Shahu Shikshan Sanstha Pandharpur

VASUNDHARA KALA MAHAVIDYALAYA, JULE SOLAPUR
POS and COS

PROGRAM OUTCOME

After completing B.A. Programme in Geography, students will be able to

1. Knowledge outcomes:

- Demonstrate knowledge of physical and cultural features of the earth and locate them on a map.

- Know about the basic disciplines of Geography and its sub branches.

- Know the basic concepts and terminologies used in Geography like interior of the earth, plate tectonic, sea floor spreading, disasters, composition and structure of atmosphere, hydrosphere, etc.

- Differentiate between minerals and rocks, weather and climate, interior of the earth, basic industries, farming etc.

- Get information about the causes and effects of local, national and · international problems like global warming, acid rain, ozone depletion, soil degradation, deforestation etc.

2. Skill outcomes:

- Carry out surveying and learn the art of map making and prepare maps for the areas with the help of surveying techniques.

- Gain knowledge of quantitative methods and their ability to use statistical and cartographical methods to solve geographical problems.

- Construct various types of projections and scales as per requirement of the study.

- Collect primary and secondary data in the field.

- Apply various statistical formulas to analyse data.

- Handle topographical and weather maps and interpret them.

- Know about Geographical Information System (GIS) and Remote Sensing

B.A. History Program Specific Outcomes

- Comprehensive understanding of historical events: Students will gain a comprehensive understanding of historical events, processes, and cultural developments across various time periods and regions.

- Critical thinking and analytical skills: Students will develop critical thinking and analytical skills, enabling them to evaluate historical evidence, arguments, and interpretations.

- Research and writing skills: Students will learn to conduct historical research, analyze data, and present their findings in clear, well-written essays and reports.

- Historian or researcher: Students may pursue careers as historians or researchers in academia, museums, archives, or other institutions.

- Teacher or educator: Students may pursue careers as teachers or educators, sharing their passion for history with students and inspiring future generations.

हिंदी विभाग

- हिंदी भाषा और साहित्य के प्रति रूचि।

- राजभाषा एवं राष्ट्रभाषा हिंदी का प्रचार-प्रसार।

- राष्ट्रीय एकात्मता की भावना में वृद्धि।

- मानवतावादी और नैतिक मूल्यों का प्रसार।

- भाषिक कौशल का विकास।

- रोजगारपरक कौशल का विकास।

- छात्रों के सम्पूर्ण व्यक्तित्व का विकास।

COURSE OUTCOMES

B.A. I

ENGLISH COMPULSORY SEM I & II

- Use oral and written English effectively
- Appreciate stories and poems.
- Use English language in creative writing
- Apply English language skills in clearing competitive examinations.

PAPER I & II INTRODUCTION TO BRITISH LITERATURE

- Understand the basics of British Literature.
- Trace the development of critical terms
- Read and understand the representative stories and short stories.
- Know the different critical terms/concepts/trends.
- Look at a literary piece from different perspectives and relate them.

GEOGRAPHY

PAPER I GEOMORPHOLOGY

- The student learns about the knowledge of Geomorphology.

- The student was understanding geomorphological concept and process takes place on the earth surface and within the earth crust.

- The student was familiar the knowledge about interior structure of the earth, formation of continent and types of rock.

- Student understands about endogenetic and exogenetic forces and their effect in the creation of different landforms on the surface of the earth.

PAPER — II HUMAN GEOGRAPHY

- The students were known the importance of Human Geography.

- The students understood the concepts, Theory, population growth and composition, settlement and detailed knowledge of Human Geography.

- The students were familiar with basic development Human Geography.

- The students are developed as good environmental conservator.

ECONOMICS

PAPER- I- INDIAN ECONOMY

- Know the Problem of Over Population in Economy.

- Know the Problem of Poverty and Unemployment

- Know the Problem of Rising prices in Economy.

- Know the Importance of Agriculture in Indian Economy, Issues of Agriculture productivity & Green Revolution

PAPER- II — INDIAN ECONOMY

- Know the importance of Industry in Indian Economy, Role and problems of Small Enterprises and industrial policy of 1991.

- Know the importance of Economic planning and development models.

- To understand the economy of Maharashtra and Cooperatives in Maharashtra.

मराठी

अभ्यासपत्रिका क्रमांक -१ साहित्यरंग

- विद्यार्थ्यांमध्ये भाषा व साहित्याची जाणीव समृद्ध झाली.

- विद्यार्थ्यांना साहित्यातील विविध प्रकार व प्रवाहांची ओळख झाली.

- विद्यार्थ्यांना कथा या वाङ्मय प्रकाराचे स्वरूप, संकल्पना समजली.

- विद्यार्थ्यांना अभ्यासक्रमातील कथा व त्यांच्या कथांचे आशय व अभिव्यक्ती समजली.

- विद्यार्थ्यांमध्ये बातमी लेखन कौशल्य विकसित झाले.

आवश्यक मराठी साहित्य दर्पण

- मराठी साहित्याची जाण विद्यार्थ्यांमध्ये वाढीस लागते
- मराठी भाषा वापरण्याची क्षमता विद्यार्थ्यांमध्ये विकसित होते
- मराठी भाषेतील साहित्यिक आणि त्यांच्या साहित्यकृतीच्या परिचय विद्यार्थ्यांना होतो.
- साहित्याचे माध्यमातून मानवी मूल्यांची जागृती होते
- साहित्यामुळे राष्ट्रीय एकात्मतेची भावना वाढीस लागते

अभ्यासपत्रिका क्रमांक -२, साहित्यरंग

- विद्यार्थ्यांमध्ये भाषा व साहित्याची जाणीव समृद्ध झाली.
- विद्यार्थ्यांना साहित्यातील विविध प्रकार व प्रवाहांची ओळख झाली.
- विद्यार्थ्यांना कविता या वांड्मय प्रकाराचे स्वरूप, संकल्पना समजली.
- विद्यार्थ्यांना अभ्यासक्रमातील कविता व त्यांच्या कवितांचे आशय व अभिव्यक्ती समजली.
- विद्यार्थ्यांमध्ये निबंध लेखन कौशल्य विकसित झाले.

आवश्यक मराठी साहित्य दर्पण

- साहित्याची अभिरुची समृद्ध होते.
- मराठी भाषेच्या दीर्घ परंपरेची जाणीव होते.
- मराठी भाषेतील दर्जेदार साहित्यिकांच्या साहित्यकृतीचा परिचय होईल.
- विद्यार्थ्यांमध्ये निसर्ग प्रेम पर्यावरण जाणीव विकसित होतील.

HINDI

Paper I / II — पाठ्यपुस्तक :- शब्द कलश , लोकभारती प्रकाशन, नई दिल्ली

- हिंदी गद्यकार एवं कवियों से परिचय हुआ।
- हिंदी साहित्य के प्रति रुचि वृद्धिगत हुई।
- राष्ट्र प्रेम, सामाजिक प्रतिबद्धता की भावना विकसित हुई।
- हिंदी वर्णमाला, अंक लेखन, शब्दभेद, कारक, लिंग, वचन, काल आदि की पहचान हुई ।
- वृत्तांत लेखन, आवेदन पत्र, साक्षात्कार, स्ववृत्त लेखन आदि भाषिक कौशल का विकास हुआ।

Compulsory Hindi

Paper I / II — पाठ्यपुस्तक :- साहित्य सुमन , संपादक डॉ. गिरीश काशिद लोकभारती प्रकाशन, नई दिल्ली

- हिंदी भाषा के आरंभिक स्तर से अब तक के बदलते रूपों की जानकारी प्राप्त हुई ।

- भाषा के सैद्धांतिक रूप के साथ व्यावहारिक पक्ष की जानकारी प्राप्त हुई ।

- उच्च शैक्षिक स्तर पर हिंदी भाषा के महत्व की जानकारी प्राप्त हुई ।

- भाषा सीखने की प्रक्रिया में भाषागत मुल्यों के व्यावहारिक स्वरूप की जानकारी प्राप्त हुई ।

- साहित्य के सौंदर्य, कला बोध के साथ वैचारिक मुल्यों को बढावा देने संबंधी जानकारी प्राप्त हुई ।

- छात्रों की रचनात्मकता को प्रोत्साहन प्राप्त हुआ ।

- सीख्नने की प्रक्रिया में हिंदी भाषा दक्षता को मजबूती प्राप्त हुई ।

HISTORY

- To apply reasoning informed by the contextual knowledge of the past to assess the current state of society, economy, environment, culture and related areas.

- Chh. Shivaji Maharaj empowered women, allowing them to own property and participate in Public life.

- Chh. Shivaji Maharaj empire laid the foundation for the Maratha Empire, which would go on to play a significant role in Indian history.

- Chh. Shivaji Maharaj established a strong economy, based on agriculture, trade, and commerce.

POLITICAL SCIENCE

PAPER- I& II INDIAN GOVERNMENT AND POLITICS

- Get knowledge about basic concepts of political Science

- understand the Basic concepts of political Science

- Know the imp. Of concepts like liberty, equality, and justice.

- Study concepts like liberty, equality's & justice.

- Analyse the Political system by using concepts like power, authority, legitimacy, Political structure

SOCIOLOGY
PAPER-I & II (INTRODUCTION TO SOCIOLOGY)
- Get knowledge about basic concepts of Sociology
- understand the Basic concepts of Sociology
- Know the imp. Of concepts like liberty, equality, and social justice.
- Study concepts like liberty, equality's & social justice.
- Analyse the social system by using concepts like power, authority, legitimacy, Social structure

B.A. II

ENGLISH COMPULSORY SEM I & II
- Students will learn human values and social ethics through the literature they will acquire the skill of writing review and writing a blog
- The leadership qualities will be developed in the students.
- The students will learn to face the interview, the interview skills will be enhanced
- They will learn stress management, precise writing and essay writing. Group Discussion Skills

PAPER NO. III & V
- The students will be acquainted with the different literary terms in English literature
- The students will learn different genres of literature drama poetry literary terms novel etc.
- The students will understand the different aspects of a British novels and drama as well as poetry. Through which other aesthetic sense will be developed.

PAPER NO. IV & VI
- Student will get acquainted with major genres/themes through the study of texts prescribed.
- Student will become familiar with Indian socio-cultural ethos as revealed through texts prescribed and try to correlate it with everyday situations.
- Students will be able to understand and interpret literature on their own and further cultivate interest in the study of literature in English.
- Students will be able to appreciate poems with critical perspectives.

GEOGRAPHY

I.D.S.TOURISM GEOGRAPHY

- Study the different elements of geography and their relationship with tourism. ·
- Identify key tourism attractions from state, international and global dimension.
- Describe the major climatic elements that affect tourism and identify the world climatic zones.
- Observed the ethnic culture and religions of major tourism destinations.
- Introduce the students to the basic concepts in Tourism Geography

PAPER III - CLIMATOLOGY

- Learn the interaction between the atmosphere and the earth's surface.
- Understand the importance of the atmospheric pressure and winds.
- Understand how atmospheric moisture works.
- Develop an idea about cyclones.

PAPER IV GEOGRAPHY OF INDIA

- Acquainted the students in physical as well as human geography of India.
- Enable the students in knowledge of river system of India.
- Increased knowledge in the natural recourses in India with help of map.
- Student got aware of the magnitude of problems and prospectus at national level.
- Help the students to understand the inter relationship between the subject and the society.

PAPER V ECONOMIC GEOGRAPHY

- Students would be integrating the various factors of economic development and dynamic aspects of Economic Geography.
- Classify economic activities with their features and differentiate developed, undeveloped and developing countries
- Classify resources focus on use of non -conventional energy resources crisis · Classify industries, transport, communication and trade
- Describe various national and international organizations also new concepts

PAPER VI ENVIRONMENTAL GEOGRAPHY

- Gain knowledge about concept, nature and scope of environmental geography and importance of environment.
- Develop an idea about human-environment relationships.

- Build an idea about ecosystem.
- Know about environmental programmes and policies.

ECONOMICS

PAPER -III - MONEY AND BANKING

- Know the various aspects of inflation.
- Aware about the concept of commercial bank and their functions.
- Know the role of Reserve Bank of India in Indian Economy; also understand the concept of credit control and monetary policy.

PAPER - IV - DEMOGRAPHIC STUDIES

- Aware about the various issues related to population in India.
- Know the various concepts and theories of population.
- Understand the population policy of India.
- Know the various tools and techniques used for Demographic study.

PAPER - V – PUBLIC FINANCE

- Know the basic aspects of Indian public financial system.
- To understand the concept and principles of public expenditure, their growth and effects of public expenditure.
- Know the Indian tax system and focus on the cannon, types, Approach of Taxation and taxable capacity.
- To aware about the public debt and financial administration. It deals with meaning, causes and effects of public debt and also focus on budget.

PAPER- VI - DEMOGRAPHY IN INDIA

- Aware about the characteristics of population in India since 1951.
- Aware about the issue of migration and urbanization in India.
- Understand the population control measures in India.
- Aware about the population policy in India.

POLITICAL SCIENCE

PAPER- III- BASIC CONCEPT IN POLITICAL SCIENCE

- Get knowledge about basic concepts of Political Science.
- understand the Basic concepts of Political Science.
- Know the imp. Of concepts like liberty, equality, and justice.
- Study concepts like liberty, equality& justice.
- Analyse the political system by using concepts like power, authority, legitimacy, democracy.

PAPER- IV -MODERN INDIAN POLITICAL THOUGHT

- Due to this paper know the ideas of students about Modern Indian Political India.
- Know the thoughts of Indian Political thinker to get independent India.
- Helping students to understand the thoughts of Indian political thinker.
- Understand the importance of the thoughts of Indian political thinker and their uses.
- To make the base of modern India, thoughts of political thinkers play important Role.

PAPER -V -BASIC CONCEPT IN POLITICAL SCIENCE

- **to introduce certain key aspects of conceptual analysis in political theory and the skills required to engage in debates surrounding the application of the concepts.**

PAPER VI -MODERN INDIAN POLITICAL THOUGHT

- Due to this paper know the ideas of students about Modern Indian Political India.
- Know the thoughts of Indian Political thinker to get independent India.
- Helping students to understand the thoughts of Indian political thinker.
- Understand the importance of the thoughts of Indian political thinker and their uses.
- To make the base of modern India, thoughts of political thinkers play important Role.

SOCIOLOGY

PAPER- III & V INDIAN SOCIETY: STRUCTURE AND CHANGE

- Due to this paper know the ideas of students about Society in India.
- Know the thoughts of Indian Sociological thinker to get Society in India.
- Helping students to understand the thoughts of Indian Social thinker.
- Understand the importance of the thoughts of Indian Social thinker and their uses.
- To make the base of social structure , thoughts of Social thinkers play important Role.

PAPER –IV & VI – SOCIAL PROBLEMS IN INDIA

- Due to this paper know the ideas of students about Social problems in India.
- Know the Social problems in India.
- Awareness in the students of Social problems in India.
- Understand the Indian Social problems and their causes.
- To make the base of social structure in India, thoughts of Sociological thinkers play important Role.

मराठी

अभ्यास पत्रिका क्रमांक तीन कादंबरी आणि उपयोजित मराठी

'रथ' रंगनाथ पठारे (नेमलेली साहित्यकृती)

- विद्यार्थी कादंबरी साहित्यप्रकार समजून घेतो .
- विद्यार्थी कादंबरीतील काल्पनिक जीवन आणि वास्तव यांची सांगड घालतो .
- विद्यार्थी कादंबरीची निर्मिती प्रक्रिया समजून घेतो.
- साहित्यिकांचा जीवन परिचय समजून घेतो.
- विविध कौशल्य आत्मसात करतो
- कौशल्याच्या माध्यमातून रोजगाराभिमुख ज्ञान प्राप्त करतो.

अभ्यासपत्रिका क्रमांक -४, कविता आणि काव्यास्वाद

नेमलेली साहित्यकृती - तुकोबा - राजेंद्र दास

- विद्यार्थ्यांना कविता या वाड़्मय प्रकाराची ओळख झाली.
- मराठी कवितेची वाटचाल समजली
- कविता आणि भाषा यामधील सहसंबंधाचा विद्यार्थ्यांना आढावा घेता आला
- मराठी कवितेतील संत तुकाराम यांच्या चित्रणाचा आढावा विद्यार्थ्यांना घेता आला.
- कविता वाड़्मय प्रकारातील मुक्तछंद ,अभंग वगैरे रचना प्रकार लक्षात आले.
- कवितेतील प्रतिमा, प्रतीके व मिथ्थक याचे महत्त्व लक्षात आले.
- काव्यास्वादाचे स्वरूप समजले.

अभ्यास पत्रिका क्रमांक पाच आत्मकथन आणि उपयोजित मराठी

'जगायचं प्रत्येक सेकंद' मंगला केवळे (नेमलेली साहित्यकृती)

- विद्यार्थी आत्मकथन साहित्य प्रकार समजून घेतो.

- दलित साहित्याची प्रेरणा समजून घेतो.

- दलित साहित्याची वैशिष्ट्ये समजून घेतो.

- लेखिकेचे आणि तिच्या समाजाचे जीवन समजून घेतो

- जीवन एक संघर्ष हे मूल्य विद्यार्थ्यांच्या मनावर बिंबते.

- विद्यार्थी व्यावहारिक मूल्य समजून घेतो.

अभ्यासपत्रिका क्रमांक -६, नाटक आणि उपयोजित मराठी

नेमलेली साहित्यकृती - अधांतर - जयंत पवार

- विद्यार्थ्यांना नाटक या वाड्मय प्रकाराची ओळख झाली.

- मराठी नाटकाची वाटचाल समजली

- नाटक आणि भाषा यामधील सहसंबंधाचा विद्यार्थ्यांना आढावा घेता आला

- अधांतर नाटकातील सामाजिक आशय व स्त्री चित्रणाचा परिचय झाला.

- नाटककार जयंत पवार व त्यांच्या एकूण साहित्यकृतीचा परिचय झाला.

हिंदी

Paper III — आधुनिक हिंदी कहानी साहित्य एवं व्यावहारिक हिंदी

पाठ्यपुस्तक :- गद्यांकुर: संपादक डॉ. अनिल साळुंखे, डॉ. सतीश घोरपडे, वाणी प्रकाशन , दिल्ली

- हिंदी कहानी साहित्य का अध्ययन कर वर्तमान समाज एवं साहित्य से अवगत हुए।

- राजनीतिक, सामाजिक, सांस्कृतिक पृष्ठभूमि में कहानी का अध्ययन कर विश्लेषण किया।

Paper IV - मध्ययुगीन हिंदी काव्य, व्याकरण एवं लेखन

पाठ्यपुस्तक :- मध्ययुगीन हिंदी काव्य: संपादक डॉ. राजेंद्र खैरनार, डॉ. दादासाहेब खांडेकर,

- उत्तर मध्यकालीन हिंदी कविता का अध्ययन कर समयावधि के साहित्य स्थिति से अवगत हुए।

- सामाजिक, राजनीतिक, सांस्कृतिक पृष्ठभूमि में कविता के अध्ययन-विश्लेषण की जानकारी हुई।

Paper V – आधुनिक हिंदी रेखाचित्र साहित्य एवं शब्द- संपदा

पाठ्यपुस्तक :- प्रतिनिधी रेखाचित्र : संपादक डॉ. अनिल साळुंखे, डॉ. सतीश घोरपडे, वाणी प्रकाशन , दिल्ली

- हिंदी रेखाचित्र साहित्य का अध्ययन कर वर्तमान समाज एवं साहित्य से अवगत हुए।
- राजनीतिक, सामाजिक, सांस्कृतिक पृष्ठभूमि में रेखाचित्र का अध्ययन कर विश्लेषण करने में सक्षम हुए।

Paper VI काव्य सारंग, व्याकरण एवं लेखन

पाठ्यपुस्तक :- काव्य सारंग: संपादक प्रो. डॉ.सदानंद भोसले, राजकमल प्रकाशन प्रा. लि., दिल्ली

- विभिन्न अस्मिताओं और समस्याओं के परिवेश से परिचय हुआ।
- आधुनिक हिंदी कवियों का परिचय हुआ।
- आधुनिक हिंदी कविता की समझ विकसित हुई।
- कविता के वाचन, लेखन, विश्लेषण और परिवेश की समझ विकसित हुई।
- संवैधानिक मूल्यों से परिचय हुआ।

I.D.S. आंतरविद्या शाखा Paper – प्रयोजनमूलक हिंदी

- हिंदी के व्यावहारिक पक्ष से परिचित हुए।
- हिंदी में कार्य करने की रुचि विकसित हुई।
- रोजगारपरक शिक्षा प्राप्त हुई।
- राजभाषा , राष्ट्रभाषा हिंदी के प्रति रुचि उत्पन्न हुई।
- कार्यालय, विज्ञापन और अनुवाद कार्य में हिंदी का कौशल विकसित हुआ।

I.D.S. आंतरविद्या शाखा Paper – रोजगारपरक हिंदी

- अनुवाद के स्वरूप और महत्व से अवगत हुए।
- विज्ञापन की दुनिया और व्यापार से परिचित हुए।
- अनुवाद और विज्ञापन के स्वरूप से परिचित हुए।

- पटकथा लेखन एवं संवाद से अवगत हुए |

- प्रयोजनमूलक हिंदी के माध्यम से रोजगारपरक कौशल विकसित हुए |

- हिंदी भाषा के प्रयोग के प्रति रुचि निर्माण होकार संगणक के कार्य से अवगत हुए |

HISTORY

PAPER NO. III AND V MODERN EUROPE (1750 – 1871 A.D.)

- Students will be able to understand the contemporary Europe in the light of its background history.

- Students will be able to understand rise and growth nationalism in Europe.

- Students will be able to understand various revolutions and basis of development of European countries.

PAPER NO. IV AND VI MODERN INDIA (1857 - 1950 A.D.)

- Students will be able to understand the major events of India's freedom struggle.

- Students will be able to understand rise and growth of nationalism in India.

- It will increase the spirit of healthy Nationalism, Democratic values and secularism among the Students

(IDS) HISTORY OF SOCIAL REFORMS IN MAHARASHTRA (1818 – 1970 A.D.)

- Understand various social reform movements and contribution of social   reformers in Maharashtra.

- Identify the different types of social problems in our society.

- Students will be able to examine social background of Maharashtra.

B.A. III

ENGLISH

SEMESTER: V & VI COMPULSORY ENGLISH
- Use oral and written English effectively
- Appreciate literary language
- Use English language in creative writing
- Apply English language skills in clearing competitive examinations.

PAPER VII & XII LITERARY CRITICISM
- To expose students to various theories of art and representation, and critical approaches that emerged in Europe throughout centuries.
- To examine the evolution of various theoretical and aesthetic concepts across space and time.
- To enable students to draw connections between the set of interrelated concepts and approaches discussed in the paper that are seminal to critical thinking and analyses of literary text.
- Encourage students to view literary texts as socially symbolic acts that may be fruitfully engaged through a variety of interdisciplinary approaches like sociological, biological, Feminist.

PAPER VIII AND XIII BRITISH LITERATURE
- To help students explore poetry, drama and prose texts in a range of political, philosophical and cultural material from the end of the Renaissance through the English Civil War and Restoration in the seventeenth century.
- Explore the key writers and texts within their historical and intellectual contexts.
- Offer a perspective on the history of ideas including that of disability and its varied meanings within this period.
- The students will understand the different aspects of a British novels and drama as well as poetry. Through which other aesthetic sense will be developed.

PAPER - X & XIV INDIAN WRITING
- 1. Understand gradual development of Indian English Literature in the latter half of the 20th century.

- Get acquainted with important themes & issues through study of texts prescribed.
- Get acquainted with Indian ethos as revealed through prescribed texts.
- Be able to interpret and analyse on their own & further nurture interest in the study of Indian literatures, especially Indian English Literature.

PAPER- X, XV LITERATURES IN ENGLISH

- Understand gradual development of Indian English Literature in the latter half of the 20th century.
- Get acquainted with important themes & issues through study of texts prescribed.
- Get acquainted with Indian ethos as revealed through prescribed texts.
- Be able to interpret and analyse on their own & further nurture interest in the study of Indian literatures, especially Indian English Literature.

PAPER NO.–XI & XVI STRUCTURE AND FUNCTION OF MODERN ENGLISH

- Identify the class of words
- Know the structure and function(s)of phrases and analyse them
- Identify clause elements
- Construct sentences using basic clause patterns
- Know various varieties of English.

मराठी

अभ्यास पत्रिका क्रमांक — ७ साहित्यशास्त्र (पूर्वार्ध)

- साहित्य लक्षणाच्या विविध सिद्धांताचा परिचय झाला.
- विद्यार्थ्यांना साहित्याचे स्वरूप समजले
- विद्यार्थ्यांना साहित्यातील विविध प्रयोजनाचे आकलन झाले.
- साहित्य निर्मितीच्या जनक कारणाची माहिती मिळाली.
- शब्दशक्तीचा विद्यार्थ्यांना परिचय झाला.

अभ्यास पत्रिका क्रमांक — ८ भाषाविज्ञान व व्याकरण (पूर्वार्ध)

- मानवी जीवनातील भाषेचे महत्व व स्वरूप विद्यार्थ्यांना समजले.

- विद्यार्थ्यांचा भाषाविषयक दृष्टिकोन विकसित झाला.

- विद्यार्थ्यांना भाषिक संप्रेषणाचा परिचय झाला.

- भाषा परिवर्तनाचे स्वरूप लक्षात आले.

- मराठी भाषेच्या व्याकरणाचे स्वरूप समजले.

अभ्यास पत्रिका क्रमांक – ९ मध्ययुगीन मराठी वांग्मयाचा इतिहास (११०१-१८००)(पूर्वार्ध)

- मध्ययुगीन मराठी वाङ्मयाचा इतिहास व परंपरा याचा परिचय झाला.

- मध्ययुगीन मराठी वाङ्मय निर्मितीच्या प्रेरणा लक्षात आल्या.

- मध्ययुगीन मराठी वाङ्मयाचे स्वरूप व वैशिष्ट्ये यांचा परिचय झाला.

- मध्ययुगीन मराठी वाङ्मयाची सांस्कृतिक परिस्थिती लक्षात आली.

- मध्ययुगीन संप्रदायातील महत्त्वाचे संप्रदाय व ग्रंथ निर्गिती याचा अनुबंध लक्षात आला.

अभ्यास पत्रिका क्रमांक – १० उपयोजित मराठी (पूर्वार्ध)

- विद्यार्थ्यांना परभाषिक शब्दांचा परिचय झाला.

- विद्यार्थ्यांना ई- मराठी लेखनाचा परिचय झाला.

- गुद्रित शोधण्याचे महत्त्व सागजले

- स्पर्धा परीक्षेतील मराठी भाषेचे महत्त्व लक्षात आले.

- स्पर्धा परीक्षेतील यशस्वीतेसाठी लागणाऱ्या मराठी भाषिक कौशल्याचा विकास झाला.

अभ्यास पत्रिका क्रमांक -११ आधुनिक मराठी साहित्यातील विविध प्रवाह (ग्रामीण व दलित)

- आधुनिक मराठी साहित्यातील प्रवाहाच्या निर्मितीची पार्श्वभूमी समजली.

- ग्रामीण व दलित साहित्य प्रवाहाची संकल्पना, प्रेरणा, स्वरूप व वैशिष्ट्ये याचे आकलन झाले.

- चैत या ग्रामीण कादंबरीचे स्वरूप, आशयसूत्र, ग्रामीण जीवन चित्रण व भाषा याची वेगळेपण लक्षात आले.

- आंदकोळ या आत्मकथनाचे स्वरूप समजले.

- अंदकोळ आत्मकथनातील सामाजिकता, वैचारिकता व भाषा याचे आकलन झाले.

अभ्यास पत्रिका क्रमांक – १२ साहित्यशास्त्र (उत्तरार्ध)

- रस विचाराचे प्रकार व स्वरूप समजले.

- साहित्य प्रकाराच्या स्वरूपाची ओळख झाली.

- साहित्याचा भाषा विचार समजला.

- साहित्यातील मूल्यांची जाणीव झाली.

- साहित्य विषयक विचार व जाणिवा वृद्धिंगत झाल्या.

अभ्यास पत्रिका क्रमांक — १३ भाषाविज्ञान व व्याकरण (उत्तरार्ध)

- भाषाविज्ञान व मराठी भाषा यामधील अनुबंध समजला.

- वर्णनात्मक भाषाविज्ञानाचा परिचय झाला.

- मराठी भाषा व बोली यांमधील परस्पर संबंध लक्षात आले.

- मराठी भाषेवरील इतर भाषेचा प्रभाव लक्षात आला.

- मराठी भाषेची व्याकरणीक व्यवस्था लक्षात आली.

अभ्यास पत्रिका क्रमांक — १४ मध्ययुगीन मराठी वाङ्मयाचा इतिहास (११०१-१८००)(उत्तरार्ध)

- मध्ययुगीन मराठी वाङ्मयाचा इतिहास व परंपरा याचा परिचय झाला.

- मध्ययुगीन मराठी वाङ्मय निर्मितीच्या प्रेरणा लक्षात आल्या.

- मध्ययुगीन मराठी वाङ्मयाचे स्वरूप व वैशिष्ट्ये यांचा परिचय झाला.

- मध्ययुगीन मराठी वाङ्मयाची सांस्कृतिक परिस्थिती लक्षात आली.

- मध्ययुगीन संप्रदायातील महत्त्वाचे संप्रदाय व ग्रंथ निर्मिती याचा अनुबंध लक्षात आला.

अभ्यास पत्रिका क्रमांक — १५ उपयोजित मराठी (उत्तरार्ध)

- मराठी भाषेचे विविध क्षेत्रातील महत्त्व व उपयोजन विद्यार्थ्यांना समजले.

- जाहिरात कला व संहिता लेखनाचे कौशल्य विकसित झाले.

- विद्यार्थ्यांना प्रसार माध्यमाची माहिती मिळाली.

- विद्यार्थ्यांमध्ये निवेदन कौशल्य विकसित झाले.

- ग्रंथ परीक्षणाचे महत्त्व व कौशल्य अवगत झाले.

- सहलवर्णन, स्थलवर्णन, निसर्गवर्णन यांबरोबरच स्वानुभववर्णन कौशल्य विद्यार्थ्यांमध्ये विकसित झाले.

अभ्यास पत्रिका क्रमांक -१६ आधुनिक मराठी साहित्यातील विविध प्रवाह (स्त्रीवादी व मुस्लिम)

- आधुनिक मराठी साहित्यातील प्रवाहाच्या निर्मितीची पार्श्वभूमी समजली.

- स्त्रीवादी व मुस्लिम साहित्य प्रवाहाची संकल्पना, प्रेरणा, स्वरूप व वैशिष्ट्ये याचे आकलन झाले.

- स्त्रीवादी व मुस्लिम साहित्य प्रवाहंचा उद्गम व विकास स्पष्ट झाला.

- प्राजक्तांची फुल आणि दाह या कथा संग्रहातील आशयसूत्रे, समाजचित्रण घटना प्रसंग, व्यक्तिरेखा व भाषा याचे आकलन झाले.

- व्यवहाराचा काळा घोडा या कवितासंग्रहाचा आशय, जीवन संघर्ष, सामाजिकता, वैचारिकता व भाषा स्पष्ट झाली.

हिंदी

Paper VII — विशेष लेखक : भगवानदास मोरवाल

पाठ्यपुस्तक : प्रतिनिधि कहानियाँ : भगवानदास मोरवाल, किताबघर प्रकाशन, नई दिल्ली

- भगवानदास मोरवाल के व्यक्तित्व का परिचय हुआ।

- भगवानदास मोरवाल के लेखन का परिचय हुआ।

- प्रतिनिधि कहानियों के विषय की विविधता से परिचय हुआ।

- कहानियों के कला पक्ष एवं भाव पक्ष से परिचय हुआ।

Paper VIII — काव्यशास्त्र

- साहित्य निर्मिति की प्रक्रिया का बोध हुआ।

- साहित्य / काव्य के भेदों से अवगत हुए।

- साहित्य की नवीन विधाओं का परिचय हुआ।

- गद्य तथा पद्य के तत्वों का परिचय हुआ।

- शब्दों की शक्ति से अवगत हुए।

Paper IX - आदिकालीन और मध्यकालीन हिंदी साहित्य का इतिहास (संवत 1050 से 1900 तक)

- हिंदी साहित्य की दार्शनिक पूर्वपीठिका से परिचय हुआ

- हिंदी साहित्य के इतिहास का परिचयात्मक अध्ययन हुआ।

- हिंदी साहित्य की आदिकालीन और मध्यकालीन कालजयी रचनाएँ तथा रचनाकारों से परिचय हुआ।

- हिंदी साहित्य के विकास का कालानुरूप परिचय।

Paper X - प्रयोजनमूलक हिंदी

- प्रयोजनमूलक हिंदी के स्वरूप एवं विकास से परिचय हुआ।
- आधुनिक जनसंचार माध्यमों में हिंदी के बढ़ते प्रयोग एवं संभावनाओं से परिचय हुआ।
- हिंदी के प्रयोग के प्रति रुचि निर्माण होकर पत्राचार संबंधी क्षमता विकसित हुई।
- कार्यालयीन पत्राचार का परिचय हुआ।
- प्रयोजनमूलक हिंदी की विभिन्न प्रयुक्तियों से परिचय हुआ।
- प्रयोजनमूलक हिंदी के माध्यम से रोजगारपरक कौशल विकसित हुआ।

Paper XI — हिंदी भाषा

- हिंदी भाषा का सामान्य परिचय प्राप्त हुआ।
- भाषा के विविध रुपों से परिचय हुआ।
- हिंदी भाषा एवं लिपि के उद्भव और विकास से परिचय हुआ।
- भाषा की शुद्धता के प्रति जागृतता निर्माण हुई।
- मानक हिंदी वर्तनी और व्याकरण से परिचय हुआ।
- भाषायी कौशल के प्रति जागृतता निर्माण हुई।

Paper XII — विशेष लेखक : भगवानदास मोरवाल

पाठ्यपुस्तक : शकुंतिका (उपन्यास) : भगवानदास मोरवाल, राजकमल प्रकाशन, नई दिल्ली

- भगवानदास मोरवाल के उपन्यास संसार से परिचय हुआ।
- शकुंतिका उपन्यास का तात्विक अध्ययन हुआ।
- शकुंतिका उपन्यास की विशेषताओं से परिचय हुआ।

Paper XIII — आलोचना

- साहित्य के उपकरणों से परिचय हुआ।
- रसानुभूति की प्रक्रिया से परिचय हुआ।
- साहित्य के मूल्य और गुणों की पहचान हुई।
- आलोचना के माध्यम से विभिन्न आलोचना पद्धतियाँ तथा विभिन्न विमर्श का परिचय हुआ।

Paper XIV आधुनिक हिंदी साहित्य का इतिहास (सन 1900 से 2010 तक)

- आधुनिक हिंदी साहित्य की दार्शनिक पूर्वपीठिका से परिचय हुआ।

- आधुनिक हिंदी साहित्य के इतिहास का परिचयात्मक अध्ययन हुआ।

- आधुनिक हिंदी साहित्य के रचनाकारों का सामान्य परिचय हुआ।

- आधुनिक हिंदी साहित्य के इतिहास के कालानुरूप विभिन्न वाद एवं विधाओं के विकास का अध्ययन हुआ।

Paper XV - व्यावहारिक हिंदी

- अनुवाद के स्वरूप और महत्व से अवगत हुए।

- विज्ञापन की दुनिया और व्यवहार से परिचित हुए।

- अनुवाद और विज्ञापन लेखन की क्षमता विकसित हुई।

- वाणिज्यिक पत्राचार का परिचय हुआ।

- दैनिक व्यवहार से प्रयुक्त प्रयोजनमूलक हिंदी के प्रयोग से अवगत हुए।

- व्यावहारिक हिंदी के माध्यम से रोजगारपरक कौशल विकसित हुआ।

Paper XVI — भाषा विज्ञान

- भाषा के प्रति वैज्ञानिक दृष्टि निर्माण हुई।

- भाषा विज्ञान का सामान्य परिचय हुआ।

- ध्वनि उच्चारण प्रक्रिया से परिचय हुआ।

- उच्चारण की शुद्धता के प्रति जागृतता निर्माण हुई।

- पद और अर्थ से परिचय हुआ।

GEOGRAPHY

PAPER VII REGIONAL PLANNING AND DEVELOPMENT

- The students were known the importance of regional planning.

- The students understood the concepts of region, regionalization, regional planning & development and detailed knowledge of region.

- The students were familiar with indicators of measurement of development.

- Detail understanding of Growth Pole Model, Center place Theory and Growth Foci Model in Indian context.

PAPER VIII URBAN GEOGRAPHY

- The students were known the importance of urban settlements through urban geography.
- The students understood the types of urban Settlements, Site and situations.
- The students were familiar with an idea of relationship between human activities and urban development.
- Detail understanding of students regarding present urban problems and students are capable to handling of present problematic situations in urban areas.

PAPER IX POPULATION GEOGRAPHY

- This paper would bring an understanding of population geography along with relevance of demographic data.
- The students would get an understanding of distribution and trends of population growth in the developed and less developed countries, along with population concepts.
- The students would get an understanding of the dynamics of population.
- An understanding of the implications of population composition in different regions of the world.
- An appreciation of the contemporary issues in the field of population studies

PAPER X EVOLUTION OF GEOGRAPHICAL THOUGHT

- 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.
- Detailed knowledge about the debates in the geographical studies.
- Understanding of recent trends in Geography.

PAPER XI POLITICAL GEOGRAPHY

- Student will understand the history and development of political geography.
- Get knowledge about evaluation of state and nation.
- Get knowledge of Geo-political theories.
- Investigates problems and disputes of India with the most current research topics in political geography

PAPER XII SOCIAL GEOGRAPHY

- In depth understanding the problems and prospects of society in India.

- The students are fully aware about the technological, occupational and migration changes of peoples in India.
- Detailed knowledge about the social categories and their spatial distribution.
- Understanding concepts of social wellbeing, welfare and social problem in India.

PRACTICAL PAPER I - MAP WORK & MAP INTERPRETATION

- In depth understanding the map, concept of scale and projection.
- Detailed knowledge about the analysis of landforms and its identification.
- The students are deeply aware about basic information to the students about S.O.I. toposheets and I.M.D. weather reports and obtained the skills about map interpretation.

PRACTICAL PAPER II - ADVANCED TOOLS, TECHNIQUES & FIELD WORK

- In depth understanding the importance of field work and advanced Techniques in Geography.
- The students are trained to implement modern tool and techniques in Geography.
- The students are deeply aware about the basics and trained in instrumental survey.
- The students are deeply familiar with computer, GIS, GPS and Remote Sensing.

HISTORY

PAPER NO-VII & XII HISTORY OF ANCIENT INDIA PRE-HISTORIC PERIOD TO 650 A.D.

- Agriculture and Trade: Ancient India saw significant advancements in agriculture and trade, with the development of the Indus Valley Civilization's sophisticated irrigation systems.
- Art and Architecture: Ancient India produced remarkable art and architecture, including the cave temples of Ajanta and Ellora, and the iconic Taj Mahal.
- Philosophy and Spirituality: Ancient India was the birthplace of influential philosophical and spiritual traditions, such as Hinduism, Buddhism, Jainism, and Sikhism.

PAPER NO – VIII & XIII HISTORY OF MUGHAL INDIA (1526A.D.- 1707A.D.)

- Understanding of the Mughal Empire's establishment and expansion: Students will understand the circumstances surrounding the establishment of the Mughal Empire by Babur and its subsequent expansion under Humayun, Akbar, and other emperors.

- Familiarity with Mughal administrative and military systems: Students will be familiar with the administrative and military systems developed by the Mughals, including the mansabdari system and the jagir system.
- Knowledge of Mughal cultural and architectural achievements: Students will be aware of the significant cultural and architectural achievements of the Mughal period, including the development of Mughal art, literature, and architecture.

PAPER NO – IX & XIV GROWTH AND DECLINE OF THE MARATHA POWER (1707 - 1818 A.D.)

- Understanding of the rise of the Maratha Empire: Students will understand the circumstances surrounding the rise of the Maratha Empire, including the role of Shivaji and the impact of the Mughal-Maratha wars.
- Familiarity with the Peshwa period and the Maratha Confederacy: Students will be familiar with the Peshwa period and the Maratha Confederacy, including the roles of key leaders such as Baji Rao I and Mahadji Shinde.
- Knowledge of the decline of the Maratha Empire: Students will understand the factors contributing to the decline of the Maratha Empire, including internal conflicts, external pressures, and the impact of British colonialism.

PAPER NO – X & XV HISTORY OF MODERN WORLD (1870 - 2000 A.D.)

- Understanding of the impact of imperialism and colonialism: Students will understand the impact of imperialism and colonialism on global politics, economies, and societies.
- Familiarity with the two World Wars and the Cold War: Students will be familiar with the causes, courses, and consequences of the two World Wars and the Cold War.
- Knowledge of the rise of nationalist and independence movements: Students will understand the rise of nationalist and independence movements in Asia, Africa, and Latin America.

PAPER NO – XI & XVI HISTORICAL SOURCES, RESEARCH AND PLACES

- Understanding of historical sources: Students will understand the different types of historical sources, including primary and secondary sources, and their significance in historical research.

- Familiarity with research methods and techniques: Students will be familiar with research methods and techniques, including archival research, oral history, and quantitative analysis.

- Knowledge of historical places and monuments: Students will have knowledge of historical places and monuments, including their significance, architecture, and cultural context.

BSc-I

CHEMISTRY

PAPER-I (PHYSICAL CHEMISTRY)
- students will be able to know about Kinetics of gases & know about ideal and non ideal gases.
- students will be able to know about boyls law, Charles law, Avagadros law.
- Students will be able to know about order chemical Reactions.
- students will be able to know about liquification of gases.

PAPER II (INORGANIC CHEMISTRY)
- the bonding fundamentals for the ionic and covalent compounds including electronegativities Bond distance and Bond energies using M. orbital diagram

- this course helps to student for predicting the The geometries of simple molecule

- the fundamentals of the chemistry of the main group elements and important real world applications of many spieces

- to be able to describe the shapes and structures of co-ordination complexes with coordination number ranging from four to six

- to be able to recognise the type of isomers in coordination compounds

- to become familiar with some applications of coordination compounds 7 student will be able to understand and gain knowledge of various theories VBT, vsepr theory molecular orbital theory

PAPER :III (ORGANIC CHEMISTRY 3)
- Student acquire the complete information regarding to chemical reaction mechanism
- get knowledge regarding to type of the reagents and Bond breaking and Bond formation and student get knowledge of types organic reactive intermediates
- Stereochemistry of organic compounds will understand and basic concepts related types of stereoisomers optical conformational and geometrical isomers

- Simple way of the mechanism of free radical mechanism
- It gives knowledge of aromaticities reaction of electrophilic aromatic substitution reaction

PAPER IV (ANALYTICAL CHEMISTRY)

- students will be able to know about the Pollution and it's types:- water pollution, Air pollution, Noise pollution etc.
- students will be able to know about the Environment chemistry.
- students will be able to know about the Green house gases, Global warming, Ozone depletion.
- students will be able to know about the Treatment of water by using Chemical and physical method.

PHYSICS

PAPER-I (MECHANICS AND PROPERTIES OF MATTER)

- To develop a strong foundation in the principles of classical mechanics and properties of matter,emphasizing their applications in engineering and technology.
- To understand the behavior of light through geometrical and physical optics and apply these principles in designing optical instruments.
- To explore the fundamentals of laser technology and its applications invarious fields such as communication , medicine,and industry.

PAPER-II (OPTICS LASER)

- Develop a solid understanding of fundamental concepts in optics such as light, reflection, refraction, diffraction, interference, polarization, and optical imaging.
- Understand the dual nature of light, i.e., both as a wave and as a particle (photon), and how this influences optical phenomena.

PAPER - III (HEAT AND THERMODYNAMICS,)

- Analyze the laws of thermodynamics and their applications in heat engines, refrigeration,and real-world processes.
- Evaluate thermal conductivity,specific heat ,and expansion of materials under varying conditions.

PAPER-IV (ELECTRICITY AND MAGNETISM)

- Demonstrate a clear understanding of electric fields, magnetic fields, and their interrelations as described by Maxwell's equations.
- Introduce the core principles of heat, thermodynamics, and electromagnetism in both theoretical and practical context.
- Develop analytical skills to apply the laws of thermodynamics and electromagnetic theory to solve real-life problems.

BOTANY

PAPER I MICROBIOLOGY AND PHYCOLOGY

- To get knowledge about viruses general character classification and economic importance of virus
- to get knowledge about bacteria and mycology classification .
- to get knowledge general character and classification of algae and economic importance of Algae.
- to get knowledge about the signnificant cynophyta and chlorophyta with their classification thala structure and reproduction. Outcomes-the student can understand about virus and bacteria with their classification
- To get knowledge about the sign of one example and chlorophyta with one example that is spirogyra.

PAPER II -FUNGI AND ARCHEGONIAT

- to get knowledge about the general character of fungi economic importance of fungi
- To get knowledge about the mucor and yeast with classification To get knowledge about the general character of Archegoniat To get knowledge about the bryophyte and its economic important
- To get knowledge about the pteridophyte and its economic important
- To get knowledge about gymnosperm general character and classification with its economic important.
- to get knowledge about the general character and in day to day life economic importance of fungi. To get knowledge about Archegoniat

- To get knowledge about bryophyte pteridophyte and gymnosperm and use of its in our life.

PAPER III PLANT ECOLOGY

- to get knowledge about the climate factor Edaphic factor, adaptation, plan community classification.
- To get knowledge about ecosystem concept types ecological pyramid and photo chain and food Web
- To get knowledge about the ecological succession
- student will understand the climatic factors edaphic factor. Student will understand plan communities ecosystem and ecological succession.

PAPER IV TAXONOMY OF ANGIOSPERM

- to get knowledge about the municipal of taxonomy classification nomenclature binomial Nomenclature of the plant principles of ICBN Sc
- To get knowledge about the herbarium and different botanical gardens of India
- To get knowledge of different angiosperm families
- student will understand different aims and principles of taxonomy Student use merit and demerits of Google system classification Don't will understand different herbarium and botanical gardens and families.

COMPUTER SCIENCE

PAPER-I: - FUNDAMENTALS OF COMPUTERS

- The objective of this course is to make the learner ready to understand basic of computer.
- To learn different types of languages used in Computer system
- To Learn basic steps to solve programs
- Learner are ready to create document, create presentations and do some calculations.
- Learner are ready to create attractive certificates.
- Apply knowledge of computer to identify types of computer system and ready to under stand basic of computer.
- Learner are now understands different types of computer languages
- Learner can understand steps to solve programs

- Learner can understand to create office documents, create presentations and create work sheet.
- Learner are able to create attractive certificates design.

PAPER-II: - PROGRAMMING USING C COURSE

- Explore programming language.
- Develop modular programs using control structures and arrays in 'C'.
- Develop user define data type like structure and union.
- Learner are write programs for file handling in 'C'.

PAPER-III: - INTRODUCTION TO WEB DESIGNING

- Understand the principles of creating an effective web page.
- Learn the language of the web: HTML and CSS.
- Learn form validation
- Develop basic programming skills using Javascript.
- Student can able to design simple and attractive web pages.
- Student can understand HTML, HTML5 and CSS and using these technique students will develop interactive web pages.
- Students can able to design web form and form validation
- Student can understand JavaScript language for client side development.

PAPER IV:-OPERATING SYSTEM:

- To understand the main components of an OS & their functions.
- To study the process management and scheduling.
- To understand the concepts and implementation Memory management policies and virtualmemory.
- To understand the working of an OS as a resource manager, file system manager, process manager, memory manager and I/O manager and methods used to implement the different parts of OS
- Describe the important computer system resources and the role of operating system in their management policies and algorithms
- Understand the process management policies and scheduling of processes by CPU

- Evaluate the requirement for process synchronization and coordination handled by operating system
- Describe and analyze the memory management and its allocation policies.
- Identify use and evaluate the storage management policies with respect to different storage management technologies.

BIOLOGY
ANIMAL DIVERSITY I AND II – INVERTEBRATES & VERTEBRATES
- Describe general taxonomic rules on animal classification.
- Classify Phylum Protozoa to Echinodermata with taxonomic keys.
- Imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment.
- Classify phylum Protochordates to Mammalia.
- Complex Vertebrate interactions.

COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES:
- Comparative knowledge of Integumentary, Digestive, Circulatory, Urinogenital, Nervous and Skeletal system of various classes of vertebrates.
- Basic concepts of developmental biology.
- Concept of hormonal regulation of reproduction

PRINCIPAL OF ECOLOGY AND CELL BIOLOGY :
- Seeks to understand the mechanisms that work to keep the animal body alive and functioning
- Interactions and interdependence of physiological and biochemical processes.

MATHEMATICS
PAPER I (ALGEBRA)
- Knowledge about complex numbers and some functions like Exponential function , logarithmic function, hyperbolic function Of complex variables
- Students can apply the De- Moivres theorem to find the sum of A trigonometric series
- Using techniques to solve and analyse vario

PAPER II (CALCULUS)
- Sketch curves in a plane using its Mathematical properties in the Different
- Using the derivatives in Optimization, Social sciences, Physics and Life sciences

- Formulate the Differential equations for various Mathematical Models.
- Using techniques to solve and analyse various Mathematical models.

PAPER-III(G E O M E T R Y)

- It is gives insight in tracking a curve and finding many of It's properties
- Concept of asymptotes of a polynomial curve and the idea of Envelope to family of curves are include their

PAPER-IV (DIFFERENTIAL EQUATION)

- Formulate the Differential equations for various Mathematical Models.
- Using techniques to solve and analyse various Mathematical mode.

STATISTICS

PAPER- I & II (INTRODUCTION TO STATISTICS)

- Present the data diagrammatically and graphically.
- Compute and interpret various measures of central tendency.
- Summarize the information in the data using summary measures.
- Compute and interpret various measures of dispersion.
- Compute and interpret moments, skewness and kurtosis.

B.Sc. II

CHEMISTRY

PAPER-V (ORGANIC CHEMISTRY)

- the use of of ultraviolet spectroscopy IR mass spectroscopy organic structure Elucidation.
- Fundamentals related to Electronic structure and bonding in conjugated and aromatic system
- to study the reactivity patterns of conjugated and aromatic molecules .
- the fundamental electronic structure and bonding in Carboxylic compounds
- the substitution effect on on pka in case of carboxylic acid.
- the reactivity of carbonyl compounds with fak hard and soft nuclear fields Carboxylic and aldehyde ketone

- condensation kind of reaction of carbonyl compound.
- the fundamental properties and reactivity of alcohol amines, diazonium sats.

PAPER-VI (INORGANIC CHEMISTRY)

- To understand ki tools of coordination compounds including variety of structures
- oxidation number and electronic configuration coordination number ligands can chelate
- to be I like to recognise the the type of isomers in coordination compounds
- to be able to name ordination compounds and to be able to draw the structure based on its name
- to be familiar with some application of coordination compounds
- students will come to know how to calculate timing reagent the active of guilt and percentage yield
- how to engage in safe laboratory practices by handing laboratory glassware equipment and chemical reagent appropriately

PAPER VII SEM IV (PHYSICAL CHEMISTRY)

- students will be able to know about Chemical Thermodynamics.
- students will be able to know about Chemical Kinetics.
- students will be able to know about Electrochemistry.
- students will be able to know about Solid state chemistry.

PAPER VIII SEM IV (ANALYTICAL CHEMISTRY)

- students will be able to know about the Volumetric Analysis and gravimetric analysis of chemical Compounds.
- students will be able to know about the Theory of Acid and Bases indicator and Complexometric Titration.
- students will be able to know about the Manufacture of Industrial Heavy Chemicals.
- students will be able to know about the Mettalllurgy, Minerals, ores, flux, slag

PHYSICS

PAPER–V (GENERAL PHYSICS SOUND)

- To develop a fundamental understanding of the principles of general physics and sound.

- To explain the behavior of physical systems under various conditions using classical and wave mechanics.
- To introduce concepts of acoustics and their applications in various fields like engineering and communication.

PAPER- (SOUND)

- Nature of Sound: Sound is a mechanical wave that travels through a medium (like air, water, or solid objects) and requires a medium to propagate.
- Types of Waves: You'll explore longitudinal waves, where the particles of the medium move parallel to the direction of the wave.
- Speed of Sound: Sound travels at different speeds in different media, depending on the properties like density and elasticity. For example, sound travels faster in water than in air.

PAPER-VI (ELECTRONIC DEVICES)

- Students will be able to apply Newtonian mechanics and laws of motion to solve physical problems.
- Demonstrate the ability to analyze wave phenomena, including interference, diffraction,and resonance.
- Explain the principles of acoustics and the behavior of soundwaves in different mediums.

PAPER VII (GEOMETRICAL, PHYSICAL AND FIBER OPTICS,)

- Understand the fundamental principles of geometrical optics,including reflection, refraction,and the formation of images by optical instruments.
- Analyze physical optics phenomena such as interference diffraction ,and polarization and their applications in real-world scenarios.
- Demonstrate a comprehensive understanding of fiber optics,including the propagation of light in optical fibers,types of fibers,and their use in communication systems.

PAPER-VIII (MODERNPHYSICS)

- Provide a deep understanding of the theoretical and practical aspects of geometrical optics and its role in designing optical devices like lenses, microscopes, and telescopes.
- Equip students with knowledge about the wave nature of light and the physical phenomena of interference,diffractio,and polarization.
- Introduce the principles of fiber optics,covering light transmission,attenuation, and its application in high-speed data transmission systems.

BOTONY

PAPER V PLANT ANATOMY TISSUE AND TISSUE SYSTEM

- to get knowledge about the meristem cell they role and classification
- To get knowledge about the theory of structural organisation in plant and a simple and complex tissues.
- To get knowledge about the types of vascular bundles and type of tissue system. Outcomes-the students can understand about cell structure of meristem structural organisation in plant and understand structure type function of simple and complex tissue Primary and secondary Structure of plant body
- To get knowledge about animals secondary structure of root and steam so wood and its organisation
- student will understand the Anatomical features of root and stem primary and secondary Anatomical feature of root and stem.
- student will understand types of food and its structural organisation.

PAPER VI PLANT METABOLISM

- to get knowledge about different micro and macro nutrient role and growth the development.
- To get knowledge about growth regular terms their discovery and physiological role.
- student will get knowledge about different nutrient role growth and development different enzyme their mechanism different types of growth regulators.
- Student get knowledge about types of carbohydrate classification and example.

PAPER VII PLANT PHYSIOLOGY

- to get knowledge about plant response light photo terrorism and vernalization. Knowledge about plant transportation
- student will get knowledge about enzyme photo periodism importance of vernalization and different translocation in the plant.

PAPER VIII: EMBRYOLOGY OF ANGIOSPERM

- to get knowledge about different terms of embryology structure of flower and types, development and stages of anthes stigma types of ovules and different process of mechanism of pollination and fertilization .
- To get knowledge about embryo endosperm development and seed and fruit dispersal.

- student will know knowledge about the different terms of plant embryology microsporangi's microsco and JSS different stages of endosperm dicot monocot different students about types of embryo in the endosperm.
- Student will get knowledge about mechanism of fruit dispersal and see the dispersal.

COMPUTER SCIENCE

PAPER – V: DATA STRUCTURES

- To impart the basic concepts of data structures and algorithms
- To understand concepts about searching and sorting techniques
- To understand the concepts about stacks, queues, lists, trees and graphs
- To impart the basic concepts of data structures and algorithms

PAPER – VI: SOFTWARE ENGINEERING:

- To study fundamental concepts in software engineering, SDLC, software requirements specification, formal requirements specification and verification.
- To study the basic techniques for improving quality of software
- Understand the fundamental principles of Software Engineering & will also have a good knowledge of responsibilities of project manager and how to handle these.
- To understand the basic knowledge of different models.

PAPER – VII: CORE JAVA

- To understand how to design, implement, test, debug programs that use basic data types and computation, simple I/O, conditional and control structures, string handling and functions in Java.
- To understand the importance of Classes & objects along with constructors and Arrays in Java
- To understand the principles of inheritance, interface and packages and demonstrate though problem analysis assignments how they relate to the design of methods, abstract classes and interfaces.
- To understand importance of multi-threading & different exception handling mechanisms.
- To understand how to develop GUI applications using Swing and JDBC technology

PAPER – VIII: DBMS USING ORACLE

- To understand the fundamental concepts of database.
- It helps in developing skills for the design and implementation of a database applications
- To understand user requirements and frame it in data model.
- To understand creations, manipulation and querying of data in databases.
- Undersetting SQL and PL/SQL

ZOOLOGY

ANIMAL PHYSIOLOGY AND BIOCHEMISTRY :

- Students gain fundamental knowledge of animal physiology
- Seeks to understand the mechanisms that work to keep the animal body alive and functioning.
- Interactions and interdependence of physiological and biochemical processes.
- Students are taught the detailed concepts of digestion, respiration, excretion, the functioning of nerves and muscles, cardiovascular system, endocrine system and reproductive system.
- Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physical, and biochemical functions of animals, their organs, and the cells of which they are composed.

MOLECULAR BIOLOGY AND PRINCIPAL OF GENETICS:

- Understanding of basic concepts of genetics and laws of inheritance.
- Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism.

ENDOCRINOLOGY AND WILDLIFE MANAGEMENT AND CONSERVATION :

- Students learn the concepts of endocrine systems and homeostasis.
- Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species.

EVOLUTIONARY BIOLOGY AND ANIMAL BEHAVIOR AND CHRONOBIOLOGY

- Apply the knowledge and understanding of Zoology to one's own life and work.
- Develops empathy and love towards the animals.

- Theories of evolution and knowledge of evolution of species.

MATHEMATICS

PAPER V (DIFFERENTIAL ALCULUS)

- Formulate.Equations of tangents and Normals, Angle of intersection of two curves.
- formulate   Definition of Curvature, Length of arc as a function, Radius of curvature, Cartesian Equation,Parametric Equations, Polar Equations, Pedal Equations.
- Using the Definition of a Jacobian, Jacobian of a function of function, Jacobian of implicit function, to find Condition of dependent functions
- Formulate Definiton of Maximum value and minimum value of a function of one, two variables, Necessary Condition for extreme values, sufficient condition for extreme values.

PAPER VI (LAPLACE TRANSFORM)

- At the end of course,the students would able to evaluate various problems using Laplace transform and inverse Laplace transform.
- Formulate definition of Maximum value and minimum value of a function of one ,two variables , necessary condition for extreme value, sufficient condition for extreme value.

PAPER VII (DIFFERENTIAL EQUATION)

- Formulate the Differential equations for various Mathematical Models.
- Using techniques to solve and analyse various Mathematical mode.

PAPER VIII (ABSTRACT ALGEBRA)

- Identify the concept of Normal subgroup, Quotient group and Isomorphism .
- Analyze the permutations group and and cyclic decomposition
- Explain fundamental theorem of finite Abelian group and its application
- Provide the information on ideas and Quotient ring, Integral domain, PID , UPD

STATISTICS

PAPER- III & V (PROBABILITY DISTRIBUTION)

- s, Mathematical expectation of bivariate discrete distribution
- Univariate continuous distribution, various measures continuous r.v.s, and probabilities using its probability distribution.
- Bivariate continuous distributions, independence of bivariate r.v.s,
- Mathematical expectation of bivariate continuous distribution

- Transformation of univariate and bivariate continuous random variable. Sampling theory and its need.
- Different methods of sampling and estimators associated with them.
- Different rates with respect to population change.
- multiple and partial correlation as well as regression .

PAPER –IV & VI – (CONTINUOUS PROBABILITY DISTRIBUTIONS)

- Uniform, exponential and beta distribution along with their basic properties.
- Normal and standard normal distribution and its wide applications
- Exact sampling distributions that are used in inferential procedures.
- Chebychev's inequality and its application
- Time series and its components, measuring the trend ad seasonal components.
- The inferential procedure for large as well as small samples.

B.Sc. III

CHEMISTRY

PAPER IX PHYSICAL CHEMISTRY

- Students will be able to know about Quantum chemistry.
- students will be able to know about Schrodinger wave equation cell and it's types.
- students will be able to know about Electrolytes.
- students will be able to know about Gibbs Phase Rule of Water and Sulphur.

PAPER X INORGANIC CHEMISTRY

- to be able to use crystal field theory to understand the magnetic properties and in simple terms the colour of coordination compounds.
- the course is designed to develop research skills in students.
- it help to understand the method of calibration and sampling applied 2 quantitative analysis
- the distinction between quantitative and qualitative chemical analysis
- the bonding models structure and reactivity and application of coordination complexes boron hydrate metal carbonyls and organometallic so this Gate gain by students very

detailed 6.students will gain an understanding of the apply knowledge of biochemical reaction and role of profit ring in the HB .

- this course helps to study the catalyst and the mechanism of reaction and industrial application of catalyst .
- it gives clear idea about synthesis of organic compound for comerical significance for fertilizers .
- students gain an understanding of basic knowledge of nuclear structure stable and unstable atomic nuclei nuclear reaction and different models of radio activity and also methods for measurement of radiodecay.

PAPER-XI ORGANIC CHEMISTRY

- student will gain an understanding of organic mechanism to predict the outcome of reactions
- this course is very important to give introduction to modern spectroscopic methods including mass Spectroscopy ultraviolet and visible spectroscopy infrared Spectroscopy
- student will understand fundamentals of electronic structure and bonding and aromatic system
- students will gain understanding regarding to stereochemistry which helps in compound synthesis
- mechanism of stereoselective and Spectroscopy reaction

PAPER XII ANALYTICAL CHEMISTRY

- students will be able to know about the Terms in Colarimetry,.
- students will be able to know about the General principle of flame Photometry.
- students will be able to know about the Clomel Electrode, Quinhydrone Electrode, glass electrode.
- Students will be able to know about the Principle of Electroplating.
- students will be able to know about the Advantage of Potantiometric Titration.

PAPER XIII PHYSICAL CHEMISTRY

- students will be able to know about the Ideal & non ideal solutions.
- students will be able to know about the Phenol and water system.
- Students will be able to know about the Order of Chemical Reaction in Thermodynamics.

- students will be able to know about the spectroscopy Electromagnetic Radiation.
- Students will be able to know about the Application and limitations of Vibrational Spectra.

PAPER-XIV INORGANIC CHEMISTRY

- students will be able to know about actinide elements are used to nuclear fuel to complete the various kinds of purpose .
- the students will be able to understand about a recently lanthanides have been used in different molar concentration and connecting grains into moles and moles conversion into grams
- it helps to student for understanding the bonding models of Boron compounds structures activity as well as applications of boron hydrides metal carbonyls and organometallic etc
- it has student to apply the knowledge of activity and knowledge of prevent corrosion of industries of the heavy machineries.

PAPER -XV ORGANIC CHEMISTRY

- it provides the knowledge of Carbohydrates structure
- to hydrocephalic compounds mechanism and synthesis are very helpful in farmer cultural field.
- here students get information of the preparation methods synthesis and application of CNS drugs antidiabetic certain kinds of various drugs.
- it gives information of synthesis dyes and their synthesis and uses as well as gives the use and synthesis of Idol 3 Acetic Acid monocrotophos etc .

PAPER XVI ANALYTICAL CHEMISTRY

- Students will be able to know about the Sugar Industry & Manufacture of Alcohol.
- students will be able to know about the Manufacture of Soap and detergent.
- students will be able to know about the Green Chemistry and Principles of green Chemistry.
- students will be able to know about the Polymeric Chemistry.

PHYSICS

PAPER -IX (MATHEMATICAL AND STATISTICAL PHYSICS,)

- Develop proficiency in applying advanced mathematical techniques such as differential equations, complex analysis ,and linear algebra to solve physical problems.

- Understand and analyze the principles of statistical mechanics and their application to macroscopic thermodynamic systems.

PAPER- X (SOLID STATE PHYSICS)

- Explore the fundamental concepts of crystalline structures, electronic properties, and band theory.
- Understand the physical mechanisms governing semiconductors, superconductors, and magnetic materials.
- Gain a deep understanding of the laws of motion and their applications to real- world systems.

PAPER- XI (CLASSICAL PHYSICS)

- Analyze complex mechanical systems using advanced concepts like Lagrangian and Hamiltonian mechanics.
- Understand the structure, properties ,and interactions of atomic nuclei.
- Explore nuclear reactions, radioactive decay ,and applications in energy production and medical imaging.
- Apply mathematical methods to formulate and solve complex physical problems.

PAPER -XII (NUCLEAR PHYSICS)

- Analyze statistical ensembles and derive macroscopic properties of systems from micro-scopic interactions.
- Explain the behavior of materials based on their atomic structure and quantum mechanical principles.
- Solve problems related to electronic properties, thermal conductivity ,and magnetic properties of materials.
- Solve dynamic problems in mechanical systems using Newtonian, Lagrangian, and Hamiltonian approaches.
- Demonstrate competence in the conservation principles of energy, momentum, and angular momentum in various systems.
- Describe nuclear models and processes such as fission , fusion ,and decay.
- Analyze the applications of nuclear physics in areas such as energy generation, medical diagnostics ,and particle accelerators.

PAPER–XIII (ELECTRODYNAMICS)

- Analyze and solve Maxwell's equations in various scenarios, including electromagnetic wave propagation and boundary conditions.
- Applyconceptsofelectromagneticfieldsinpracticalapplicationslikeantennas, transmission lines, and waveguides.

PAPER-XIV (MATERIAL SCIENCE)

- Examine the structure and properties of materials at the atomic level.
- Relate the mechanical ,thermal ,electrical ,and magnetic properties of materials to their structure and bonding.

PAPER -XV (ATOMIC ,MOLECULAR AND QUANTUM PHYSICS)

- Understand the fundamental principles of quantum mechanics and its application to atomic and molecular systems.
- Analyze atomic spectra and molecular vibrations/rotations using quantum theory.
- Introduce the fundamental principles of electric and magnetic fields.
- Provide a comprehensive understanding of material characterization techniques.
- Develop knowledge of advanced materials like superconductors ,nanomaterials, and biomaterials.
- Familiarize students with quantum mechanical concepts such as wave-particle duality and uncertainty principles.

PAPER -XVI (ELECTRONICS)

- Develop the ability to analyze and troubleshoot electronic circuits.
- Provide hands-on experience in the design and implementation of electronic systems for practical applications.

MATHEMATICS
PAPER IX (ALGEBRA II)

- Recognize consistent and inconsistent systems of linear equations by the row
- To find the Eigen values and corresponding Eigen vectors for a Square matrix.
- Using the knowledge of vector calculus in geometry.

- Enhance the knowledge of three-dimensional geometrical figures (e.g. cone)

B.SC III PAPER X (COMPLEX ANALYSIS)

- Describe the regular and polar representation of complex analysis
- Analyze C-R equations, Analytic function, Harmonic function
- Evaluate the line Integral and different forms of cauchys theorem .
- Enhance the knowledge of three-dimensional geometrical figures (e.g. cone)

PAPER XI (REAL ANALYSIS)

- Describe the fundamental properties of the real numbers that underpin the formal development of real analysis;
- Demonstrate an understanding of the theory of sequences and series, continuity, differentiation and integration;
- Demonstrate skills in constructing rigorous mathematical arguments.

PAPER XII (PARTIAL DIFFERENTIAL EQUATIONS)

- Demonstrate a working knowledge of the theory of second order linear Partial differential equations including knowledge of theorem ;
- solve simple boundary value problems for ordinary differential equations
- apply the product method, transform method and selected numerical methods .

PAPER XIII (METRIC SPACE)

- understand the Euclidean distance function on Rn and appreciate its properties, and state and use the Triangle and Reverse Triangle Inequalities for the Euclidean distance function on Rn
- explain the geometric meaning of each of the metric space properties (M1) – (M3) and be able to verify whether a given distance function is a metric
- distinguish between open and closed balls in a metric space and be able to determine them for given metric spaces
- define convergence for sequences in a metric space and determine whether a given sequence in a metric space converges
- state the definition of continuity of a function between two metric space.

PAPER XIV (NUMERICAL ANALYSIS)

- Apply knowledge and fundamental concept of calculus
- Solve real life application problems using suitable techniques in numerical methods.
- State the definition of continuity of a function between two metric space.

PAPER XV (GRAPH THEORY)

- Students will achieve commands on fundamental definition
- Students will understand concept of graph theory.
- Understanding and apply the core theorems
- Understanding the Algorithms and generating examples

PAPER XVI (INTEGRAL CALCULUS) NUMERICAL METHODS.

- It deals with calculus of several variables.
- It is a science that deals with rate of change.
- Understanding the concept of differentiation.
- Understanding the concept of Integration.
- Applications of differentiation include measuring velocity, acceleration, etc.

PROGRAM OUTCOMES FOR BCA

- Apply mathematics and computing fundamental and domain concepts to find out the solution of defined problems and requirements. (Computational Knowledge
- Use fundamental principle of Mathematics and Computing to identify, formulate research literature for solving complex problems, reaching appropriate solutions. (Problem Analysis)
- Understand to design, analyze and develop solutions and evaluate system components or processes to meet specific need for local, regional and global public health, societal, cultural, and environmental systems. (Design/Development of Solutions)
- Use expertise research-based knowledge and methods including skills for analysis and development of information to reach valid conclusions. (Conduct Investigations of Complex Computing Problems
- Use expertise research-based knowledge and methods including skills for analysis and development of information to reach valid conclusions. (Conduct Investigations of Complex Computing Problems)
- Exhibiting ethics for regulations, responsibilities and norms in professional computing practices. (Professional Ethics)

- Enlighten knowledge to enhance understanding and building research, strategies in independent learning for continual development as computer applications professional. (Lifelong Learning)

- Establishing strategies in developing and implementing ideas in multi- disciplinary environments using computing and management skills as a member or leader in a team. (Project Management and Finance)

- Contribute to progressive community and society in comprehending computing activities by writing effective reports, designing documentation, making effective presentation, and understand instructions. (Communication Efficacy)

- Gain confidence for self and continuous learning to improve knowledge and competence as a member or leader of a team. (Individual and Teamwork) Program Specific Outcomes

COURSE OUTCOMES

COMPULSORY ENGLISH

- The prescribed course equips students with nuances of language that includes proficiency in grammar, its effective usage in speaking and writing. It also develops their personality.

- The practical work improves their communication and writing skills, and at the same time equipping them to use modern forms of communication.

- Students should be familiar with representative literary and cultural texts within a significant number of historical, geographical, and cultural contexts.

- Students should be able to apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres.

- Students should be able to identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past

COMPUTER FUNDAMENTAL & OFFICE AUTOMATION OFFICE AUTOMATION:

- Recognize the importance of computer in education and career,

- Understand the basic knowledge of computer,

- Perform common functional operations in windows. Identify software and hardware CO

- Understand Testing, errors and debugging, 4: Understand the usage of Computer,

- Understand windows directory
- Understand the components of office automation.
- Perform operations using MS Word, Excel, PowerPoint, Surf details through Internet
- Understand and discuss about the use of Office Package and internet in daily life.

C PROGRAMMING

- Understanding a functional hierarchical code organization.
- Ability to define and manage data structures based on problem subject domain.
- Ability to work with textual information, characters and strings.
- Ability to work with arrays of complex objects.
- Understanding a concept of object thinking within the framework of functional model.
- Understanding a concept of functional hierarchical code organization.
- Understanding a defensive programming concept. Ability to handle possible errors during program execution.

WEB PROGRAMMING:

- Write, compile, run, and test simple object-oriented Java programs demonstrating use of good object-oriented design principles including encapsulation and information hiding; primitive and reference data types.
- Understand and apply in programs the concept of inheritance, package and multithreading. Identify and fix common exception issues in code.
- Demonstrate the use of a variety of basic AWT components; file-based I/O; and one dimensional arrays.
- Understand the concept of events and how to handle the event-driven programming and also networking. Develop JDBC application of elementary level.
- Write a static webpage using HTML. Use various tags, tables and image formats.
- Set up the web server. Understand HTTP and client-server architecture. Understand the potential of Servlets. Apply the methods of Servlets to retrieve and sending information, tracking session and database connectivity.
- Create web pages of dynamic and static nature using JSP and HTML. Create JSP forms and gather information using forms. Use JSTL and custom tag libraries.

MATHEMATICS

- Find out Eigen values and Eigen vectors
- Apply the concepts of limit, continuity and differentiability.
- Apply Taylors and Maclaurin's theorem to find the expansion of functions as infinite series.
- Evaluate the integrals of complex functions and to find area, volume
- Apply the concept of vector algebra, scalar triple product, vector triple product.

STATISTICS

- Organize, manage and present data.
- Analyze statistical data graphically using frequency distributions and cumulative frequency distributions.
- Analyze statistical data using measures of central tendency, dispersion and location.
- Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.
- Translate real-world problems into probability models

FUNDAMENTAL OF ELECTRONICS:

- An ability to understand theory of Digital Design and Computer Organization to provide an insight of how basic computer components are specified.
- An ability to understand the functions of various hardware components and their building blocks.
- An ability to understand and appreciate Boolean algebraic expressions to digital design
- An in depth understanding of realization of different combinational/sequential circuits.
- An in depth understanding of different stages of an instruction execution.
- An in-depth understanding o how different hardware components are related and work in communication
- An ability to understand computer buses and input/output peripherals.

LINEAR ELECTRONICS

- Identify and explain the building blocks of computer, instruction execution cycle
- Knowledge about different CPU organizations
- Recognize addressing modes, data/ instruction formats

- Knowledge about different micro operations that are needed for an instruction execution
- Knowledge of different arithmetic operations like addition, subtraction, multiplication, division based on algorithms.
- Case study of Intel 8085 microprocessor, overview, architecture, programming involving loop, subroutine, I/O etc.

B.C.A I (Sem II)

ENGLISH

- To participate in an online learning environment successfully.
- To distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.
- To draft effective business correspondence with brevity and clarity.
- To stimulate their Critical thinking by designing and developing clean and lucid writing skills.
- To demonstrate their verbal and non-verbal communication ability through presentations.

ADVANCED PROGRAMMING C:

- Student should be able to understand the logic building used in Programming.
- Students should be able to write algorithms for solving various real life problems.
- To convert algorithms into programs using C .

OPERATING SYSTEM

- Understand the fundamental concepts of operating systems and their structure, processes, and threads.
- Able to solve questions based on algorithms for process scheduling for a given specification of CPU utilization, Throughput, Turnaround Time, Waiting Time and Response Time.
- Understand and analyze the memory management techniques.
- Apply page replacement algorithms to resolve the issues in virtual memory. 5: Acquire knowledge of files and I/O management system.

MATHEMATICS – II

- Ability to learn the basic concepts about relations, functions and to draw different diagrams like Lattice, Hasse diagrams.
- Identify the application of partial differentiation and apply for evaluating maxima, minima.
- Evaluate 3D Geometry.
- Illustrate the working methods of multiple integral and apply for finding area, Volume.

STATICAL METHODS II

- Understand the science of studying & analyzing numbers.
- Identify and use various visualization tools for representing data.
- Describe various statistical formulas. CO4 Compute various statistical measures.

INTRODUCTION TO MICROPROCESSOR:

- Know about the basic functioning of various parts of computer system from hardware point of view and interfacing of various peripheral devices used with the system.
- Learn number system and various types of micro-operations of processor.
- Learn the communication of various components through common bus
- Learn how to design Combinational & Sequential circuits.

B.C.A. II (Sem III)

OBJECT ORIENTED PROGRAMMING USING C++

- Identify importance of object oriented programming and difference between structured oriented and object oriented programming features.
- Able to make use of objects and classes for developing programs.
- Able to use various object oriented concepts to solve different problems.

DATA STRUCTURES USING C

- Design correct programs to solve problems.
- Choose efficient data structures and apply them to solve problems.
- Analyze the efficiency of programs based on time complexity.
- Prove the correctness of a program using loop in-variants, pre-conditions and post-conditions in programs.
- Implement abstract data types using arrays and linked list

- Apply the different linear data structures like stack and queue to various computing problems.
- Implement different types of trees and apply them to problem solutions. 8: Analyze the various sorting and searching algorithms.

INTRODUCTION TO DBMS

- Will be able to comprehend and evaluate the role of database management systems in information technology applications within organizations.
- Effectively explains the basic concepts of databases and data models.
- Develops an Entity-Relationship model based on user requirements.
- Designs SQL queries to create database tables and make structural modifications.
- Explains the concurrency control and recovery algorithms.

COMPUTER NETWORK

- Build an understanding of the fundamental concepts of data communication and computer networking.
- Understand how errors detected and corrected that occur in transmission
- How collisions to be handled when many stations share a single channel
- Know about routing mechanisms and different routing protocols
- Understand transport layer functions
- Know about different application layer protocols

SOFTWARE TESTING AND QUALITY ASSURANCE

- To explore the effective testing techniques (both black-box and white box) for ensuring high quality software Students learn to apply software testing knowledge and engineering methods
- To learn metrics for managing quality assurance and understand capabilities of test tools Students understand and identify various software testing problems, and solve these
- problems by designing and selecting software test models, criteria, strategies, and methods
- To learn how to planning a test project, design test cases and data, conduct testing operations, manage software problems and defects, generate a testing report Students
- analyze and understand the use of software testing methods and modern software testing tools for their testing projects
- To understand software test automation problems and solutions Students identify defects

and manage those defects for improvement in quality for given Software

- To expose the advanced software testing topics, such as object-oriented software testing methods, and component-based software testing issues, challenges, and solutions Students learn to design SQA activities, SQA strategy, formal technical review report for software quality control and assurance

WEB DEVELOPMENT USING PHP

- To introduce the importance of PHP in web page design.
- To understand the features like functions, forms in PHP.
- To understand Files, OOPs concepts, Cookies, Sessions and Data base.
- To handle requests and draw images on the server with AJAX.

COMPUTER NETWORK

- How collisions to be handled when many stations share a single channel
- Know about routing mechanisms and different routing protocols CO 5: Understand transport layer functions
- Know about different application layer protocols
- Build an understanding of the fundamental concepts of data communication and computer networking.
- Understand how errors detected and corrected that occur in transmission.

FINICAL ACCOUNTING WITH TALLY

- Prepare consolidated financial statements using international accounting standards.
- Manage the financial operations including revenues, expenses, assets, liabilities and capital.
- To understand and be able to calculate the various ratios through financial statements and its impact on the short- and long-term position of the firm.
- Determine the long-term sources of finance to fulfil the long-term finance needs of organization.
- Demonstrate the applicability of the concept of Financial Management to understand Capitalization and Capital Structure.
- Determine the break-even point and analyze the profit on large volume of output by differentiating between fixed and variable costs.
- Evaluate and determine the organization's motives for holding cash, Cash budget,

Managing Inventory and Receivables.

- Apply accounting and financial information for decision making and achievement of business goals

B.C.A. II (Sem IV)

OOPS WITH C++ II:

- To learn programming from real world examples.
- To understand Object oriented approach for finding Solutions to various problems with the help of C++ language.
- To create computer-based solutions to various real-world problems using C++
- To learn various concepts of object-oriented approach towards problem solving

DATA STRUCTURE USING C II:

- Apply appropriate constructs of Programming language, coding standards for application development
- Use appropriate data structures for problem solving and programming
- Use algorithmic foundations for solving problems and programming
- Apply appropriate searching and/or sorting techniques for application development.
- Develop programming logic and skills.

MY SQL SECTION I:

- Able to understand various queries and their execution
- Populate and query a database using SQL DML/DDL commands.
- Declare and enforce integrity constraints on a database
- Programming PL/SQL including stored procedures, stored functions, cursors, packages
- Able to design new database and modify existing ones for new applications and reason about the efficiency of the result

ETHICS AND CYBER LAW:

- Make Learner Conversant with The Social and Intellectual Property Issues Emerging from Cyberspace.
- Explore The Legal and Policy Developments in Various Countries to Regulate Cyberspace;
- Develop The Understanding of Relationship Between Commerce and Cyberspace; And

- Give Learners in Depth Knowledge of Information Technology Act and Legal Frame Work Of Right to Privacy, Data Security and Data Protection.
- Make Study on Various Case Studies On Real Time Crimes

ANGULAR JS SECTION 1:

- Develop AngularJS programs using basic features.
- Develop dynamic Web applications using AngularJS modules.
- Make use of form validations and controls for interactive applications.
- Apply the concepts of Expressions, data bindings and filters in developing AngularJS programs.

ADVANCED COMPUTER NETWORK:

- Graduates are proficient at solving computer networking problems in the workplace.
- Graduates pursue productive careers in computer networking or a related computing field.
- Graduates are engaged in continuing professional development or professional societies in computer networking or a related computing field.
- Graduates follow standards set forth by professional societies of which they are members

ENVIRONMENTAL STUDIES

- Gain in-depth knowledge on natural processes and resources that sustain life and govern economy.
- Understand the consequences of human actions on the web of life, global economy, and quality of human life.
- Develop critical thinking for shaping strategies (scientific, social, economic, administrative, and legal) for environmental protection, conservation of biodiversity, environmental equity, and sustainable development.

PYTHON IN PROGRAMMING:

- Familiar with Python environment, data types, operators used in Python.
- Compare and contrast Python with other programming languages.
- Learn the use of control structures and numerous native data types with their methods.
- Design user defined functions, modules, and packages and exception handling methods.
- Create and handle files in Python and learn Object Oriented Programming Concepts.

SEM V

BUSINESS COMMUNICATION

- To participate in an online learning environment successfully.
- To distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.
- To draft effective business correspondence with brevity and clarity.
- To stimulate their Critical thinking by designing and developing clean and lucid writing skills.
- To demonstrate their verbal and non-verbal communication ability through presentations.

ADVANCED JAVA:

- Able to solve real world problems using OOP techniques.
- Able to understand the use of abstract classes.
- 3Able to solve problems using java collection framework and I/o classes. 4Able to develop multithreaded applications with synchronization.
- Able to develop applets for web applications.
- Able to design GUI based applications.

VISUAL PROGRAMMING

- To provide a hands-on experience in programming concepts using VB.NET Programming Language.
- To be able to develop programs for arithmetic operations, string and matrix operations, in Console Applications.
- To be able to create forms for various applications and web application.

COMPUTER GRAPHICS:

- Students will be able to describe the fundamental algorithms used in computer graphics and to some extent be able to compare and evaluate them Knowledge, Understand (Level1, Level2)
- Students will be able to work and interact, through hands-on experiences, to design, develop, and modify electronically generated imaginary using a wide range of sophisticated graphical tools and techniques. Apply, Create (Level 3)
- Students will be able to summarize different hidden surface elimination algorithms and shading techniques used in computer graphics and digital media production.

RECENT TRENDS IN IT

- Ability to deal with the convergence, interoperability and design of heterogeneous networks with local, access and core networks, as well as with service integration.
- Ability to model, design, implement, manage, operate, administrate and maintain networks, services and contents
- Ability to plan networks and decision-making about services.
- Learn about service transition and service operations.
- Ability to apply Continual Service Improvement in an organization.

LINUX AND SHELL PROGRAMMING

- To familiarize students with Linux Installation.
- Enable Students to Install RPM and use Red hat Package Management
- To Make Students Install Samba Server and the use of Samba Server
- To make Students Install Apache, Send Mail.
- Write Shell Scripts in Linux.

SEM VI

BUSINESS ENGLISH

- Business English courses provide language instruction and training in business
- communication, including business correspondence, negotiations, formal presentations, informal networking, business vocabulary, report and proposal writing, vocabulary for professional purposes, and reading for professional purposes.
- Language skills addressed include: listening, fluency development, oral intelligibility, reading, grammar, writing, and vocabulary development.

ADVANCED JAVA:

- Able to solve real world problems using OOP techniques.
- Able to understand the use of abstract classes.
- Able to solve problems using java collection framework and I/o classes.
- Able to develop multithreaded applications with synchronization. 5
- Able to develop applets for web applications. • Able to design GUI based applications

DOT NET TECHNOLOGY

- Evaluate C# and the .NET framework namespace contents.
- Develop the console and GUI applications using C# .Net.
- ADO.NET: Features of ADO.NET, ADO.NET compared to classic ADO, Datasets, Managed providers, Data binding, Databases and data access using ADO.NET, Data sets and XML, Typed data sets.
- ASP.NET: Introduction to ASP.NET, Difference between ASP and ASP .Net, Working with web and HTML controls, Using rich server controls, Configuration overview, Using the web site administration tool, Login controls, Overview of ASP.NET validation controls,
- Using the simple validations, Using the complex validators accessing data using ADO.NET.

DATA WAREHOUSE AND DATAMINING:

- Be familiar with mathematical foundations of data mining tools..
- Understand and implement classical models and algorithms in data warehouses and data mining
- Characterize the kinds of patterns that can be discovered by association rule mining, classification and clustering.
- Master data mining techniques in various applications like social, scientific and environmental context.
- Develop skill in selecting the appropriate data mining algorithm for solving practical problems.

CRYPTOGRAPHY AND NETWORK SECURITY

- Analyze and design classical encryption techniques and block ciphers.
- 2Understand and analyze data encryption standard.
- 3Understand and analyze public-key cryptography, RSA and other public-key cryptosystems
- such as Diffie-Hellman Key Exchange, ElGamal Cryptosystem, etc.
- Understand key management and distribution schemes and design User Authentication Protocols.

- Analyze and design hash and MAC algorithms, and digital signatures.
- Design network application security schemes, such as PGP, S/ MIME, IPSec, SSL, TLS,
- 8HTTPS, SSH, etc. ❖ Know about Intruders and Intruder Detection mechanisms, Firewall Characteristics, Types of Firewalls, Firewall Location and Configurations.

ADVANCED PYTHON

- Describe the semantics of Python programming language and Illustrate the process of structuring the data using lists, dictionaries, tuples, strings and sets.
- Illustrate the Object-oriented Programming concepts in Python.
- Demonstrate the basic database design for storing data as part of a multi-step data gathering, analysis, and processing.
- Familiarize the basics of machine learning using an approachable, and also understand the advantage of using Python libraries for implementing Machine Learning models

NEP - M.A. History - Program Outcomes

- Advanced research skills: Students will demonstrate advanced research skills, including the ability to locate, evaluate, and synthesize primary and secondary sources.
- Interdisciplinary approaches: Students will apply interdisciplinary approaches to historical analysis, incorporating insights from sociology, anthropology, literature, and other fields.
- Understanding of historical theories and methodologies: Students will understand various historical theories and methodologies, including Marxist, feminist, and postcolonial approaches.
- Skill in writing for different audiences and purposes: Students will develop the skill to write for different audiences and purposes, including academic, popular, and professional contexts.
- Development of transferable skills: Students will develop transferable skills, including critical thinking, research, writing, and communication, which can be applied to a wide range of careers and professions.
- Networking opportunities and professional connections: Students will have opportunities to network with historians and professionals in related fields, establishing valuable connections and contacts.

M. A. Part – I (History)

DSC-I - HISTORIOGRAPHY-I

- Understanding of the concept of historiography: Students will understand the concept of historiography, including the study of historical methods, theories, and interpretations.

- Students will understand the emergence of modern historiography, including the impact of the Enlightenment, Romanticism, and Positivism on historical thought.

- Students will be able to evaluate historical interpretations and theories, recognizing their underlying assumptions and biases.

- Students will be able to evaluate and interpret historical evidence, recognizing the complexities and nuances of historical knowledge.

DSC-II-HISTORY OF ANCIENT INDIA-I (UP TO 650 A. D.)

- Understanding of the Indus Valley Civilization: Students will understand the significance, achievements, and decline of the Indus Valley Civilization.

- Familiarity with the Vedic Period: Students will be familiar with the Vedic Period, including the composition of the Vedas, the emergence of varna system, and the development of early Hinduism.

- Knowledge of the Mauryan and Gupta Empires: Students will understand the rise and fall of the Mauryan and Gupta Empires, including their administrative systems, economic achievements, and cultural contributions.

- Understanding of ancient Indian society and culture: Students will understand the social structure, cultural practices, and religious beliefs of ancient Indian society.

DSC-VII- HISTORY OF MEDIEVAL INDIA- II (1526 A. D. TO 1707 A.D.)

- Understanding of the Mughal Empire: Students will understand the establishment, expansion, and decline of the Mughal Empire, including the reigns of Babur, Humayun, Akbar, Jahangir, Shah Jahan, and Aurangzeb.

- Familiarity with Mughal administration: Students will be familiar with the Mughal administrative system, including the jagir system, the mansabdari system, and the role of the emperor, nobles, and officials.

- Knowledge of Mughal culture and architecture: Students will understand the significant cultural and architectural achievements of the Mughal period, including the development of Mughal art, literature, and architecture.
- Understanding of the decline of the Mughal Empire: Students will understand the factors that contributed to the decline of the Mughal Empire, including internal conflicts, external invasions, and economic decline.

DSC-VIII- THEORY AND CONCEPTS OF MODERN WORLD-II

- Understanding of modernization and globalization: Students will understand the concepts of modernization and globalization, including their historical development, key features, and impact on societies.
- Familiarity with modern political ideologies: Students will be familiar with modern political ideologies, including liberalism, conservatism, socialism, and communism.
- Students will understand the key features and functioning of modern economic systems, including capitalism, socialism, and mixed economies.

DSE (DISCIPLINE SPECIFIC ELECTIVE) SEM- I - HISTORY OF SOLAPUR

- Understanding of the historical context of Solapur: Students will understand the historical context of Solapur, including its geographical location, cultural heritage, and economic significance.
- Familiarity with the ancient and medieval history of Solapur: Students will be familiar with the ancient and medieval history of Solapur, including the rule of various dynasties, such as the Satavahanas, Rashtrakutas, and Yadavas.
- Knowledge of the impact of British colonial rule on Solapur: Students will understand the impact of British colonial rule on Solapur, including the economic, social, and cultural changes that occurred during this period.
- Understanding of the role of Solapur in the Indian independence movement: Students will understand the role of Solapur in the Indian independence movement, including the contributions of local leaders and the impact of the movement on the city.

DSE (DISCIPLINE SPECIFIC ELECTIVE)SEM- II- APPLIED HISTORY

- Application of historical perspectives to real-world problems: Students will be able to apply historical perspectives to real-world problems, including policy-making, cultural heritage management, and community development.

- Application of historical perspectives to real-world problems: Students will be able to apply historical perspectives to real-world problems, including policy-making, cultural heritage management, and community development.
- Ability to apply historical knowledge in practical contexts: Students will develop the ability to apply historical knowledge in practical contexts, including policy-making, cultural heritage management, and community development.

RM - RESEARCH METHODOLOGY IN HISTORY

- Written examinations and assignments: Students will be assessed through written examinations and assignments that test their knowledge, analytical skills, and critical thinking abilities.
- Class participation and presentations: Students will be assessed on their class participation and presentations, which will evaluate their communication skills and ability to articulate complex concepts and theories.
- Research paper or project: Students may be required to complete a research paper or project that demonstrates their ability to analyze modern concepts and theories and contextualize them within the broader framework of modern world history.

OJT/FP: FIELD VISIT AND PROJECT WRITING

- Fieldwork and data collection skills: Students will develop fieldwork and data collection skills, including observation, documentation, and data analysis.
- Project writing and reporting skills: Students will develop project writing and reporting skills, including research design, data analysis, and presentation.
- Critical thinking and analytical skills: Students will develop critical thinking and analytical skills through the analysis of historical sites and monuments and the evaluation of fieldwork data.

M.A. PART- II HISTORY CHOICE BASED CREDIT SYSTEM

HCT -3.1- MARATHA HISTORY (1600 A.D. – 1818 A.D.) (POLITY AND ECONOMY)

- Understanding of the rise and growth of the Maratha Empire: Students will understand the historical context and factors that contributed to the rise and growth of the Maratha Empire.

- Familiarity with Maratha polity and administration: Students will be familiar with the Maratha system of governance, including the role of the Peshwa, the Ashtapradhan, and the jagirdari system.

- Knowledge of Maratha economy and trade: Students will understand the Maratha economy, including agriculture, trade, and commerce, and the impact of British colonialism on the Maratha economy.

- Understanding of the decline and fall of the Maratha Empire: Students will understand the factors that contributed to the decline and fall of the Maratha Empire, including internal conflicts, external invasions, and British colonialism.

HCT -3.2- MODERN MAHARASHTRA (1818 A.D. – 1990 A.D.)

- Understanding of the British colonial rule in Maharashtra: Students will understand the impact of British colonial rule on Maharashtra's economy, society, and politics.

- Familiarity with the social and cultural movements in Maharashtra: Students will be familiar with the social and cultural movements in Maharashtra, including the reform movements, nationalist movements, and Dalit movements.

- Knowledge of the economic development of Maharashtra: Students will understand the economic development of Maharashtra, including the growth of industries, agriculture, and infrastructure.

- Understanding of the role of Maharashtra in the Indian independence movement: Students will understand the role of Maharashtra in the Indian independence movement, including the contributions of leaders

HCT - 3.3 RESEARCH METHODOLOGY

- Written examinations and assignments: Students will be assessed through written examinations and assignments that test their knowledge, analytical skills, and critical thinking abilities.

- Class participation and presentations: Students will be assessed on their class participation and presentations, which will evaluate their communication skills and ability to articulate complex concepts and theories.

- Research paper or project: Students may be required to complete a research paper or project that demonstrates their ability to analyze modern concepts and theories and contextualize them within the broader framework of modern world history.

DSE (DISCIPLINE SPECIFIC ELECTIVE) -A - OPTIONAL (ANY ONE):

DSE- 3.2 THE THOUGHTS OF MAHATMA PHULE AND DR. BABASAHEB AMBEDKAR

(Mahatma Phule)

- Empowerment through Education: Phule believed that education was the only way to bring about social change and uplift the marginalized communities. He opened several schools for girls and the lower castes, despite facing opposition from the upper-caste community [1].

- Social Justice and Equality: Phule fought against caste-based discrimination and advocated for equal rights for all. He founded the Satya Shodhak Samaj, an organization that aimed to promote social justice and human rights [1].

- Women's Rights: Phule was a strong advocate for women's rights and education. He believed that women's empowerment was essential for social change and opened several schools for girls

GENESIS ELECTIVE - B - (ANY ONE)

GET- 3.1- HISTORY OF INDIA (1858 A. D. - 1964 A. D.)

- Understanding of the British Raj: Students will understand the establishment, consolidation, and impact of British colonial rule in India.

- Familiarity with the Indian National Movement: Students will be familiar with the various phases and streams of the Indian National Movement, including the Moderate and Extremist phases, the Non-Cooperation Movement, and the Quit India Movement.

- Knowledge of India's struggle for independence: Students will understand the key events, figures, and ideologies that shaped India's struggle for independence, including the roles of Mahatma Gandhi, Jawaharlal Nehru, and Subhas Chandra Bose.

- Understanding of the post-independence period: Students will understand the challenges and developments of the post-independence period, including the integration of princely states, the reorganization of states, and the early years of India's democratic experiment.