outcomes	Programme Specific Outcomes
1	<b>B. Sc. I &amp; II : Botany</b>	Understand plant structures in the context of physiological functions of plants.  Understand lipid metabolism in plants.  Understand the morphological and structural organization of Cryptogams and Phanerogams.  Economics Botany and plant utilization in concern with human life.  Diversity of plants  National plant wealth .  Developmental biology of plants.  Industrial application of microorganism	1. Identifying different resources helpful for human life.  2. Identifying different groups of plants  3. Acquiring knowledge about inheritance, biochemical and metabolic activities.  4. Development of horticultural skill.  5. Acquiring knowledge about importance of environment.



  
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## Course Outcomes

Sr.No	Course	Course Outcomes
1	B.Sc –I Paper I Diversity in non-vascular plants.  B.Sc – II Paper V Algae, Fungi, Bryophytes and Industrial application.	1 Developing interest in plant diversity.  2 Developing skill of identification of Algae, Fungi and Bryophytes.  3 Creating interest in biological industry.
2	B.Sc –I Paper No. II- Plant Biochemistry, physiology and Ecology.  B.Sc –II Paper No .IV-Plant physiology, Ecology and Horticulture.	1. Acquiring basic knowledge about biochemical, physiological mechanism in plants.  2. Imparting knowledge of Horticulture.
3	B.Sc –I Paper III -Diversity in vascular plants.  B.Sc –II Paper IV - Pteridophytes, Gymnosperms, Angiosperms and Anatomy.	The student can understand the knowledge about  1. Diversity in vascular plant.  2. Characters of vascular plants and classification of plants.  3. External & internal characters of plants.
4	B.Sc –I Paper III -Diversity in vascular plants.  B.Sc –II Paper IV - Pteridophytes, Gymnosperms, Angiosperms and Anatomy.	Students should be able to know  1. Structure of cell.  2. Types of organisms and characteristics.  3. History, distribution, structure and functions of different cell organelles,  4. Transmission of character  5. Mendelism.  6. Resource of plants to fulfill the basic needs.



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**K. N. Bhise Arts Commerce and Vinayk Rao Patil Science College,  
Vidyanagar Bhosare  
Department of Economics**

**Programme Outcomes**

S.N.	Programme	Programme Objectives	Programme Outcomes
1	<b>B.A. Entire Economics</b>	<b>A) Intellectual Growth :</b> <b>PO 1.</b> Develop the ability to explain core economic terms, concepts, and theories.	<b>PSO 1.</b> * Explain the function of market and prices as allocative mechanisms. * Apply the concept of equilibrium to both microeconomics and macroeconomics. * Identify key macroeconomic indicators and measures of economics change, growth, and development. * Identify and discuss the key concepts underlying comparative advantage. * Identify and explain major types of market failures.
	<b>B.A. Entire Economics</b>	<b>PO 2.</b> Demonstrate the ability to employ the “economic way of thinking.”	<b>PSO 2.</b> * Discuss the application of marginal analysis. * Explain the use of benefit/cost analysis. * Explain the contribution of economics to the analysis of non-market social issues.
	<b>B.A. Entire Economics</b>	<b>PO 3.</b> Demonstrate awareness of global, historical, and institutional forces.	<b>PSO 3.</b> * Assess the role of domestic and international institutions and norms in shaping economies.
	<b>B.A. Entire Economics</b>	<b>PO 4.</b> Apply economic theories and concepts to contemporary social issues, as well as formulation and analysis of policy.	<b>PSO 4.</b> * Describe how economic trade-offs and social values impact public/private social policy, and the success or failure of policies to achieve intended outcomes.
	<b>B.A. Entire Economics</b>	<b>PO 4.</b> Recognize the role of ethical values in economic decisions.	<b>PSO 5.</b> * Distinguish between normative and positive economics. * Identify the limits of economic analysis. * Compare and contrast efficiency and equity.
	<b>B.A. Entire Economics</b>	<b>B) Skill Areas</b> <b>PO 5.</b> Apply both oral and written communication skills within the discipline.	<b>PSO 6.</b> * Present economic arguments in non-quantitative form. * Discuss economic concepts in an articulate manner in a classroom.
	<b>B.A. Entire Economics</b>	<b>PO 6.</b> Demonstrate quantitative reasoning skills.	<b>PSO 7.</b> * Present an economic argument in quantitative terms. * Be able to conduct economic analysis using equations and graphs.





	<b>B.A. Entire Economics</b>	<b>PO 7.</b> Demonstrate the ability to collect, process, and interpret data, including statistical inference.	<b>PSO 8.</b> * Recognize how to use scientific method in economics. * Formulate empirically testable hypotheses. * Construct a data set of economic variables. * Calculate, present, and discuss descriptive statistics. * Conduct a regression analysis. * Critically assess the statistical analysis of other researchers.
	<b>B.A. Entire Economics</b>	<b>PO 8.</b> Demonstrate computer proficiency within economics.	<b>PSO 9.</b> * Access, download, and use electronic databases. * Use standard software packages. i.e. SPSS, Excel etc.
	<b>B.A. Entire Economics</b>	<b>PO 9.</b> Be able to use critical thinking skills within the discipline of economics about economic matters.	<b>PSO 10.</b> * Present viewpoints and alternative hypothesis on economic issues. * Recognize underlying assumptions in economic models. * Demonstrate ability to use the economic tools of analysis.
	<b>B.A. Entire Economics</b>	<b>C) Professional Development</b> <b>PO 10.</b> Develop an awareness of career choices for undergraduate economic majors, and the options for graduate study.	<b>PSO 11.</b> * Set up and keep current a database concerning career opportunities for undergraduate majors and undergraduate options in economics. * Encourage majors and option students to consult department advisors concerning career goals, and the develop study programs consistent with those career goals.



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**Department of Economics**

**Course Outcomes**

S. N.	Course	Course Outcomes
1	<b>B. A. I - Indian Economy P.N. I &amp; II (Sem. I &amp; II)</b>	<ol style="list-style-type: none"> <li>1. To introduce Characteristics of Indian economy.</li> <li>2. To know the students about cause and measures of Indian population</li> <li>3. To introduce the poverty, unemployment and rising prices of Indian economy.</li> <li>4. To know the silent features of Maharashtra's economy.</li> </ol>
2	<b>B.com – I Business Economics I (Sem. I &amp; II)</b>	<ol style="list-style-type: none"> <li>1. To introduce basic concepts of Business Economics</li> <li>2. To create awareness among commerce students about fundamental economic problems pervading in the corporate world.</li> <li>3. To create the ability in the students to understand the cause and effect relation of consumer behavior in different market situation.</li> <li>4. To create ability among the students to forecast future situation on the basis of present market situation and changes.</li> </ol>
3	<b>B.A. II – Money, Banking and Public Finance P.N. III &amp; V (Sem. III &amp; IV)</b>	<ol style="list-style-type: none"> <li>1. To introduce the concept of money to the students.</li> <li>2. To introduce the concept of value of money.</li> <li>3. To make aware the students with recent trends in commercial banking in India.</li> <li>4. To make familiar the students with functioning of RBI and different monetary measures in India.</li> <li>5. To introduce the nature and scope of public finance in India.</li> </ol>
4	<b>B.A. II – Demography P.N. IV &amp; VI (Sem. III &amp; IV)</b>	<ol style="list-style-type: none"> <li>1. To make aware the students about the various issues related to population in India.</li> <li>2. To highlight various concepts and theories of population.</li> <li>3. To enable the students to understand population policy of India.</li> <li>4. To introduce various tools and techniques used for Demographic study.</li> </ol>
5	<b>B.com – II Business Economics II (Sem. III &amp; IV)</b>	<ol style="list-style-type: none"> <li>1. To explain the basic concepts and theories of Macro-Economics to the students.</li> <li>2. To inform the Macro-Economic policies and create awareness about changes in various Macro-Economic theories to the students.</li> </ol>
6	<b>B.com – II Money and Financial System (Sem. III &amp; IV)</b>	<ol style="list-style-type: none"> <li>1. To explain the nature, functioning and issues related to money, banks and nonbank institution in India to the student.</li> <li>2. To acquaint the students fully with the changing role of financial institutions in the process of growth and development.</li> </ol>
7	<b>B.A. III – Micro Economics P.N. VII &amp; XII (Sem. V &amp; VI)</b>	<ol style="list-style-type: none"> <li>1. As a foundation course, in this paper, student is expected to understand the behavior of an economic agent, namely a consumer, a producer, a factor owner and the price fluctuation in a market.</li> <li>2. The approach of this paper is to study the behavior of a unit and analyze it in general, static and partial equilibrium framework.</li> <li>3. The modules incorporated in this paper deal with the nature and scope of</li> </ol>



		<p>economics, the theory of consumer behavior, analysis of production function and equilibrium of producer, the price formation in different markets, structures and the equilibrium of a firm and industry.</p> <p>4. In addition, the principles of factor pricing and commodity pricing, the problem of investment and welfare economics have also been included.</p>
8	<b>B.A.III – Macro Economics P.N. VIII &amp; XIII (Sem. V &amp; VI)</b>	<p>1. On account of the growing influence and involvement of the state in Economic fields, macroeconomics has become a major area of economic analysis in terms of theoretical as well as policy-making issues.</p> <p>2. Microeconomics has an extensive, substantive as well as methodological content. It deals with the functioning of the economy as a whole, including how the economy’s total output of goods and services and employment of resources is determined and what causes these totals to fluctuate.</p> <p>3. The canvass of the study is the whole rather than the part because what is true for the part is not necessarily true for the whole.</p> <p>4. The paper entitled “Macroeconomics” is designed to make an undergraduate student aware of the basic theoretical framework underlying the field of macroeconomics.</p>
9	<b>B.A.III – History of Economics Thoughts P.N. IX &amp; XIV (Sem. V &amp; VI)</b>	<p>1. This course is essential for a student who aspires for advanced training in economics. Contemporary economic science has evolved over many centuries.</p> <p>2. The evolution of economic ideas in each instance was as much a response to immediate economic problems and policy issues as much as it was a self-conscious attempt to refine earlier analysis by correcting mistakes and filling in the gaps in analysis.</p> <p>3. Economic ideas did not evolve in isolation, but were an integral and important part of the evolution of modern social thought. Prevailing ideas of science, scientific rigor and measurement played a significant role in shaping of economic science at each stage of its evolution.</p> <p>4. This course, tracing the history of economic thought, would enable the student to understand how contemporary economics came to be what it is.</p>
10	<b>B.A.III – Development and Research Methodology P.N. X &amp; XV (Sem. V &amp; VI)</b>	<p>1. Modules incorporated in this paper would enable the students to know about theories of growth and development, sectorial aspects of development, investment criteria, allocation of resources, interrelation of international trade and development, domestic macro policies, international aspects of development and the issues relating to sustainable development also find their due place in the modules.</p> <p>2. This paper also attempts to enable students with the research methodology in economics.</p>
11	<b>B.A.III – Agricultural Economics P.N. XI &amp; XVI (Sem. V &amp; VI)</b>	<p>1. The importance of agriculture in the Indian economy hardly needs to be emphasized. The paper on agricultural economics highlights important aspects of the agricultural development and planning in India.</p> <p>2. The paper is split into many chapters; each chapter discusses an aspect of Indian agriculture and role of agriculture in Indian economy.</p> <p>3. This paper also tries to explore the new techniques in agriculture and the changes in agriculture in the contexts of Globalization.</p>
12	<b>B.com – III Business</b>	<p>1. To Explain the Introduction, Meaning, Concept, &amp; Scope of Business Economics.</p>



	<b>Economics III (Sem. V &amp; VI)</b>	<p>2. Principles of Business Economics.</p> <p>3. To introduce the Classical and neo-classical approaches regarding business economics.</p> <p>4. To introduce the LPG model to the students.</p>
<b>13</b>	<b>B.com – III Co- operative Development (Sem. V &amp; VI)</b>	<p>1. To Explain the Introduction, Meaning, Concept, &amp; Scope of co-operative development.</p> <p>2. Explain the various co-operatives institutes.</p> <p>3. To explain the Role of various co-operative institutions in the economic development of the nation.</p>



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## Department of English

### Programme Outcomes

Sr. No.	Programme	Programme Objectives	Programme Specific Outcomes
1	B. A. English	<b>PO 1. Critical Thinking:</b> To develop different perspectives about various ideas to reach to the ultimate decisions.	<b>PSO 1</b> Teaching should bring clarity about the topic and encourage students to form his own opinion about the topic
		<b>PO 2. Effective Communication:</b> Effectiveness in LSRW i.e. Listening, Speaking, Reading and Writing. Effective use of language in oral, written and e-communication.	<b>PSO 2</b> The units of grammar and phonology and communication skills enable students in learning LSRW and their use.
		<b>PO 3. Social Interaction:</b> Importance of listening to others, Using different ways while speaking in society, Skills of disagreements and to assist in reaching to conclusion in group settings.	<b>PSO 3</b> General issues from the syllabus are chosen for discussions and debates. In these activities the ability to form opinions, views, to express agreement, disagreement, etc. in socially acceptable ways.
		<b>PO 4. Effective Citizenship:</b> To develop social awareness and National concern. To take an active role in civic issues with eclectic ideology.	<b>PSO 4</b> The intension is to develop an approach about Social, Political, and Cultural issues after learning various ideas in the classrooms.
		<b>PO 5. Ethics:</b> To know value system. To take moral decisions and accept the responsibility for them.	<b>PSO 5</b> To teach ethical values to students belong to different backgrounds and maintain balance between/among different ethical views.
		<b>PO 6. Environment and Sustainability:</b> To understand the issues of environmental consciousness and sustainable development.	<b>PSO 6</b> The aim is to teach importance of ecological balance. The prescribed texts, lessons and poems can be used by teachers for this purpose.
		<b>PO 7. Self-directed and Life-long Learning:</b> To gain the ability to engage in independent and life-long learning.	<b>PSO 7</b> To inspire students to gain knowledge and wisdom and teach them that gaining knowledge and wisdom is continuous and unending process apart from financial gain from the acquired knowledge and wisdom



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## Course Outcomes

Sr. No.	Course	Course Outcomes
<b>1</b>	<b>B. A., B.com and B. Sc. Part – I Compulsory English</b>	<ol style="list-style-type: none"> <li>1. To introduce to the students various forms of communication.</li> <li>2. To make the teaching of English more practical and student centric.</li> <li>3. To introduce to the students poems from across the globe.</li> <li>4. To acquaint the students with different forms of prose.</li> <li>5. To acquaint the students with different language skills.</li> </ol>
<b>2</b>	<b>B. A. Part – I Optional English</b>	<ol style="list-style-type: none"> <li>1. To acquaint the students with the minor forms of literature.</li> <li>2. To initiate students and provide a firsthand experience of reading the literary text.</li> <li>3. To acquaint the students with literary and critical terms/ concepts.</li> <li>4. To acquaint the students with lyrical types.</li> </ol>
<b>3</b>	<b>B.A. and B. Com. II Compulsory English</b>	<ol style="list-style-type: none"> <li>1. To comprehend the language skills.</li> <li>2. Use some simple language expressions in day to day life.</li> <li>3. To develop the vocabulary of the students.</li> <li>4. To improve the communicative skills of the students.</li> </ol>
<b>4</b>	<b>BA II Sem. III &amp; IV British Literature</b>	<ol style="list-style-type: none"> <li>1. To introduce to the students British Literature and writers.</li> <li>2. To initiate process of literary and critical interpretation of the texts.</li> <li>3. To acquaint students with novel, essay, poetry and drama forms.</li> <li>4. To acquaint students with historical background and literary characteristics of the texts.</li> </ol>
<b>5</b>	<b>BA II Sem. III &amp; IV Indian Literature In English</b>	<ol style="list-style-type: none"> <li>1. To acquaint Students with different literary forms practiced in India in English language.</li> <li>2. To initiate reading skills of Indian Literature in English.</li> <li>3. To acquaint students with critical and analytic skills of literary works.</li> <li>4. To acquaint students with the salient features of Indian English novel and drama.</li> </ol>
<b>6</b>	<b>B.A. /B. Sc. Part III English Compulsory English Skills for Success</b>	<ol style="list-style-type: none"> <li>1. To introduce students to the best uses of language in literature.</li> <li>2. To familiarize students with the communicative power of English</li> <li>3. To enable students to become competent users of English in real life situations</li> <li>4. To expose students to varied cultural experiences through literature</li> <li>5. To contribute to their overall personality development by improving their communicative and soft skills</li> </ol>
<b>7</b>	<b>B.A. III English (Special) Paper – IV Introduction to Literary Criticism</b>	<ol style="list-style-type: none"> <li>1. To introduce and elaborate the basic concepts of literary criticism and literature.</li> <li>2. To familiarize students with critical texts.</li> <li>3. To enable students to read and appreciate literary texts critically.</li> <li>4. To expose them to major trends in literary criticism.</li> </ol>



8	<b>Paper No. V British Literature</b>	<ol style="list-style-type: none"> <li>1. To acquaint the students with major forms of British Literature.</li> <li>2. To introduce various movements and major contributions to British literature.</li> <li>3. To enhance literary, linguistic and aesthetic competence of the students.</li> </ol>
9	<b>Paper VI Indian Writing in English</b>	<ol style="list-style-type: none"> <li>1. To introduce undergraduate students to various phases of evolution in Indian writing in English and to familiarize them with ethos of India.</li> <li>2. To acquaint students to pluralistic dimensions of this literature and sensitize them to value system it upholds.</li> <li>3. To introduce the students the different themes, styles, genres as reflected in poetry, drama and fiction prescribed.</li> </ol>
10	<b>Paper VII Literatures in English</b>	<ol style="list-style-type: none"> <li>1. To develop a clear grasp of the key concepts of world literature</li> <li>2. To expose students to alternative literature produced in the world</li> <li>3. To provide an exposure to various forms of literature</li> <li>4. To familiarize the student with the rich and complex literary tradition of the world</li> <li>5. To understand and respond to literary texts in different periods and cultures</li> </ol>
11	<b>Paper VIII Introduction to the Structure and Function of Modern English</b>	<ul style="list-style-type: none"> <li>• To introduce some basic and advanced units of language so that they become aware of the technical aspects and their practical usage</li> </ul>



  
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# **K.N. Bhise Arts, Commerce and Vinayakrao Patil Science College, Bhosare**

Paranda Road, Bhosare, (Kurduwadi) Tal-Madha Dist.-Solapur Pin-413 208 (Maharashtra)

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## **Department of History**

### **Programme Outcomes (Undergraduate Level)**

#### **Faculty of Arts**

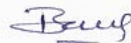
**After completing the graduation in the faculty of Arts the students have**

- Acquired the knowledge with facts and figures concerned with the subjects such as **History, Geography, Economics, Languages**, etc. Understood the basic concepts, fundamental principles, and various theories in the above mentioned subjects.
- Realized the importance of literature in terms of aesthetic, mental, moral, intellectual development of an individual and accordingly of the society.
- Understood how issues in the social science get influenced by the literature and how the literature can provide solutions to the social issues.
- Gained the analytical ability to analyze the literature and social issues to appreciate the strength and to suggest the improvements for better results.
- Appreciated that social issues are no longer permanent and largely depend on the political and the economic changes.
- Convinced himself/herself that the study of literature and social sciences are not only helpful to evolve better individual and better society but also helpful to make the life of an individual more happy and meaningful.
- Participated in various social and cultural activities voluntarily. Written articles, novels, stories to spread the messages of equality, nationality, social harmony and other human values.
- Emerged as a multifaceted personality who is self-dependent; earning his own bread and butter and also creating opportunities to do so.
- Realized that the pursuit of knowledge is a lifelong process and one can achieve the success only with untiring efforts and positive attitude.
- Developed various communication skills such as reading, listening, speaking, etc., which will be helpful in expressing ideas and views clearly and effectively

**I. Program Outcome of Bachelor of Arts (B.A.) Student seeking admission for B.A. programme are expected to imbue with following quality also which help them in their future life to achieve the expected goals.**

- a. Realization of human values.
- b. Sense of social service.
- c. Responsible and dutiful citizen.
- d. Critical temper
- e. Creative ability



  
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## **Department of History**

### **Programme Specifics Outcomes**

#### **The Outcomes of UG Course, B. A. in History**

**At the completion of B. A. in History the students are able to:**

- Understand the basic themes, concepts, chronology and the Scope of Indian History.
- Be Acquaint with the range of issues related Indian History and its distinctive area.
- Understand the history of the countries other than India with comparative approach.
- Think and argue historically and critically in writing and discussion.
- Prepared for various types of Competitive Examinations, Critically recognized the Social, Political, Economic and Cultural aspects of History.
- Apply his historical knowledge in ancillary subject of History as like, Archaeology, Numismatic, and Epigraphy.



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## **Department of History**

### **Course Outcomes**

#### **BA –I Semester I & II**

##### **Paper No –I Chhatrapati Shivaji Maharaj and His Times (1600 AD To 1707 AD)**

- Acquaint the great legends of Maharashtra.
- Understand the Political, Social and Cultural progress of Maharashtra in 17<sup>th</sup> Century.
- Inculcate the Values and tolerance religious policy of Chhatrapati Shivaji Maharaj among the students.

#### **B.A. part-II, Semester III & IV**

##### **IDS paper: -- History of Social Reformers in Maharashtra (1818 AD To 1970 AD)**

- Acquaintance with the great social reformers and their contribution to the Social changes.
- Understanding the Ideal thoughts of social reforms in order to contribute to social evolutionary movement.
- Aware the students to accept the modern ideas and prepare them to eradicate false belief and costumes.

##### **Optional Paper No- III and V Modern Europe (1750 to 1871)**

- Acquaint the students with the socio- Economical and Political development in other countries.
- Understand the contemporary Europe in the light of its background History become aware of the principles, forces, processes and problems of the recent times
- Highlight the rise and growth of Nationalism as a movement in Europe and world

##### **Optional Paper No- IV and VI Modern India (1857 to 1950)**

- Understand the Major events of India's freedom Struggle
- Understand the legacy and their contribution to the making of Modern India.
- Promote the Nationalism in youth.
- Introduce the new ideas and Values which were emerged during struggle for independence.



### **Optional Paper No- VII and XII Ancient India (Up to 650)**

- Understand the Political, Socio-economical and Religious development of Ancient India.
- Acquaint the various Institutions, Organizations , Ideas and Legacy in ancient period
- Introduce the Arts and Architect in Ancient era.
- Acquaint the Human Values and principles of Buddhism and Jainism.

### **Optional Paper No- VIII and XIII History of Mughal India (1526 to 1707)**

- Understand the Political, Socio-economical and Religious development of Mughal India.
- Acquaint the various Institutions, Organizations, Ideas and Legacy in Mughal India.
- Introduce the Arts, Architect and Literature of Mughal Period.

### **Optional Paper No- IX and XIV Expansion and Downfall of the Maratha Power (1707 To 1818)**

- Acquaint the work of Peshwa's to extend and consolidate the Maratha power.
- Understand the Religious and Socio-economic development under Peshwa regime.

### **Optional Paper No- X and XV Modern World (1870 To 2000 AD)**

- Acquaint the students with the socio- Economical and Political development in the world in 19<sup>th</sup> and 20<sup>th</sup> Century.
- Understand the contemporary World in the light of its background History become aware of the principles, forces, processes and problems of the recent times
- Highlight the rise and growth of views and New Ideologies.

### **Optional Paper No- XI and XVI Historical Sources, Research, and Places**

- Understand the Meaning and Nature of History
- Acquaint the Modern Historical Research methodology.
- Introduce the Historical places to promote Historical Tourism.



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**Department of Political Science**

Programme Outcomes

Sr. No.	Programme	Programmes Outcomes	Programme Specific Outcomes
1	B.A. Political Science	<p><b>PO 1 घटनात्मक शासन आणि भारतीय लोकशाही</b> - भारताच्या संविधानाची निर्माती व त्यातील महत्वाच्या तरतूदी अभ्यासाव्या. सर्वोच्च न्यायालय, लोकसभा, राज्यसभा, निवडणूक आयोगाचा अभ्यास करावा</p> <p><b>PO 1 Indian Constitution</b> To study origin and provisions of Indian Constitution. To study the nature of Supreme Court, Loksabha, Rajyasabha and Election Commission.</p> <p><b>PO 2 राजकीय सिध्दांत</b> - राजकीय सिध्दांताचा इतिहास अभ्यासणे विविध संकल्पनांचा अर्थ, स्वरूप, उगम व प्रकार अभ्यासणे</p> <p><b>PO 2 Political Theories</b> To study the history of Political Theories. To study the nature, origin and types of various concepts.</p> <p><b>PO 3 राजकीय विचार</b> - आधुनिक भारतातील विविध राजकीय विचारांचा अभ्यास करणे त्यामुळे विद्यार्थ्यांसमोर आदर्श निर्माण होतील.</p> <p><b>PO 3 Political Thought</b> To study political thoughts of modern India for creating ideals before students,</p> <p><b>PO 4 लोकप्रशासन</b> - प्रशासन म्हणजे काय ते पाहणे, संघटना, लोकनिगम, अंदाजपत्रकाची प्रक्रीया विद्यार्थ्यांना समजावी तसेच सार्वजनिक धोरणांचा व्यक्तीच्या जीवनावर होणारा परिणाम अभ्यासणे</p>	<p>PSO 1. भारतीय संविधानावर पडलेल्या विविध घटकांचा अभ्यास समजावा व केंद्र व घटकराज्य पातळीपर्यंतची राजकीय व्यवस्था आकलन व्हावे.</p> <p>PSO 1 To gain knowledge of various elements which have impact on Indian Constitution and to have understanding of top to bottom political system.</p> <p>PSO 2. राजकीय सिध्दांताचा अभ्यास केल्याने राजकीय व्यवस्था समजून येईल तसेच न्याय, स्वातंत्र्य, समता, सत्ता, अधिसत्ता, अधिमान्यता, लोकशाही यांचा परिचय होईल.</p> <p>PSO 2 To study political theories to know political system as well as justice, liberty, equality, power and democracy</p> <p>PSO 3. आधुनिक भारतीय राजकीय विचारांच्या अभ्यासामुळे समाजसेवेची व देशाच्या प्रगतीची बिजे निर्माण व्हावीत. आपले आचरण शुध्द ठेवावे.</p> <p>PSO 3 To sow seeds of social service, the development of country and pure conduct while studying modern Indian political thoughts.</p> <p>PSO 4. प्रशासन म्हणजे काय ते पाहून लोकप्रशासनाचे महत्व समजावे. संघटना व लोकनिगमांचा परिचय व्हावा. सार्वजनिक धोरणे व विविध नविन कायदांचा जवळून परिचय करावा.</p>



		<p><b>PO 4 Public Administration</b> To study Administration. Students should know organisational structure, Public corporation and annual planning. To study the impact of social policies on individuals.</p> <p><b>PO 5 राजकीय नैतिकता –</b> विद्यार्थ्यांच्या मनामध्ये राजकीय नैतिकता वाढीला लागून तो भारताचा आदर्श नागरीक बनावे</p> <p><b>PO 5 Political Ethics</b> To make a student an ideal citizen when he/she is taught political ethics</p> <p><b>PO 6 राजकीय ज्ञान - राज्यशास्त्र</b> विषयाचा अभ्यास केला असता राजकीय व्यवस्थेचे प्रशासकीय ज्ञान प्राप्त व्हावे.</p> <p><b>PO 6 Political Knowledge-</b> To gain knowledge of administration of political system.</p>	<p>PSO 4 To know the importance of Public Administration. To introduce organisational structure and corporation. To introduce social policies and various new laws.</p> <p>PSO 5. विद्यार्थ्यांच्या मनामध्ये राजकीय नैतिकता वृद्धीगत झाली पाहिजे व त्याने भारताचे नवनिर्माण करावे.</p> <p>PSO 5 To introduce political ethics to students for the creation of new nation.</p> <p>PSO 6. लोकप्रशासन या विषयातील विविध घटकांचा परिचय झाला पाहिजे तसेच विविध लोककल्याणाचे कायदे अवगत व्हावेत. ते सुजाण नागरिक बनावेत.</p> <p>PSO 6 To study various topics under public administration and various laws about public welfare. To become ideal citizen of the country.</p>
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**Department of Political Science**

**Course Outcomes**

Sr. No.	Course	Course Outcomes
1	B.A. I Paper I & II Sem I & II Constitutional Government and Democracy in India	विद्यार्थ्यांना १) भारतीय संविधानावर प्रभाव पडलेल्या घटकांचा परिचय व्हावा (To introduce elements which influenced Indian Constitution) २) आपले अधिकार-कर्तव्ये समजली, राज्याने कोणती कल्याणकारी कार्ये करावी हे समजावे ( ) ३) लोकसभा व राज्यसभा यांच्या कामकाजाची माहिती मिळावी ४) सर्वोच्च न्यायालयाचे स्वरूप समजावे ५) केंद्र-राज्य संबंध कसे परस्थापित होतात ते समजावे ६) निवडणूक आयोगाची, राजकीय पक्षांबद्दल माहिती मिळावी ७) भारतीय राजकारण कोणत्या घटकाने प्रभावीत होते ते समजावे
2	B. A. II Paper III & V Sem III & IV Introduction to Political Theory	विद्यार्थ्यांना १) राजकीय सिध्दांताची ओळख व्हावी. २) स्वातंत्र्याबद्दल विद्यार्थ्यांमध्ये जागृती व्हावी. ३) समता प्रस्थापित करण्याचा प्रयत्न करावा ४) न्यायाची आस मनात निर्माण व्हावी ५) सत्तेचे विविध प्रकार समजावेत ६) अधिसत्ता व सत्ता यातील फरक समजावा ७) अधिमान्यता मिळवण्याचे विविध घटक समजावे ८) लोकशाहीबद्दल आस्था निर्माण व्हावी
3	B.A. II Paper IV & VI Sem III & IV Modern Indian Political Thought	विद्यार्थ्यांना १) आधुनिक भारतीय राजकीय विचारांची ओळख व्हावी. २) राजा राममोहन रॉय यांचे भारतीय प्रबोधनातील योगदान समजावे व त्यातून प्रेरणा मिळावी ३) लोकमान्य टिळकांचा जहाल विचार समजावा ४) महात्मा गांधींचे स्वराज्य प्राप्तीचे योगदान समजावे ५) नेहरु यांनी आधुनिक भारताच्या विकासासाठी केलेले योगदान अभ्यासावे ६) मौलाना अब्दुल कलाम आझादांनी पाकिस्तान-भारत यांच्या निर्मितीत काय भूमिका होती ती समजावी ७) एम.एन.रॉय यांचे लोकशाहीबद्दलचे वेगळे विचार पहावयास मिळावे ८) डॉ. आंबेडकर यांनी केलेले समाजउध्दाराचे कार्य समजावे ९) लोहिया यांचे चौखंबा राज्याविषयीचे वेगळे विचार समजावे
4	B.A. II Paper IDS Sem III & IV Public Administration	विद्यार्थ्यांना १) लोकप्रशासनाची ओळख व्हावी २) संघटनेची तत्वे, उद्देश, घटक समजावून घेणे ३) लोकनिगमांचा व्यक्तीच्या जीवनावर होणारा परिणाम अभ्यासणे ४) अंदाजपत्रकाची प्रक्रिया समजावून घेणे ५) सार्वजनिक धोरणांचा अभ्यास करणे ६) समाज व प्रशासन यांच्या संबंधाचा अभ्यास करणे ७) लोक कल्याणाची विविध कायदे अभ्यासणे



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Madha Taluka Shikshan Prasarak Mandal's  
**K. N. Bhise Arts, Commerce and Vinayakrao Patil Science College,  
Vidyanagar, Bhosare**

NAAC Re-accredited 'A' Grade (CGPA -3.10)

Paranda Road, Kurduwadi, Tal- Madha, Dist-Solapur Pin- 413208 (Maharashtra)

Phone No. :- (02183)223245

Email:-[knbacck@yahoo.co.in](mailto:knbacck@yahoo.co.in)

**Department of Zoology**

**Programme Outcomes and Programme specific outcomes**

Sr.No	Programme	Program objectives	Programme specific outcomes
1	B.Sc. Zoology	PO 1. Scientific Thinking: To develop different perspectives about various ideas to reach to the ultimate decisions.	Been able to think creatively (divergently and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems.
2		PO2. Skill in handling of scientific instruments	The skills of observations and drawing logical inferences from the scientific experiments.
3		PO3 To find solutions and new ideas for the sustainable developments.	Realized how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments.
4		PO4.Developed various communication skills such as scientific reading, listening, speaking, etc., which we will help in expressing ideas and views clearly and effectively.	Develop the skill of scientific communication.
		PO5. Depth learning in the field of subject Zoology.	To train the students to take up wide variety of roles like researchers, scientists, consultants, entrepreneurs, academicians, and industrialist.



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**Department of Zoology**

**Course Outcomes**

Sr.No	Course	Course outcomes
1	Paper I - Animal Diversity I	<ol style="list-style-type: none"> <li>1. Understand the evolution, history of phylum.</li> <li>2. Understand about the Non Chordate animals.</li> <li>3. To study the external as well as internal characters of non chordates.</li> <li>4. To study the distinguishing characters of non chordates.</li> <li>5. Understand the economical importance of Molluscs.</li> </ol>
2	Paper II- Cell biology and Genetics	<ol style="list-style-type: none"> <li>1. Understand the Scope of cell biology, because cell is the basic unit of life.</li> <li>2. Understand the Main distinguishing characters between plant cell and animal cell.</li> <li>3. To study and understand the whole cell organelles with their structure and function.</li> <li>4. Understand the cell cycle and know the importance of various cells in body of organisms.</li> <li>5. Understand mendelian genetics, some aspects of Human Genetics and theories of sex determination.</li> </ol>
3	Paper III – Animal Diversity II	<ol style="list-style-type: none"> <li>1. Understand the silent features of protochordates.</li> <li>2. Understand general characters of fishes, fish scales, fish respiration</li> <li>3. To understand the classification and general characters of fishes and amphibians.</li> </ol> <p>Paper IV- Ecology, Ethology, Evolution and Applied Zoology</p> <ol style="list-style-type: none"> <li>1. To understand the basic concepts of biotic factors and abiotic factors.</li> <li>2. To understand the concept of ecosystems and ecological succession.</li> <li>3. To understand the behavior of animals in different</li> </ol>



		<p>part of life cycle.</p> <p>4.To know the concept of Evolution and origin of life</p> <p>5. To understand applied concepts of Apiculture, sericulture, vermin culture, goat farming etc.</p>
4	Paper IV- Ecology, Ethology, Evolution and Applied Zoology	<p>1.To understand the basic concepts of biotic factors and abiotic factors.</p> <p>2.To understand the concept of ecosystems and ecological succession.</p> <p>3.To understand the behavior of animals in different part of life cycle.</p> <p>4.To know the concept of Evolution and origin of life</p> <p>5. To understand applied concepts of Apiculture, sericulture, vermin culture, goat farming etc.</p>
5	Paper V- Animal Diversity III	<p>1.To understand the morphology, habitats and physiological systems of cockroach and Pila</p> <p>2.Tostudy disease spreading insects Mosquito species</p> <p>3. To study the offence and defense mechanism in animals.</p> <p>4. Classification and characters of non chordates and hemichordates.</p>
6	Paper VI- Cell Science, Genetics, Biological chemistry and Economic zoology	<p>1. To understand cell science Mitosis and Meiosis</p> <p>2. To understand the genetics in some human disorders</p> <p>3. To study the structure and function of biomolecules.</p> <p>4. To understand the economic zoology with reference to fishery, apiculture, dairy , etc.</p>
7	Paper VII – Animal Diversity IV	<p>1. To understand the classification and characters of AVES, REPTILES, and Mammals.</p> <p>2. To understand the classification and physiological systems of Rat as type study .</p> <p>3. To understand the poisonous and non poisonous snakes, snake venom and its medicinal uses</p> <p>4. To understand evolutionary studies</p>



8	Paper VII – Histology and Physiology	<ol style="list-style-type: none"><li>1. To understand the various human tissue ,structure and their functions.</li><li>2. To understand the effect of hormones</li><li>3. To understand the various contraceptives</li><li>4. To understand the body defense mechanism</li></ol>
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## Department of Marathi

### Programme Outcomes

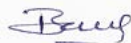
- 1) To Promote studies and research in Marathi language and literature
- 2) To provide higher education facility to the students in rural area.
- 3) To develop overall personality of the students.
- 4) To give the students an opportunity to have an interaction with poor and weaker section of society.
- 5) To make the students cultured, civilized and responsible citizens.
- 6) To inspire the students with the feeling of nationalism.
- 7) To develop the sense of social awareness among the students and provoke them to help the needy people.
- 8) To make the students able to face the challenges in the modern age.
- 9) To implement new educational facilities and courses in the college.

### Programme Specific Outcomes

The following are the learning outcomes that we would like to see each Marathi students graduate with:

<b>PSO 1</b>	The Student will have knowledge of the different trends, types and movements of the Marathi Literature and Language across the period.
<b>PSO 2</b>	The students will be familiar with research practices in Marathi language and literature.
<b>PSO 3</b>	The Programme will help to make creative, sensitive, ideal and learned human being for better future of India.
<b>PSO 4</b>	The intension is to develop an approach about Social, Political, and Cultural issues after learning various ideas in the classrooms.
<b>PSO 5</b>	The Students of different faculties will have the knowledge of use of language, Indian culture, book history, publication of book, script editing and creative writing.
<b>PSO 6</b>	The Students will have the training for all competitive exams including NET and SET examinations.
<b>PSO 7</b>	The Students will be able to use appropriate language.
<b>PSO 8</b>	The Students will be able to write creatively.
<b>PSO 9</b>	The students will be familiar with research practices in Marathi language and literature.



  
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## Department of Marathi

### Course Outcomes

Sr. No.	Course	Course Outcomes
1	B. A. Part – I Sem. I & II Marathi (Opt.)	<ol style="list-style-type: none"> <li>1. विद्यार्थ्यांमध्ये मराठी भाषा आणि साहित्याची जाणीव समृद्ध होईल . .</li> <li>2. विद्यार्थ्यांना मराठी साहित्यातील विविध प्रकार आणि प्रवाहाची ओळख होईल . . .</li> <li>3. विद्यार्थ्यांना भाषेची सृजनशील प्रक्रिया समजून घेता येईल .</li> </ol>
2	B.Com Part – I Sem. I & II Marathi ( Comp.)	<ol style="list-style-type: none"> <li>1. विद्यार्थ्यांमध्ये मराठी भाषा समर्थपणे वापरण्याची क्षमता निर्माण होईल .</li> <li>2. विद्यार्थ्यांना मराठी साहित्यातील विविध प्रकार आणि प्रवाहाचे आकलन, आस्वाद आणि विश्लेषण करता येईल .</li> <li>3. भाषा, साहित्य, समाज, संस्कृती आणि आजचे सामाजिक वास्तव यांचा अनुबंध लक्षात घेता येईल .</li> <li>4. विद्यार्थ्यांच्या व्यक्तिमत्व विकासास मदत आणि जीवन व्यवहारास आवश्यक असणारी कौशल्य आत्मसात करता येतात .</li> </ol>
3	B.A II, Sem – III पेपर नं--III (कविता वांग्मय प्रकार आणि काव्यास्वाद ) पेपर नं—IV- (कादंबरी वांग्मय प्रकार आणि व्यावहारिक मराठी)	<ol style="list-style-type: none"> <li>1. काव्य वांग्मय प्रकाराची ओळख होईल .</li> <li>2. विद्यार्थी मराठी कवितेची वाटचाल समजून घेतील .</li> <li>3. काव्याची शैली व रचना यांचे अनुबंध समजून घेतील .</li> <li>4. कवितेतील प्रतिमा-प्रतीके यांचा अनुबंध सोधण्यास प्रवृत्त होतील .</li> </ol>
4	B.A –II, Sem – IV पेपर नं-V- (कथा वांग्मय प्रकार आणि व्यावहारिक मराठी) पेपर नं-VI- (आत्मचरित्र वांग्मय प्रकार आणि सृजनशील लेखन) .	<ol style="list-style-type: none"> <li>1. काव्य वांग्मय प्रकाराची ओळख होईल . . .</li> <li>2. मराठी कवितेची वाटचाल समजून घेतील .</li> <li>3. काव्याची शैली व रचना यांचे अनुबंध समजून घेतील . .</li> <li>4. कवितेतील प्रतिमा-प्रतीके यांचा अनुबंध सोधण्यास प्रवृत्त होतील .</li> </ol>



		<p>3. विद्यार्थ्यांना मराठी साहित्यातील विविध प्रकार आणि प्रवाहाचे आकलन, आस्वाद आणि विश्लेषण करता येईल.</p> <p>4. सृजनशील लेखनासाठी वातावरण निर्मिती, कथानक, पत्रांचा विकास आणि भाषेचा वापर कसा करावा याबद्दलची तंत्र विद्यार्थ्यांना अवगत करता येतील.</p>
5	<p>B.A. III Sem., V, VI पेपर नं- VII-xII- (साहित्यशास्त्र) , पेपर नं- VIII-</p>	<p>1. विद्यार्थ्यांना साहित्याचे स्वरूप समजावून घेता येईल .</p> <p>2. साहित्याच्या प्रयोजनांचा परिचय होईल . .</p> <p>3. विद्यार्थ्यांमधील वाग्मयीन अभिरुची वृद्धींगत होईल . . .</p> <p>4. काव्याची शैली व रचना यांचे अनुबंध समजून घेता येईल .</p> <p>5. शास्त्रीय आणि ललित साहित्याच्या फरक समजून घेणे शक्य</p>
6	<p>B.A. III Sem., V, VI पेपर नं- VIII-xIII (भाषाविज्ञान व व्याकरण)</p>	<p>1) मराठी भाषेच्या उत्पत्तीच्या संदर्भात भाषाकुलाची संकल्पना अभ्यासता येईल .</p> <p>2) मराठीच्या बोलींचा प्रमाण मराठीशी असणारा संबंध अभ्यासणे शक्य होईल . .</p> <p>3) विद्यार्थ्यांमध्ये मराठी भाषा समर्थपणे वापरण्याची क्षमता निर्माण होईल .</p> <p>4) भाषिक परिवर्तनाचे स्वरूप समजणे शक्य होईल . .</p> <p>5) आधुनिक भाषाविज्ञानाचा मराठी भाषेच्या संदर्भात परिचय करून घेता येईल . .</p> <p>6) मराठीवरील अन्य भाषांचा झालेला प्रभाव अभ्यासता येईल</p>
7	<p>B.A. III Sem., V, VI पेपर नं- IX-xIV (मध्ययुगीन मराठी वाग्मयाचा अभ्यास)</p>	<p>1. त्या काळातील विविध साहित्य प्रवाहांचा इतिहास अभ्यासताना त्या-त्या प्रवाहातील वाग्मयप्रकारांचे स्वरूप, वैशिष्ट्य समजून घेणे शक्य होईल . .</p> <p>2. वाग्मयनिर्मितीच्या प्रेरणा समजून घेता येतील . .</p> <p>3. स्वातंत्र्यपूर्व काळातील महाराष्ट्रातील सामाजिक, राजकीय , सांस्कृतिक जीवनाची पार्श्वभूमी समजून घेऊन त्याचा साहित्याशी असणारा संबंध विद्यार्थ्यांना अभ्यासता येईल .</p>
8	<p>B.A. III Sem., V, VI पेपर नं- X-xV (उपयोजित मराठी)</p>	<p>1. भाषिक कौशल्यांचा विकास होईल . .</p> <p>2. सर्जनशील लेखनाचे विशेष अभ्यासता येतील .</p> <p>3. भाषिक कौशल्य विद्यार्थी उपयोजनात आणतील .</p>
9	<p>B.A. III Sem., V, VI पेपर नं- XI-xVI (आ.म.सा. विविध प्रवाह)</p>	<p>1. विद्यार्थ्यांना साहित्य प्रकाराची संकल्पना समजून घेता येईल .</p> <p>2. वेगवेगळ्या वाग्मय प्रकारातील विशेष विद्यार्थ्यांना अभ्यासता येतील .</p> <p>3. वेगवेगळ्या वाग्मय प्रकारांचा तुलनात्मक अभ्यास करणे शक्य होईल .</p>



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**Department of Mathematics**

**Programme Outcomes**

Sr. No.	Programme	Programme Objectives	Programme Specific Outcomes
1	<b>B. Sc. Mathematics</b>	<p><b>PO 1. Critical Thinking</b>                      The ability to identify, reflect upon, evaluate, integrate, and apply different types of information and knowledge to form independent judgments. Analytical and logical thinking and the habit of drawing conclusions based on quantitative information.</p>	<p><b>PSO1.</b></p> <ul style="list-style-type: none"> <li>• Understand the basic rules of logic, including the role of axioms or assumptions</li> <li>• Appreciate the role of mathematical proof in formal deductive reasoning</li> <li>• Be able to distinguish a coherent argument from a fallacious one, both in mathematical reasoning and in everyday life</li> <li>• Understand and be able to articulate the differences between inductive and deductive reasoning</li> <li>• Proficiently construct logical arguments and rigorous proofs</li> <li>• Formulate conjectures by abstracting general principles from examples.</li> </ul>
		<p><b>PO2. Effective Communication:</b>                      The ability to communicate and interact effectively with different audiences, developing their ability to collaborate intellectually and creatively in diverse contexts, and to appreciate ambiguity and nuance, while emphasizing the importance of clarity and precision in communication and reasoning. Students acquire and enhance these abilities in mathematical contexts, but the acquired habits of rigorous thought and creative problem-solving are invaluable in all aspects of life. These skills are acquired through experience in the context of studying specific mathematical topics and exploring problems chosen to challenge students'</p>	<p><b>PSO2.</b></p> <ul style="list-style-type: none"> <li>• Present mathematics clearly and precisely to an audience of peers and faculty</li> <li>• Appreciate the role of mathematical proof as a means of conveying mathematical knowledge</li> <li>• Understand the differences between proofs and other less formal arguments</li> <li>• Make vague ideas precise by formulating them in mathematical language</li> <li>• Describe mathematical ideas from multiple perspectives</li> <li>• Explain fundamental mathematical concepts or analyses of real-world problems to non-mathematicians.</li> </ul>



		abilities, spurring them on to acquire new techniques and abandon familiar but restrictive habits of thought.	
		<p><b>PO3.Problem solving</b></p> <p>The ability to assess and interpret complex situations, choose among several potentially appropriate mathematical methods of solution, persist in the face of difficulty, and present full and cogent solutions that include appropriate justification for their reasoning.</p>	<p><b>PSO 3.</b></p> <ul style="list-style-type: none"> <li>• Formulate and solve abstract mathematical problems</li> <li>• Recognize real-world problems that are amenable to mathematical analysis, and formulate mathematical models of such problems</li> <li>• Apply mathematical methodologies to open-ended real-world problems</li> <li>• Recognize connections between different branches of mathematics</li> <li>• Recognize and appreciate the connections between theory and applications</li> </ul>
		<p><b>PO4.Subject-specific knowledge</b></p> <p>Knowledge and understanding are fundamental to studying mathematics and form the base from which to explore concept and develop problems solving skills. Through knowledge and understanding, student develop mathematical reasoning to make deductions and solve problems.</p>	<p><b>PSO 4</b></p> <ul style="list-style-type: none"> <li>• Know and demonstrate understanding of the concept from branches of mathematics such as Algebra, Calculus, Geometry, Differential Equation, Partial differential Equation, Real Analysis, Abstract Algebra, Differential Calculus</li> <li>• Use appropriate mathematical concept and skills to solve problem in both familiar and unfamiliar situation including those in real life context</li> </ul>
		<p><b>PO5.Investigating Patterns</b></p> <p>Investigating Patterns allows student to experience the excitement and satisfaction of mathematical discovery. It gives the opportunity to apply mathematical knowledge to investigate a problem, generate and or analyze information, find relationships and patterns to describe mathematically.</p>	<p><b>PSO5.</b></p> <ul style="list-style-type: none"> <li>• Select and apply appropriate enquiry and mathematical problem solving techniques.</li> <li>• Recognize patterns</li> <li>• Describe patterns as relationship or general rules.</li> <li>• Draw conclusions consistent with finding</li> </ul>



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**Department of Mathematics**


**Course Outcomes**

Sr. No.	Course Content	Course Outcomes
1	<b>B. Sc. Part - I Algebra</b>	<ol style="list-style-type: none"> <li>1. Find the rank of the matrix.</li> <li>2. Solve the system of homogeneous and non-homogeneous linear equation.</li> <li>3. Find the inverse of matrix using Cayley-Hamilton method.</li> <li>4. Find the Eigen values and Eigen vectors of the Matrix.</li> <li>5. Find all the <math>n^{\text{th}}</math> the roots of Complex numbers.</li> <li>6. Describe the relation between Circular and Hyperbolic Functions.</li> </ol>
2	<b>B. Sc. Part - I Calculus</b>	<ol style="list-style-type: none"> <li>1. Find the <math>n^{\text{th}}</math> derivative of standard function</li> <li>2. Prove the Leibniz theorem</li> <li>3. Find the partial derivatives of function.</li> <li>4. Solve the examples on gradient, divergence and curl.</li> </ol>
3	<b>B. Sc. Part - I Geometry</b>	<ol style="list-style-type: none"> <li>1. Find the new transformed equations of given equation using translation and rotation of co-ordinate system</li> <li>2. Identify the conic.</li> <li>3. Find the angle between given planes.</li> <li>4. Explain the diameter form of sphere.</li> <li>5. Find the equations of tangents of the sphere</li> </ol>
4	<b>B. Sc. Part - I Differential Equation-I</b>	<ol style="list-style-type: none"> <li>1. Explain the method of solving first order and first degree differential equation</li> <li>2. Explain the method of solving the linear differential equation with constant coefficient.</li> <li>3. Solve the first order and first degree differential equation</li> <li>4. Solve the Linear differential equation with constant coefficient</li> </ol>
5.	<b>B. Sc. Part - II Differential Calculus</b>	<ol style="list-style-type: none"> <li>1. Find the radius of curvature of a curve</li> <li>2. Find the Jacobian of functions of two and three variables</li> <li>3. Find the equation of tangents and normal of a curve</li> <li>4. Find the extreme value of the function</li> </ol>
6.	<b>B. Sc. Part - II Laplace Transforms</b>	<ol style="list-style-type: none"> <li>1. Define the Laplace Transform</li> <li>2. Find the Laplace Transform of some elementary function</li> <li>3. Define the Inverse transform Laplace Transform</li> <li>4. Find the Inverse Laplace Transform of the derivative, Integrals, multiplication by power of P.</li> <li>5. Solve the ordinary differential equation with constant coefficient by Laplace Transform Method</li> </ol>



7.	<b>B. Sc. Part -II Differential Equation-II</b>	<ol style="list-style-type: none"> <li>1. Explain the method of solving first order and higher than first degree differentia equation</li> <li>2. Explain the method of solving solve Homogeneous differential equation</li> <li>3. Explain the method of solving solve Simultaneous and Total differential equation</li> <li>4. Solve the first order and higher than first degree differential equation</li> <li>5. Solve the Homogeneous differential equation</li> <li>6. Solve the Simultaneous and Total differential equation</li> </ol>
8.	<b>B. Sc. Part -II Abstract Algebra</b>	<ol style="list-style-type: none"> <li>1. Define Group and gives examples of groups</li> <li>2. Find the order of element and group</li> <li>3. Describe the equivalence relation and congruent modulo n</li> <li>4. Prove the Cayley's Theorem</li> <li>5. Prove the Fundamental theorem of homomorphism</li> </ol>



  
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**Department of Hindi  
Programme Outcome and Programme Specific Outcome**

Sr. No.	Program me	Programme Objective	Programme Specific Outcome
1	B.A. Hindi Opt.	<b>PO 1 :-</b> चिकीत्सक विचार-छात्रों में चिकीत्सक तथा नयी कल्पनाओंको विकसित करना।	<b>PSO 1 :-</b> छात्रों में अध्ययन से नयी प्रतिभाशक्ती का विकास हुआ।
		<b>PO 2 :-</b> परिणामकारक संप्रेषण- छात्रों में भाषण, वाचन, लेखन, श्रवण क्षमता का विकास करना।	<b>PSO 2 :-</b> छात्र हिंदी व्याकरण, मानकवर्तनी, पत्रलेखन, संवादकौशल्य, ध्वनीशास्त्र पहचानकर व्यवहार में हिंदी भाषा का प्रयोग करता है।
		<b>PO 3 :-</b> सामाजिक विकास- छात्रों में सामाजिक आंतरक्रियाओंका विकास करना।	<b>PSO 3 :-</b> गटचर्चा तथा चर्चासत्र में छात्र अपने सामाजिक विचार प्रकटकर समाजविकास के प्रति जागरुत हुआ।
		<b>PO 4 :-</b> आदर्श नागरिक- देश तथा समाज के राष्ट्रीय विकास के लिए आदर्श निर्माण करना।	<b>PSO 4 :-</b> भारतीय संस्कृती द्वारा अर्जित ज्ञान, विश्वास, नैतिक मुल्य, कला, रिती रिवाज, मुल्यबोध का ज्ञान प्राप्त कर आदर्श व्यक्तिमत्व को प्रस्तुत करेंगे।
		<b>PO 5 :-</b> नैतिक मुल्य-छात्रों में नैतिक तथा सामाजिक मुल्य विकसित करना।	<b>PSO 5 :-</b> छात्र नैतिक मुल्यों की शिक्षा प्राप्त कर अपनी संस्कृती, सभ्यता, विरासत के प्रती सजग रहकर सामाजिक जिम्मेदारी निभाता है।
		<b>PO 6 :-</b> पर्यावरण सुरक्षा- पर्यावरण संबंधी शिक्षा देकर छात्रों में पर्यावरण के प्रति प्रेम तथा कर्तव्य जागरुक करना।	<b>PSO 6 :-</b> पाठ्यक्रम के आधारपर पर्यावरण संबंधित जागरुक होकर उपन्यास कहानी संस्मरण यात्रा जीवनी के उदाहरण प्रस्तुत किए।
		<b>PO 7 :-</b> आजीवन ज्ञान- छात्रों में आजीवन ज्ञान प्राप्ती के लिए स्वयंसिद्ध बनाना।	<b>PSO 7 :-</b> छात्रों को उत्साहित करना तथा छात्र को सर्वगुणसंपन्न बनाने के लिए प्रयत्नशिल उपक्रम हात में लेना।



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## Course Outcomes

Sr. No.	Programme Course	Course Outcome
1.	<b>B.A. I Hindi (Opt.)</b>	<ol style="list-style-type: none"> <li>हिंदी साहित्य तथा साहित्यकारों का परिचय हुआ।</li> <li>कविता का रसग्रहण किया।</li> <li>साहित्य का स्वरूप तथा उसकी सार्थकता समझी।</li> <li>हिंदी भाषा का व्याकरण, वर्णमाला, कारक, लिंग, वचन, वाक्य शुद्धिकरण का परिचय हुआ।</li> </ol>
2.	<b>B.A. II Hindi (Opt.)</b> <b>Paper no. III/V</b> हिंदी गद्य व्याकरण तथा लेखन	<ol style="list-style-type: none"> <li>हिंदी कहानी विधा से परिचित किया।</li> <li>हिंदी कहानी के तत्व को समझाया।</li> <li>कहानी तथा उपन्यास के प्रति अभिरुचि विकसित हुई।</li> <li>सामाजिक परिवेश और जीवन यथार्थ से परिचय हुआ।</li> </ol>
	<b>B.A. II Hindi (Opt)</b> <b>Paper No. IV/VI</b> हिंदी पद्य व्याकरण तथा लेखन	<ol style="list-style-type: none"> <li>भक्तिकाल तथा रितीकाल की सामाजिक, धार्मिक परिस्थिती एवं परिवेश से अवगत हुए।</li> <li>भक्तिकालीन काव्य में निर्गुण और सगुण भक्तिधारा का अध्ययन किया।</li> <li>रितीकाल के माध्यमसे शृंगार एवं वीर रस का महत्त्व तथा प्रेमभावनाको समझ गए।</li> <li>आर्थिक सामाजिक परिस्थिती स्वतंत्रता एवं स्वतंत्रता पश्चात मानवी पीडा का अध्ययन किया।</li> </ol>
3.	<b>B.A III- Hindi (opt)</b> <b>Paper No VIII/XII</b> विशेष लेखक- भगवानदास मोरवाल	<ol style="list-style-type: none"> <li>लेखक की बहुमुखी प्रतिभा से परिचित हुई है।</li> <li>छात्र स्त्री विमर्श से प्रभावित हुए।</li> <li>छात्र कहानी साहित्य तथा उपन्यास साहित्य से प्रभावित हुए।</li> <li>लेखक की विचारधारा तथा साहित्यिक विशेषतासे परिचय हुआ।</li> </ol>
	<b>Paper No. VIII/ XIII</b> साहित्यशास्त्र और समालोचना	<ol style="list-style-type: none"> <li>साहित्य सृजन का स्वरूप तथा उसकी सार्थकता का बोध हुआ।</li> <li>साहित्य की नई विधाओं का परिचय प्राप्त किया।</li> <li>साहित्य की उपकरणोंका परिचय प्राप्त किया।</li> <li>काव्यरूपों तथा छंद, अलंकार सामान्य परिचय किया।</li> </ol>
	<b>Paper No. IX/ IXV</b> हिंदी साहित्य का विकास	<ol style="list-style-type: none"> <li>हिंदी साहित्य की दार्शनिक पूर्वपीठिका से परिचय किया।</li> <li>हिंदी साहित्य के इतिहास का परिचयात्मक अध्ययन हुआ।</li> <li>हिंदी साहित्य के इतिहास का कालानुरूप विकास का अध्ययन किया।</li> <li>हिंदी साहित्य के इतिहास का कालजयी रचना तथा रचनाकारों का सामान्य परिचय किया।</li> </ol>



<p><b>Paper No. X/ XV</b> प्रयोजनामुलक हिंदी</p>	<ol style="list-style-type: none"> <li>1. प्रयोजनामुलक हिंदी की परिभाषा, स्वरुप तथा विशेषताओं से परिचित हुए।</li> <li>2. जनसंचार माध्यमों का परिचय हुआ।</li> <li>3. कार्यालयीन तथा वाणिज्यिक पत्राचार संबंधी क्षमता का विकास किया।</li> <li>4. अनुवाद का अर्थ, परिभाषा स्वरुप एवं प्रकारों का परिचय हुआ।</li> </ol>
<p><b>Paper No. XI/ XVI</b> भाषा विज्ञान</p>	<ol style="list-style-type: none"> <li>1. भाषा के विविध रूपों का परिचय हुआ।</li> <li>2. भाषा विज्ञानका सामान्य परिचय हुआ।</li> <li>3. हिंदी भाषा एवं लिपि के उद्भव और विकास से परिचित हुए।</li> <li>4. भाषा की शुद्धता के प्रति छात्रों को जागरुत किया।</li> <li>5. मानक हिंदी वर्तनी और व्याकरण से छात्रों को परिचित किया।</li> </ol>



  
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## Department of Physics


### *Programme outcomes*

Sr. No.	Program me	Programme objectives	Programme specific outcomes
1.	B.Sc.- Physics	<p><b>PO.-1-Knowledge and Understanding-</b> Understand laws of motion and their application to various dynamical situations, notion of inertial frames and concept of Galilean invariance. He / she will learn the concept of conservation of energy, momentum, angular momentum and apply them to basic problems. Understand the analogy between translational and rotational dynamics, and application</p>	<p>PSO1.The fundamental concepts of physics, such as classification of materials, working of Diesel engine and full scope study of thermodynamic.</p>
		<p><b>PO2. Teaching/learning methods and strategies-</b>Formal lectures and practical's supported by tutorials in specific areas related to physics. Assessment Most knowledge is tested through a combination of coursework and unseen formal examinations</p>	<p>PSO2. Rational thought and logical analysis is developed throughout the programme. Find out solutions to key problems in physics through the application of experimental procedure. Assessment A mixture of written examinations, and continuous assessments such as practical write ups, essays and poster and oral presentations.</p>
		<p><b>PO3-Skills and other attributes-</b> To develop intellectual &amp;practical skills Transfer appropriate knowledge and methods from one topic to another within the overall subject. The ability to formulate and test hypothesis of microbiological and biochemical laboratory tasks and techniques.</p>	<p>PSO3- Should be focus on transferable skills through Use of ICT, Communicate scientific ideas and Work as part of a team. Plan experiments and carry them out in the laboratory Plan experiments and carry them out in the laboratory</p>



		<b>PO4- Deep discipline knowledge-</b> accredited or validated against national or international standards	PSO4 informed and infused by cutting edge research, scaffold throughout their program of studies acquired from personal interaction with research active educators.
		<b>PO5-Critical thinking and awareness-</b> To develop scientific approach for the development of knowledge. To encourage research through the application of empirical evidences	PSO5- Encourage students to think logically, Organize tasks in a structured form to analyze and solve problems.
		<b>PO6Carrier and leadership readiness-</b> To provide the platform to have knowledge regarding opportunities in biophysics and polymer industries& to take initiative to solve social problems	PSO6-To develop a attitude of forward thinking & code of proficiency. Adapt technology to test and validate the relevant work. Student become technology savvy to plan their career
		<b>PO7Intercultural &amp; ethical competency</b> To inculcate the indigenous knowledge to understand national & international standards & desirable social outcomes	PSO7-To adept the students comfortable with different nationality and social context.
		<b>PO8- Self-awareness and emotional intelligence-</b> The aim is to make abled students to tackle difficult social situations, avoid conflicts and engage them positively in demanded work.	PSO8-Encourage students to prepare their own self –appraisal & support to achieve their constructive objectives



  
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## Department of Physics

### Course Outcomes

<i>Sr. No.</i>	<i>Course Code</i>	<i>Title of the Course</i>	<i>Course Outcomes</i>
1.	<b>B.Sc. Part- I Sem-I Paper-I (201104)</b>	Mechanics & Properties of Matter	<ol style="list-style-type: none"><li>1. Learner will understand basic theorems and concepts of basic physics.</li><li>2. To understand the dynamics of different types of pendulum and to determine 'g'.</li><li>3. To understand the elastic properties of matter and expression of bending beam with its application as a cantilever.</li><li>4. To understand concept of surface tension and its relation with excess pressure and radius of curvature.</li><li>5. To determine the surface tension by Jaeger's method from experiments.</li><li>6. To understand concept of fluid flow and pressure energy in fluids.</li><li>7. To determine Bernoulli's Theorem and its applications: venturi meter, pitot tube.</li><li>8. To design experiment to determine coefficient of viscosity by using Poiseuille's equation.</li><li>9. To understand basic theories related with properties of matter and its application to determine values of various physical quantities associated with matter.</li><li>10. To develop basic skills to perform experiments to understand the concept from existing theories of Basic physics.</li></ol>
	<b>Paper-II (201105)</b>	Optics & Lasers	<ol style="list-style-type: none"><li>1. To learn Power of lens, Spherical aberration in lens, and to distinguish Chromatic aberration and Achromatism aberration.</li><li>2. To understand concept of interference pattern due to reflected light in parallel sided thin films and in thin wedge shaped film.</li><li>3. To demonstrate experimental set up for</li></ol>



			<p>Newton's rings, theory and its application to determine wavelength of source and refractive index of liquids.</p> <p>4. To understand the basic theory of and processing of Lasing action and types of Lasers</p>
	<b>Sem-II Paper-III (201204)</b>	Heat & Thermodynamics	<p>1. Understand basic concept of thermodynamics and to distinguish between work done due to Adiabatic and isothermal changes.</p> <p>2. To state laws of thermodynamics and concept of internal energy.</p> <p>3. To understand Carnot's ideal heat engine, Carnot's cycles and its efficiency, Carnot's theorem, Otto and Diesel engines with their efficiencies.</p> <p>4. To understand Concept of entropy, Change of entropy in Reversible process and Irreversible process, T-S diagram.</p> <p>5. Knowledge of basic principles of refrigeration methods: Evaporative refrigeration, refrigeration by throttling of gas, vapour refrigeration.</p> <p>6. To learn basic components of simple vapour compression refrigeration understand its working with Flow diagram.</p>
	<b>Paper-IV (201205)</b>	Electricity, Magnetisms & Basic Electronics	This paper is expected to provide necessary back ground of Electricity Magnetism and Basic electronics for various application in building electrical and electronic circuits.
2.	<b>B.Sc. Part-II Sem III Paper-V (201303)</b>	General Physics, Heat & Sound	<p>1. To demonstrate Lissajous figures by mechanical, optical and electrical methods.</p> <p>2. To understand composition of two S.H.M.s of equal frequencies along same line of vibration, at right angles (analytical method with different cases).</p> <p>3. To understand Free and damped oscillations.</p> <p>4. To solve differential equation of damped harmonic oscillator and Energy equation.</p> <p>5. To demonstrate Resonance and its types (Mechanical resonance pendulum), Acoustic resonance (resonance tube), Electrical resonance (LCR circuit) and Optical resonance (sodium vapour lamp).</p>



			<p>6. To solve differential equation of forced oscillations and its solution, and to obtain amplitude, Energy of forced oscillations, Amplitude and Sharpness and Velocity of resonance, Power dissipation, Band width and quality factor.</p> <p>7. To understand concept of sound and to classify sound frequencies.</p> <p>8. To understand piezoelectric effect, Magnetostriction effect.</p> <p>9. To learn Generation, Detection and Applications of ultrasonic waves by Piezoelectric and Magnetostriction oscillator.</p> <p>10. To understand Doppler effect in sound and light and its application.</p>
<b>Paper- VI (201304)</b>	Electronics		<p>1. To distinguish between P-N diode, Zener diode, LED and Photodiode.</p> <p>2. To understand Half wave, full wave and bridge rectifiers and filters: capacitance filter, inductor filter and <math>\pi</math>filter.</p> <p>3. To demonstrate voltage regulation using Zener diode.</p> <p>4. To understand basic construction and operation of bipolar transistors (NPN and PNP),</p> <p>5. To distinguish between transistor circuit configurations (CB, CE, CC), current gains (<math>\alpha</math>, and <math>\beta</math>) and their interrelationship.</p> <p>6. To solve problems of electronics using decimal and hexadecimal number system.</p> <p>7. To learn logic gates and to design R-S, clocked R-S, D , JK and T flip flops using logic gates.</p> <p>8. To state De Morgan's theorems and understand symbols, Boolean expression and truth tables for logic gates.</p>
<b>Sem-IV Paper-VII (201404)</b>	Optics		<p>1. To understand the concept of cardinal points.</p> <p>2. To demonstrate Michelson Interferometer and Fabry-Perot Interferometer (experimental setup and its application for measurement of wavelength of monochromatic source).</p> <p>3. To distinguish between Fresnel and Fraunhofer diffraction.</p> <p>4. To understand theory of plane transmission grating and prism and its resolving power.</p>



			<p>5. To understand polarization by double refraction in crystals.</p> <p>6. To understand Construction of Polaroid, Quarter and Half wave plates, Nicol prism.</p> <p>7. To learn production and detection of circularly and elliptically polarized light</p> <p>8. To demonstrate principle and working of Polarimeter.</p>
	<b>Paper-VIII (201405)</b>	Modern Physics	<p>1.To understand the concept of theory of relativity.</p> <p>2. How to imagine relative motion of a body?</p> <p>3. To solve Lorentz transformation equation and its applications in solving variation of mass, time dilation, length contraction derivations</p> <p>4. To understand the energy-mass relation. To verify experimentally of discrete atomic energy levels and correspondence principle</p> <p>5. To understand atomic spectra and distinguish classical planetary model and Bohr's theory of hydrogen atom and quantum mechanical Somerfield model.</p> <p>6. To understand matter wave, concept of wave group, and relations between phase Velocity, group velocity, particle velocity.</p>
3.	<b>B.Sc. Part-III (CGPA) Sem-V Paper-VII (221510)</b>	Mathematical & Statistical Physics	<p>1. Have knowledge about, and being able to use, advanced mathematical methods and theories on various mathematical and physical problems.</p> <p>2. Use mathematical formulations, analyses and models to obtain insight in specialized areas of Physics.</p> <p>3. Be able to apply skills of mathematical, statistical and physical modeling in Applied fields and on technological problems.</p> <p>4. Be able to carry out, present and document a comprehensive independent work, demonstrating command of the terminology of the subject area.</p> <p>5. Identify different special mathematical functions.</p> <p>6. Apply techniques of vector analysis, such as gradient of scalar, divergence of vector, curl of vector,</p>



		<p>7. To the study of special functions of mathematical physics</p> <p>8. To understand Cartesian (X, Y, Z), Spherical polar (r, <math>\theta</math>, <math>\phi</math>) and Cylindrical (<math>\rho</math>, <math>\phi</math>, z) co-ordinate systems and their transformation equations.</p> <p>9. To understand expression for gradient, divergence, curl and Laplacian in curvilinear, spherical polar and cylindrical co-ordinate systems.</p> <p>10. Solve partial differential equations with appropriate initial or boundary conditions with Green function techniques</p> <p>11. Have confidence in solving mathematical problems arising in physics by a variety of mathematical techniques</p> <p>12. To understand basic concepts of probability and probability distribution.</p> <p>13. To solve Random walk problem in one dimension and Gaussian probability distribution.</p> <p>14. To understand specification of the state of the system (Classical &amp; Quantum).</p> <p>15. To state Basic postulate of equal a priori probability,</p> <p>16. To understand Statistical Ensembles and Calculation of microstates of an ideal monatomic gas.</p> <p>17. To understand Distribution of energy between systems in equilibrium.</p> <p>18. To state Boltzmann relation for entropy and to perform Statistical calculations of Thermodynamic quantities.</p> <p>19. To state Equipartition theorem and its application to mean K.E. of a molecule in a gas and to Harmonic oscillator.</p>
<b>Paper-VIII (221511)</b>	Solid State Physics	<p>1. Be able to account for interatomic forces and bonds</p> <p>2. Have a basic knowledge of crystal systems and spatial symmetries</p> <p>3. Be able to account for how crystalline materials are studied using diffraction, including concepts like the Ewald sphere, form factor, structure factor, and scattering amplitude.</p>





			<p>4. Be able to perform structure determination of simple structures</p> <p>5. Understand the concept of reciprocal space and be able to use it as a tool know the significance of Brillouin zones</p> <p>6. Know what phonons are, and be able to perform estimates of their dispersive and thermal properties</p> <p>7. Be able to calculate thermal and electrical properties in the free-electron model and know Bloch's theorem and energy band and distinction between metals, semiconductors and insulators</p> <p>8. Be able to estimate the charge carrier mobility and density.</p> <p>9. Be able to account for what the Fermi surface is and how it can be measured.</p> <p>10. To understand Lattice heat capacity and to compare Classical theory, Einstein's theory, Debye theory of specific heat capacity of solids</p> <p>11. To apply techniques of X-Ray Diffraction and UV Spectroscopy to study crystals.</p>
	<b>Paper-IX (221512)</b>	Classical Mechanics	<p>1. To state Gauss law and its application to obtain electric field for different cases.</p> <p>2. Describe and explain the relationship between the electric field and the electrostatic potential.</p> <p>3. Understand the relation between Electric displacement vector D, Susceptibility, Permittivity, Dielectric constant.</p> <p>4. To understand Lorentz force on a point charge moving in a magnetic field.</p> <p>5. To state Biot and Savart's law and Ampere's circuital law to Describe and explain the generation of magnetic fields by electrical currents;</p> <p>6. Be able to solve relevant theoretical problem and use their conceptual understanding of the electromagnetic laws in order to qualitatively describe the behavior of the solution to the problem</p>



	<b>Paper-X (221513)</b>	Nuclear Physics	<ol style="list-style-type: none"> <li>1. To understand nuclear compositions and Elementary particles, charge symmetry and independence, spin dependence of nuclear force.</li> <li>2. To state Law of radioactive decay and its application.</li> <li>3. To distinguish between Types of nuclear models: Single particle shell model and Liquid drop model.</li> <li>4. To understand nuclear reactions and conservation laws.</li> <li>5. To understand nuclear fission on the basis of liquid drop model and nuclear fusion.</li> <li>6. To understand basic principles and classification of Nuclear Reactor.</li> <li>7. To learn types of detectors and classification of accelerators.</li> </ol>
	<b>Sem-VI Paper-XI (221612)</b>	Electrodynamics	<ol style="list-style-type: none"> <li>1. Understand origin of Maxwell's equations in magnetic and dielectric media</li> <li>2. Write down Maxwell's equations in linear, isotropic, homogeneous media</li> <li>3. To derive continuity conditions on electromagnetic fields at boundaries</li> <li>4. To derive electromagnetic wave solutions and propagation in dielectric and other media and understand transport of energy and Poynting vector.</li> <li>4. To Show laws of geometric optics originate with Maxwell's equations at dielectric boundaries calculate reflection and transmission coefficients for waves at dielectric boundaries.</li> </ol>
	<b>Paper-XII (221613)</b>	Material Science	<ol style="list-style-type: none"> <li>1. Get knowledge of Historical perspectives of materials science.</li> <li>2. To classify between advanced materials, Smart materials, Nano structured, Ceramic, Polymers, bio-materials Materials.</li> <li>3. To understand chemistry of organic material and its classification.</li> <li>4. To understand and learn the Mechanical Properties, Thermal Properties, Electrical Properties, and Magnetic Properties of materials.</li> </ol>



	<p><b>Paper-XIII (221614)</b></p>	<p>Atomic, Molecular &amp; Quantum Physics</p>	<ol style="list-style-type: none"> <li>1. State and explain the key properties of vector atom model and the importance of the Pauli Exclusion Principle.</li> <li>2. To explain the observed dependence of atomic spectral lines on externally applied electric and magnetic fields.</li> <li>3. To state and justify the selection rules for various optical spectroscopies in terms of the symmetries of molecular vibrations.</li> <li>4. List different types of atomic and molecular spectra and related instrumentation.</li> <li>5. Describe theories explaining the structure of atoms and the origin of the observed spectra</li> <li>6. Identify atomic effect such as space quantization and Zeeman Effect.</li> <li>7. To understand the Origin and nature of x-ray, Characteristic x-ray spectra,</li> <li>8. To state Moseley's law and its importance, regular and irregular doublets and their laws.</li>   <li>9. To develop a knowledge and understanding of the concept that quantum states live in a vector space.</li> <li>10. To solve quantum mechanics problems.</li> <li>10. Formulation of Schrödinger equation-time dependent and time independent forms.</li> <li>11. To derive energy Eigen value and eigen functions particle in a box and 1-D harmonic oscillator.</li> <li>12. To formulate the Schrödinger wave equation in terms of spherical polar coordinates for its application to solve Hydrogen atom problem.</li> <li>13. To understand Postulate of quantum mechanics, operators and use of commutation and commutative algebra of operators to solve quantum mechanics problem.</li> </ol>
	<p><b>Paper- XIV (221615)</b></p>	<p>Electronics &amp; Instrumentation</p>	<ol style="list-style-type: none"> <li>1. Use of C.R.O as a measurement tool for different electrical parameters (frequency, a.c. /d.c.voltage, pulse height, pulse width, rise time and fall time).</li> <li>2. To obtain Lissajous figures using C.R.O.</li> </ol>



			<p>3. To determine characteristics of Thermistor and to find an unknown temperature by using thermistor.</p> <p>4. Measurement of magnetic field by search coil.</p> <p>5. Measurement of magnetic field by hall probe method.</p> <p>6. Directional characteristics of a microphone.</p> <p>7. Platinum resistance thermometer. (Determine the melting temperature of Wax)</p> <p>8. Velocity of sound by phase shift method.</p> <p>9. Measurement of Noise by Using Sound Pressure level Meter.</p> <p>10. To study construction, working and image formation by SEM and TEM</p>
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## Department of Commerce

### Programme Outcomes [PO]

**PO-1.** After completing three years for B. Com programme, Student would gain a through grounding in the fundamentals of Accountancy.

**PO-2.** The Commerce and Accountancy focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern day challenges in commerce and business.

**PO-3.** The all-inclusive outlook of the course offer a number of value based and job oriented courses ensures that students are trained into up-to-date. In advanced accounting courses beyond the introductory level, affective development will also progress to the valuing and organisation levels.

**PO-4.** The primary goal of accounting education is to produce competent and ethical professional accountants capable of making a positive contribution over their lifetimes to the profession and society in which they work.

### Programme Specific Outcomes (PSO)

**PSO – 1:** Students will be able to demonstrate progressive learning of various tax issues and tax forms related to individuals. Students will be able to demonstrate knowledge in setting up a computerized set of accounting books

**PSO – 2:** Students will demonstrate progressive affective domain development of values, the role of accounting in society and business.

**PSO – 3:** Students will learn relevant financial accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

**PSO – 4:** Students will learn relevant managerial accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

**PSO – 5:** Learners will gain thorough systematic and subject skills within various disciplines of commerce, business, accounting, economics, finance, auditing and marketing.

**PSO – 6:** Learners will be able to prove proficiency with the ability to engage in competitive exams like CA, CS, CMA, MBA etc. and other courses.

**PSO –7:** Learners will involve in various co-curricular activities to demonstrate relevancy of foundational and theoretical knowledge of their academic major and to gain practical exposure.


**PSO – 8:** Learners can also acquire practical skills to work as tax consultant, audit assistant and other financial supporting services.

**PSO – 9:** Learners will be able to do higher education and advance research in the field of commerce and finance.

**PSO – 10:** Students will be understand business management principles and practices to withstand the competitive business environment.

**PSO – 11:** To impart the basic understanding of business management, to enable the students to apply different skills and technique to assist the management in taking appropriate decisions relating to business enterprise.



  
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## Department of Commerce

### Course Outcomes

Class	Subject	Course Outcomes
<b>B.Com. I</b>	<b>English</b>	<ol style="list-style-type: none"> <li>1. Spoken communication and written communication.</li> <li>2. Writing of Resume, letters of application, business letters.</li> <li>3. Writing News-report, Essay, paragraph,, Review, etc.</li> <li>4. Narration of experience, daily routine.</li> <li>5. Interview Techniques.</li> <li>6. Understanding and interpretation of poem, prose, essay, short stories, etc.</li> </ol>
	<b>Economics</b>	<ol style="list-style-type: none"> <li>1. Understanding the link between business economics and business decision.</li> <li>2. Realizing the importance of demand forecasting and method of demand forecasting.</li> <li>3. Justifying the demand function and production function.</li> <li>4. Evaluating various production theories.</li> <li>5. Clarifying the meaning of Marginal, average, total revenue, and Marginal, average and total cost and its implication.</li> <li>6. Understanding different markets structure in marketing system</li> </ol>
	<b>Financial Accounting</b>	<ol style="list-style-type: none"> <li>1 Understanding the concepts of financial Accounting</li> <li>2 Exposure to nature and advantages of Accounting, Accounting concepts and conventions.</li> <li>3. Introduction to Accounting standards in India</li> <li>4. Obtaining the knowledge of computerized Accounting.</li> <li>5. Getting knowledge about accounting procedure of partnership firm, accounts of professionals, single entry system, branch accounts and consignment accounts.</li> </ol>
	<b>Principles of Business Management</b>	<ol style="list-style-type: none"> <li>1. Supporting to Achieve Group Goals.</li> <li>2. Knowledge about motivating employees by providing financial and nonfinancial incentives.</li> <li>3. Evaluating the economic growth and development of an organization.</li> <li>4. Understanding the relation between individuals, groups, departments and between levels of management.</li> <li>5. Comprehending the human resource productivity.</li> </ol>
	<b>Marathi</b>	<ol style="list-style-type: none"> <li>1. Illustrating the nature of short story.</li> <li>2. Explaining the nature of characterization, literate and philosophical writings.</li> <li>3. Illustrating Poems, travelogue and autobiography as the forms of literature.</li> <li>4. Illustrating the general skills and usages of Marathi in day-to-day life.</li> </ol>



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Class	Subject	Course Outcomes
<b>B.Com. II</b>	<b>English</b>	<ol style="list-style-type: none"> <li>1. Spoken communication and written communication.</li> <li>2. Writing of Resume, letters of application, business letters.</li> <li>3. Writing News-report, Essay, paragraph, Review, etc.</li> <li>4. Narration of experience, daily routine.</li> <li>5. Interview Techniques.</li> </ol>
	<b>Corporate Accounting</b>	<ol style="list-style-type: none"> <li>1. Exposure to the issue of shares and debentures of the company</li> <li>2. Attainment of knowledge about accounting procedure of company final account.</li> <li>3. Understanding the accounting procedure amalgamation and absorption of company</li> <li>4. Ability to get the knowledge about valuation of shares.</li> <li>5. Understanding the accounts procedure of liquidation of Ltd. company.</li> </ol>
	<b>Business Economics</b>	<ol style="list-style-type: none"> <li>1. Understanding the basic concepts and theories of Macro Economics.</li> <li>2. Awareness about changing Macro Economics policies and theories.</li> <li>3. Justifying various concepts such as; GDP, GNP NNP, Personal Income, Disposable Income, Per Capita Income, and National Income.</li> <li>4. Explanation of the factors determining gross domestic product, employment, the general level of prices, and interest rates.</li> <li>5. Acquaintance with law of markets, consumption function and investment function.</li> <li>6. Understanding monetary policy of Central Banks and its implications.</li> </ol>
	<b>Money and Financial System</b>	<ol style="list-style-type: none"> <li>1. Understanding the nature, functions and issues related to money, banking and non-banking financial intermediaries and financial system.</li> <li>2. Knowing about changing role of banking and financial intermediaries in the process of growth &amp; development.</li> <li>3. Realization of the term structure, role and functions of RBI, NBFIs, Development Banks, Commercial Banks, Money Market, Capital Market and Forex Market.</li> <li>4. Getting knowledge about changing paradigms in Indian Banking (E- Banking, Mobile Banking Tele Banking, Core Banking – Retail Banking - ATM, Credit Card and Debit card, Kisan card).</li> </ol>
	<b>Fundamentals of Entrepreneurship</b>	<ol style="list-style-type: none"> <li>1. Motivating to acquire the skill to be an Entrepreneur</li> <li>2. Creating Entrepreneurial skill among the students.</li> <li>3. Creating awareness among students about self-employment/own business.</li> <li>4. Providing various innovative business ideas to the society.</li> <li>5. Developing a skill of stability in the business at critical situation.</li> </ol>





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<b>B.Com. II</b>	<b>Business statistics</b>	<ol style="list-style-type: none"> <li>1. Making familiar with statistical tools which are relatively used in business.</li> <li>2. Imparting the ability to collect present, analyse and interpret data.</li> <li>3. Ability to predict trend values by using list square methods in regression.</li> </ol>
	<b>Environmental Studies</b>	<ol style="list-style-type: none"> <li>1. Understanding environmental concerns by the students at the undergraduate level.</li> <li>2. Understanding the relationship of man with the environment and help them change his attitude for more positive, proactive, eco-friendly and sustainable lifestyles.</li> <li>3. Getting information about climate change, Global warming, Acid rain, Greenhouse effect, Ozone, layer depletion.</li> <li>4. Cultivating attitudes to safeguard the environment built particularly with field experience.</li> <li>5. Realization of the impact of human actions on the immediate environment and the linkage with the larger issues.</li> <li>6. Getting information about Environment Protection Acts.</li> </ol>

Class	Subject	Course Outcomes
<b>B.Com. III</b>	<b>Modern Management Practices</b>	<ol style="list-style-type: none"> <li>1. Knowing about the growing size and complexity of business.</li> <li>2. Getting known with good working environment and conditions.</li> <li>3. Explanation about how to reduce wastage and increase efficiency.</li> <li>4. Importance of research and development.</li> <li>5. Knowledge about cut throat competition in the market.</li> <li>6. Acquaintance with the modern management practices being used by the corporate world.</li> </ol>
	<b>Business Regularity Framework</b>	<ol style="list-style-type: none"> <li>1. Introduction to Business Law as well as other Laws.</li> <li>2. Achieving the knowledge of Law.</li> <li>3. Knowing the rights and liability of every citizen regarding society.</li> <li>4. Awareness of legal liability.</li> <li>5. Welfare of society</li> <li>6. Creating legal awareness among the students.</li> <li>7. Acquainting with the latest laws, governing business and commercial transactions.</li> </ol>
	<b>Business Economics</b>	<ol style="list-style-type: none"> <li>1. Understanding Business Economics at national and international level.</li> <li>2. Knowledge about agricultural development, industrial development and service sector development in India.</li> <li>3. Discussing the problems of Indian economy.</li> <li>4. Measuring implementation and impact of Liberalization, Privatization and Globalization on Indian Economy.</li> <li>5. Justifying performance, role, function, merits and demerits of Foreign Capital, Multinational corporations and International Corporation (IMF, IBRD, WTO and SAARC).</li> </ol>



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<b>B.Com. III</b>	<b>Co-operative Development</b>	<ol style="list-style-type: none"> <li>1. Understanding the principles of co-operation and co-operative movement in India.</li> <li>2. Knowing the structure, types, functions, problems and remedies agricultural and Non-agricultural Credit Co-operative institutions.</li> <li>3. Getting known with Co-operative credit movement in post-independence period.</li> <li>4. Evaluating the impact of Globalization on co-operative Movement.</li> <li>5. Getting basic knowledge of co-operative society and its administration.</li> <li>6. Justifying the role of state and central government in development of cooperative sector.</li> <li>7. Understanding New Economic Policy since 1991 and Co-operative Movement.</li> </ol>
	<b>Advanced Accountancy Paper I</b>	<ol style="list-style-type: none"> <li>1. Knowledge about various provision of Banking Regulation Act for maintenance of Bank final accounts.</li> <li>2. Knowledge about the accounting procedure of Hire purchase system of sales.</li> <li>3. Calculation of fire insurance claim under loss of stock policy and loss of profit policy</li> <li>4. Knowledge about the Firm Accounting procedure.</li> <li>5. Obtaining the knowledge about analysis and interpretation of financial statements.</li> <li>6. Understanding the procedure of calculation of working capital requirement and preparation of funds flow statement.</li> <li>7. Exposure to cost accounting and management accounting.</li> </ol>
	<b>Advanced Accounting Paper II (Auditing) And (Income Tax)</b>	<p style="text-align: center;"><b>Advanced Accounting Paper II (Auditing)</b></p> <ol style="list-style-type: none"> <li>1. Knowledge about auditing principles and techniques of auditing.</li> <li>2. Getting knowledge of vouching of cash and credit transactions.</li> <li>3. Knowing the appointment procedure of Auditor.</li> <li>4. Acquiring the skills of Audit program of co-operative societies and banks.</li> <li>5. Knowledge about writing of audit reports.</li> </ol> <p style="text-align: center;"><b>Advanced Accounting Paper II (Income Tax)</b></p> <ol style="list-style-type: none"> <li>1 Understanding basic concepts in Indian Tax Act.</li> <li>2 Obtaining the knowledge about tax free incomes.</li> <li>3 Acquiring the knowledge about general deductions from income.</li> <li>4 Exposure to income tax planning</li> <li>5 Knowing the procedure of calculation of income tax</li> <li>6 Understanding the procedure of e-filing of return and e-payment of tax.</li> <li>7 Getting known with application of principles and provisions of direct tax laws in computation of taxable income under various heads of income.</li> </ol>



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