PROGRAMME OUTCOMES (PO): B.A.

Programme Outcomes	Students seeking admission for B.A. programme, permeating following qualities which help them in their future life to achieve the expected goals.
PO 1	Realizing human values.
PO 2	Becoming a responsible and dutiful citizen.
PO 3	Acquiring critical temper.
PO 4	Inculcating creative ability.
PO 5	Getting well acquainted with the historical events happened in India as well as in the world.
PO 6	Getting acquainted with social transactions, social relations, social formations, social control, social values and culture.
PO 7	Working in NGOs and preparing for competitive exams
PO 8	Creating interest in basic Knowledge and major Knowledge in literature.
PO 9	Developing reading, writing, speaking and listening skills in language.
PO 10	Developing the Knowledge about theories of economic growth.

PROGRAMME OUTCOMES (PO): B.Sc.

Programme Outcomes	Students taking admission to this program of B.Sc. get equipped with following outcomes:
PO 1	Domain Knowledge: acquiring knowledge of fundamentals, basic Mathematics, domain knowledge of proper scientific models andComputing Specialization from defined problems and explaining the basic scientific principles and methods.
PO 2	Inculcating for scientific thinking and awareness and Getting an ability to use necessary current techniques, skills, and modern tools.
PO 3	Communication: Communicate concepts, designs, and solutions of scientific activities effectively and professionallywith society at large.
PO 4	Problem Analysis: Identifying, formulating, and analyzing complex problems, reaching substantiated conclusions using first principles of Mathematics, natural sciences and electronicsciences.
PO 5	Environment and Sustainability: Understanding the impact of scientific solutions on societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
PO 6	GettingfamiliarwithemergingareasofdifferentsubjectsinScienceand their applications in various spheres of sciences and getting appraise of its relevance in future studies.
PO 7	Understanding basic facts and concepts in Chemistry while retaining the exciting aspects of Chemistry so as to develop interest in the study of Chemistry as a discipline.
PO 8	Getting ability to apply various statistical tools to research problems and ability to build statistical knowledge and knowing the statistical organization in India and abroad.
PO 9	Developing scientific intuition, ability and techniques to tackle Problems either theoretical or experimental in nature.
PO 10	Getting an opportunity to learn the latest trends in Electronics and Computer Science and Getting an ability to solve complex Electronics Science and computing problems, using latest hardware and software tools, along with analytical skills to get cost effective and appropriate solutions.

Programme Specific Outcomes (PSO): B. A. (English)

Programme Specific Outcomes	The students taking up this program of B A with English as a special subject of study receive the following outcomes:
PSO 1	Basic Knowledge of English as a language.
PSO 2	Major knowledge of English as Literature.
PSO 3	Advanced knowledge of English Grammar.
PSO 4	Critical study of English literary studies.
PSO 5	Relation between literature and real life.

Programme Specific Outcomes (PSO): B.A.(Hindi)

Programme Specific Outcomes	Hindi degree holders are,
PSO 1	Availing the job opportunities in Hindi writer and teacher.
PSO 2	Increasing the critical attitude about literary writing.
PSO 3	Imbuing the Hindi grammar and linguistic.
PSO 4	Increasing sensitivity about the human emotions.

Programme Specific Outcomes (PSO): B. A.(Marathi)

Programme Specific Outcomes	Marathi degree holders are,
PSO 1	Availing the job opportunities in translation, transformation and media.
PSO 2	Developing language.
PSO 3	Increasing the critical attitude about literary studies.
PSO 4	Imbuing the literary research attitude.

Programme Specific Outcomes (PSO): B. A. (Geography)

Programme Specific Outcomes	Geography degree holders are,
PSO 1	Serving as a Geographer and Work as a teacher in colleges, schools and high schools.
PSO 2	Serving as conserver in forest, Soil, Agricultural Departments and Work in disaster and water resources management.
PSO 3	Serving in cargrapher in map making divisions of government.

Programme Specific Outcomes (PSO): (B.A.HISTORY)

Programmes Specific Outcomes	History degree holders are,
PSO 1	Thinking, arguing and writing critically, analytically and logically on the historical issues.
PSO 2	Understanding relevance of present scenario in every respect.
PSO 3	Applying his/her Knowledge Exploring employment opportunities and creating overall awareness about history in society.

Programme Specific Outcomes (PSO): B. A.(Economics)

Programme Specific Outcomes	Economics degree holders are,
PSO 1	Understanding how different degrees of competition in a market affect pricing and output.
PSO 2	Understanding the efficiency and equity implications of market interference, including government policy.
PSO 3	Developing research Knowledge in economics and also Developing the skill of data collection & use of sampling techniques in research.

Programme Specific Outcomes (PSO): B.A. (PoliticalScience)

Programme Specific Outcomes	Political Science degree holders are,
PSO 1	Getting knowledge about political system of the nation.
PSO 2	Studying national and international political affairs.
PSO 3	Studying, from competitive examination point of view.
PSO 4	Understanding the government mechanism, its functions, duties and responsibilities.
PSO 5	Creating appropriate and efficient political leaders.

Programme Specific Outcomes (PSO): B. A.(Sociology)

Programme Specific Outcomes	Sociology degree holders are,
PSO 1	Knowing the significance of social institution, caste system, religion, nationalism, integrity, equality and justice.

PSO 2	Getting the Knowledge of the works of social reformers all over the nation.
PSO 3	Ability to follow new stream of thoughts and theories of social thinkers.
PSO 4	Getting the deep Knowledge about various social groups like tribal community, women bulk etc.

Program Specific Outcomes (PSO): B.Sc.(Botany)

Programme	After successful completion of three year degree program in
Specific Outcomes	Botany students are;
PSO 1	Identifying different resources helpful for human life and acquiring knowledge about importance of environment.
PSO 2	Identifying different groups of plants
PSO 3	Acquiring knowledge about inheritance, biochemical and metabolic activities.
PSO 4	Development of horticultural skill.

Programme Specific Outcomes (PSO): B.Sc.(Chemistry)

Programme Specific Outcomes	After successful completion of three year degree program in Chemistry students are;
PSO 1	Developing the ability to apply the principles of Chemistry
PSO 2	Appreciate the achievement in Chemistry and to know the role of Chemistry in nature and in society.
PSO 3	Develop skills in handling the apparatus and chemicals properly
PSO 4	Exposed to the different processes used in industries and their applications

Program Specific Outcomes (PSO):B.Sc.(Physics)

Programme Specific Outcomes	After successful completion of three year degree program in Physics students are;
PSO 1	Identifying and describing physical systems with their professional Knowledge.
PSO 2	Getting knowledge of general physics like sound, wave, friction, forces and laws of motion and use of mathematics.
PSO 3	Getting knowing about the light and its importance in life, its characteristics,Properties and use in various instruments.
PSO 4	Learning about concepts of nuclear physics and nuclear energies and importance of their use for mankind.

Program Specific Outcomes (PSO): B.Sc.(Statistics)

Program Specific Outcomes	After successful completion of three year degree program in Statistics students are;
PSO 1	Applying statistics in various walks of life.
PSO 2	Acquiring ability to apply various statistical tools to research problems.
PSO 3	Understanding how to collect, present, analyze and interpret the data. Application of various distributions to real life situation
PSO 4	Acquiring ability to analyze the data by using MS-Excel

Program Specific Outcomes: B. Sc. (Computer Science Optional)

Programme Specific Outcomes	After successful completion of three year degree program in Computer Science students are;
PSO-1	Understanding of the principles and working of the hardware and software aspects of computer systems.
PSO-2	Getting ability to Design, implement, test, and evaluate a computer system, component, or algorithm to meet desired needs and to solve a computational problem.
PSO-3	Enhancing skills and adapting new computing technologies for attaining professional excellence and carrying research.

B A I (CBCS) (With effect from2018-19)

Sem I& II: Paper I& II –Optional English

Course Outcomes	Students are;
CO 1	Getting introduction of literature as a form of art.
CO 2	Getting Knowledge of different forms of literature.
CO 3	Getting introduction of Literature in English.

BA II (Old) (Up to 2018-19)
Sem III& IV: Paper III & V: British Literature (Optional English)

Course Outcomes	Students are;
CO 1	Getting Introduction of British Literature.
CO 2	Understanding English Poetry and Prose.

Sem III & IV: Paper IV & VI: Indian English literature (Optional English)

Course Outcomes	Students are;
CO 1	Getting introduction of Indian English literature.
CO 2	Understanding Indianness in English Literature

BA II (CBCS) (With effect from2019-20)

Sem III & IV:Paper III& V: Literature and Cinema (Optional English)

Course Outcomes	Students are;
CO 1	Getting introduction of the relationship between Literature and Cinema.
CO 2	Developing critical Understanding of film adaptations of literature
CO 3	Interpret literary texts through film adaptation

Sem III & IV: Paper IV & VI: Partition Literature (Optional English)

Course Outcomes	Students are;
CO 1	Getting introduction of Indian English literature
CO 2	Getting introduction of Literature on the theme of partition
CO 3	Getting interpretation and appreciation of partition effect on society

Course Outcomes (CO): B.A.III (SpecialEnglish)

Sem V&VI:Paper VII & XII:Criticism

Course Outcomes	Students are;
CO 1	Developing critical ability through the Studyingof critical works.
CO 2	Developing ability to appreciate and analyze literature.

Sem V& VI: Paper VII & XIII:Poetry

Course Outcomes	Students are;
CO 1	Developing poetic sensibility.
CO 2	Understanding Poetry in English and World Literature

Sem V& VI: Paper IX & XIV: Drama

Course Outcomes	Students are;
CO 1	Understanding Drama as a form Critically.
CO 2	Understanding Drama in World Literature.

Sem V &VI: Paper X & XV: Novel

Course Outcomes	Students are;
CO 1	Getting critical insights in Novel as a form.
CO 2	Understanding Novel in World Literature.

Sem V &VI: Paper XI& XVI: Structure and Function of Language

Course Outcomes	Students are;
CO 1	Getting systematic Knowledge of Language form and structure
CO 2	Understanding Literature as Discourse

Course Outcomes: B.A. (Hindi)
B.A. I: Sem I&II Paper I andII

Course Outcomes	After studying Hindi subject, students are;
CO 1	Understanding the Hindi Poems and Poets, as well different types of Hindi poems.
CO 2	Understanding different aspects of Hindi poems, like Knowledge, skills, etc.
CO 3	Becoming familiar with personalities and talents of Hindi authors and poets.
CO 4	Becoming familiar with different types of Hindi novels and able to characterize the novel, also grasping the incidences depicted in the novel.
CO 5	Understanding social, religious, political situations depicted in the novel.
CO 6	Getting acquainted with the human values of the novel.

B.A. II : Sem III & IV (Up to 2018-19)
Paper III and IV: Modern Prose

Course Outcomes	After studying Hindi subject, students are ;
CO-1	Getting inspired with the greatness values and emulates it in life.
CO-2	Understanding the essential values live a family and matrimony life.
CO-3	Understanding the men dominating mentality and helplessness of women and understanding the importance of financial independence of women.
CO-4	Getting inspired by and evade from the situation arises due to misunderstanding.
CO-5	Becoming familiar with hypostatic discussion of plays.
CO-6	Understanding the reality of democratic system.
CO-7	Getting acquainted with the human values of the novel.

Paper IV and VI: Medieval and Modern Poetry

Course Outcomes	After studying Hindi subject, students are ;
CO-1	Grasping the thoughts related moral values of Sant.
CO-2	Understanding the thoughts of NirgunSantKaviKabir and his devotional sentiments.
CO-3	Understanding the Adiantum of Krishna described by Surdas.
CO-4	Getting acquainted by non-violence, peace and mercy in life.
CO-5	Getting familiar with the Indian culture of courtesy and honor wards guests.
CO-6	Understanding the symbolical description in poems.
CO-7	Getting acquainted with the human values of the novel.

B.A. II : CBCS (With effect from 2019-20) Sem III Paper III
Asmita Mulak Vimarsh and Hindi Literature

Course Outcomes	After studying Hindi subject, students are ;
CO-1	Grasping the knowledge of nature, principles and types of short story.
CO-2	Understanding the short stories comparatively and critically.
CO-3	Understanding the critical teaching in other genres of the literature.
CO-4	Getting acquainted with the relevance of short stories and other literature.

Sem III Paper IV

Hindi Saint Poetry and National Poetry

Course Outcomes	After studying Hindi subject, students are ;
CO-1	Understanding the medieval Hindi poets
CO-2	Grasping the knowledge of various
CO-3	Understanding the nature of thoughts of Saint-Poet
CO-4	Understanding the childhood description of Lord Krishna depicted by Surdasa .

Sem IV Paper V

Career-oriented Hindi

Course Outcomes	After studying Hindi subject, students are ;
CO-1	Getting the imaginative power as well as interest and ability to think in Hindi.
CO-2	Getting acquainted with the skill of listening and writing in Hindi.
CO-3	Grasping the skill of communicating in Hindi in business and services
CO-4	Getting acquainted with the career-oriented skill and education

Sem IV Paper V

Career-oriented Hindi

Course Outcomes	After studying Hindi subject, students are ;
CO-1	Getting the imaginative power as well as interest and ability to think in Hindi.
CO-2	Getting acquainted the skill of listening and writing in Hindi.
CO-3	Grasping the skill of communicating in Hindi in business and services
CO-4	Getting acquainted the career-oriented skill and education

Sem IV Paper VI
Asmita Mulak Vimarsh and Hindi Poetry

Course Outcomes	After studying Hindi subject, students are ;
CO-1	Understanding the Hindi poets
CO-2	Grasping the skill of reading, writing and listening in Hindi
CO-3	Understanding the knowledge of various genres of the literature and developing interest in Hindi literature
CO-4	Getting responsibility towards the moral and national values

Course Outcome (B.A. HINDI)
B.A.III Sem V and VI: Paper No. VII and XII

Course Outcomes	Students are;
CO-1	Understanding the terrorism and communalism.
CO-2	Getting inspired with the humanity.
CO-3	Understanding the problems of depressed class.
CO-4	Recognizing the annoyance and discomfort of women and understanding the theoretical Approach of woman biography.
CO-5	Understanding the dalitsry writer, translator, and a gaiter socialist form of Kausalya Basantri.
CO-6	Understanding cast-subcast system and mannerism of depressed class.
CO-7	Understanding the terrorism and communalism.

B.A.III Sem V and VI: Paper No. VIII and XIII

Course Outcomes	Students are;
CO 1	Getting acquainted with the Knowledge of Indian and foreign review theories.
CO 2	Understanding various types of Hindi criticism.
CO 3	Understanding different approaches of Hindi poems and acquiring the ability of poignancy of literature.
CO 4	Getting information of purpose of literature.
CO 5	Getting acquainted with poetic inspiration.

B.A.III Sem V and VI: Paper No. IX and XIV

Course Outcomes	Students are;
CO 1	Getting introduction of the differentiation of period of the Hindi literature and its careers.
CO 2	Understanding the main propensity and periodical Development of Hindi literature.
CO 3	Getting introduction of different forms of prose literature.
CO 4	Understanding the heuristic, devotional, romantic, moral, modal, and recent forms of Hindi poems

Course Outcomes: B.A. (Marathi)
B.A.I: sem I & II

Course Outcomes	Marathi degree holders are;
CO 1	Understanding the interrelation between literature and society.
CO 2	Understanding the nature of language and literature.
CO 3	Understanding the skills of literary criticism.
CO 4	Understanding the essay writing skills.

Course Outcomes: B.A. (Marathi)
B.A.II: sem III & IV

Course Outcomes	Marathi degree holders are;
CO 1	Understanding the medieval Marathi language and literature.
CO 2	Understanding the contemporary literary works.
CO 3	Acquiring the skills of translation.
CO 4	Getting acquainted with the oriental poetry.

Course Outcomes: B.A. (Marathi)
B.A.III- Poetry

Course Outcomes	Marathi degree holders are;
CO 1	Getting Acquainted with oriental poetry.
CO 2	Understanding the nature and features of poetry.
CO 3	Creating the skill of critical appreciation of a poem.
CO 4	Developing the poetic devices and their usages.

B.A.III-Linguistics

Course Outcomes	Marathi degree holders are;
CO 1	Getting acquainted with modern linguistics.
CO 2	Understanding origin, nature and function of language.
CO 3	Get information about phonetics.
CO 4	Enhancing the interest in Marathi language.

.B.A.III- Medieval Marathi Literature

Course Outcomes	Marathi degree holders are;
CO 1	Introducing of the historical survey of medieval Marathi literature.
CO 2	Understanding origin, nature and function of language
CO 3	Getting introduction of the literary forms in medieval literature.
CO 4	Getting explanation of the trends and structure of medieval Marathi literature.

B. A. Part-I (CBCS) (with effect from2018-19)
Sem I: Paper-I –Physical Geography

Course Outcomes	Students are;
CO 1	Exploring the broader perspective of scope and philosophy as well as Knowing the different dimensions of Physical geography.
CO 2	Getting Knowledge about the basic concepts of climatology, energy bud, Getting, wind systems accompanied with the endogenetic and exogenetic processes responsible for shaping thelithosphere.

Sem I: Paper-II-Human Geography

Course Outcomes	Students are;
CO 1	Investigating the broader perspective of scope and philosophies of the Human Geography as well as Knowing the different dimensions of the same.
CO 2	Getting aware regarding migration pattern and process and its consequences in the world with the human settlement and Agriculture as well.

B. A. Part-II (Old) (Up To2018-19)

Sem III: Paper-III -Soil Geography

Course Outcomes	Students are;
CO 1	Getting Knowledge of the basic concepts of Soil morphology and its physico-chemical characteristics.
CO 2	Getting aware about the degradation process of soil with its causes and consequences.
CO 3	Knowing the importance of soil conservation through various mechanical and bio-physical conservationmethods.

Sem III: Paper-IV –Human Geography

Course Outcomes	Students are;
CO 1	Receiving Knowledge of the basic concepts of Anthropogeography and race, religion and ethnicity, getting awareness concerning with the racial and religious distributional pattern in the world in general.
CO 2	Getting better insight in the critical population problems in under developed and
	Developed countries of the world, getting awareness regarding migration pattern and process and its consequences on the global scale.

Sem IV: Paper-V-Oceanography

Course Outcomes	Students are;
CO 1	Getting better insight in the different ocean water facets viz. salinity, temperature and its distribution in the world oceans, various dimensions of oceanic current and its importance as well.
CO 2	Knowing that ocean is the most powerful reserve of various resources and obtaining the intrinsic Knowledge about the Wind-rose, Hypsometric curve andIsohaline etc. with their applications.

Sem IV: Paper-VI –Agriculture Geography

Course Outcomes	Students are;
CO1	Studying the nature, scope and various determinants of Agriculture.
CO 2	Knowing about the crop combination and agricultural productivity as well as green revolution for the obtaining sustainable Development of agriculture.
CO 3	Obtaining the intrinsic Knowledge about the Line Graph, Bar Graph, Divided Circle and Population pyramid etc. with their applications.

B. A. Part-II (CBCS) (with effect from2019-20)

Sem III: Paper-III –Soil Geography

Course Outcomes	Students are;
CO 1	Investigating the scope and nature of the soil geography as well as Knowing the different dimensions of the same and have come across the basic concepts of Soil morphology and its Physico-chemical characteristics.
CO 2	Getting aware about the degradation process of soil with its causes and consequences.
CO 3	Getting familiarize with the soil profile, soil sample collection ols, chemical analysis of soil and process of vermicomposting formation.

Sem III: Paper- IV –Resource Geography

Course Outcomes	Students are;
CO 1	Investigating the diverse magnitude of resources in geospatial point of interest and has been enriching, concerning with the distribution, uses and problems of each and individual resources in the world.
CO 2	Becoming conscious about the limited and existence of non-renewable resources and its traditional as well as modern methods of resource conservation, also improving the insight in the Human Resource Management.

Sem IV: Paper-V-Oceanography

Course Outcomes	Students are;
CO 1	Getting better insight in the different ocean water facets viz. salinity, temperature and its distribution in the world oceans.
CO 2	Getting intrinsic Knowledge about the Wind-rose, Hypsometric curve and Isohaline etc. with their applications in differentfields.

Sem IV: Paper-VI –Agriculture Geography

Course Outcomes	Students are;
CO 1	Improving Knowledge of the agricultural land use pattern through the proposed theory of VonThunen as well as Knowing about the crop combination and diversification technique with agricultural problems and sustainable Development of an Agriculture.
CO 2	Getting intrinsic Knowledge about the Line Graph, Bar Graph, Divided Circle and Proportional Square etc. with their applications.

History

BA I (CBCS)(with effect from 2018-19)
Sem I, Paper I: Rise of Maratha History (1600-1707)

Sem II, Paper II- Polity, Society and Economy under the Marathas

Course Outcomes	Students are;
CO 1	Knowing factual details, hurdles, inspiration behind the foundation of the Swaraj.
CO 2	Understanding Chh. Shivaji Maharaj achievements in detail till, Karnataka expedition
CO 3	Grasping the Maratha war of independence and understanding Chh. Shivaji Maharaj's concept of Swarajya along with ashtapradhan, fort and naval administration.
CO 4	Evaluating the Indian, Persian and foreign contemporary sources for the Studying of the Maratha power.
CO 5	Evaluating economy, society and religion under the Maratha and the work of historians of Maratha history.

BA II: Sem III &Sem IV (Old) (up To 2018-19)

Paper III & V- World revolution I &II

Course Outcomes	Students are;
CO 1	Understanding political situation in the world alongwith social, economic and cultural condition.
CO 2	Evaluating critically and analytically the revolutions taken place.
CO 3	Grasping modern world's History in detail.

Paper IV &VI -Freedom Struggle of India I &II

Course Outcomes	Students are;
CO1	Understanding modern Indian History.
CO 2	Knowing the revolt of1857 in detail.
CO 3	Understanding the background of foundation of INC and ideologies of Moderars and extremists.
CO 4	Understanding contribution of Tilak and Gandhi.
CO 5	Grasping the contribution of revolutionaries and other strands of Indianfreedom movement.
CO 6	Knowing about the work of Praja parishad movement in Princely States.
CO 7	Understanding the contribution of Dr Babasaheb Ambedkar Indian Constitution.

BA II: Sem III & Sem IV (CBCS) (with effect from June2019-20)

Paper III & V- History of Modern Maharashtra (1900 - 1960) & (1960 - 2000)

Course Outcomes	Students are;
CO 1	Understanding the concept, rise and growth of nationalism and grasping the social problems and social movement.
CO 2	Knowing the contribution of Maharashtra in national movement.
CO 3	SanyuktMaharashtra movementand Knowingthecontributionpoliticalleadersin construction of modern Maharashtra.
CO 4	Understanding major issues, events, social movements and educational Development of Maharashtra.

Paper IV &VI-History of Modern India &History of freedom struggle

(1757-1857)

Course Outcomes	Students are;
CO 1	Understanding how the company rule established in India and colonial policies of rulers and evaluatingthe colonial economy and drain of wealth.
CO 2	Knowing the causes, course and effects of revolt of1857.
CO 3	Understanding the concept, rise and growth of nationalism in India with the establishment of INC.
CO 4	Grasping the ideology of extremists and moderers with their contribution.
CO 5	Knowing the Gandhian era and his leadership and understanding the concept of communalism, causes and effects of partition.

B.A. (HISTORY) III: Sem V and VI:
Paper VII and XII: History of Ancient India

Course Outcomes	Students are;
CO1	Knowing various sources of ancient India.
CO 2	Understanding the growth and achievements of man in sane age.
CO 3	Aware about various aspects of Harappa civilization and Vedic age.
CO 4	Grasping the philosophy of Jainism and Buddhism.
CO 5	Knowing different aspects of Maurya empire and Gupta period.
CO 6	Understanding the Historyofdynesties- Satvahana,Shung,Kushan,Hun,Pallav,Chol and Chalukya.

Paper-VIII and XIII:

Political History of medieval India and Socio-economic and cultural History of medieval India

Course Outcomes	Students are;
CO 1	Understanding the expansion and nature of Sultanshahi.
CO 2	Knowing agriculture, economic, religious and administrative policies of Sultans and their Theory of kingship.
CO 3	Grasping the Iqta system and grasping territorial expansion of Mughals.
CO 4	Knowing theory of kingship of Mughals and understanding trade, agriculture, administration of Mughals along with their relegious policy
CO 5	Grasping Mansabdari system.

Paper IX and XIV:

India since Independence I&II

Course Outcomes	Students are;
CO1	Understanding thoroughly challenges before post-independence.
CO 2	Evaluating foreign policy of India adopted by prime minister P. Nehru.
CO 3	Grasping agricultural challenges in detail and understanding various people's struggles and movements.
CO 4	Graspingt he policies of different political parties and achievements of prime ministers of India.
CO 5	Evaluating Development of India after independence in the field of
CO 6	Understanding five year plan and evaluating the success of it.

Paper X and XV:

History of the Marathas and History of modern Maharashtra

Course Outcomes	Students are;
CO1	Understanding Political situation in India in general and in Maharashtra in particular in early 18th century.
CO 2	Grasping the conflict between Maharani Tarabai and Chh. Shahu Maharaj.
CO 3	Understanding the policies of Bajirao First and his contribution.
CO 4	Knowing battle of Panipat thoroughly, evaluatingdownfall of the Maratha Power.
CO 5	Understanding Samyukta Maharashtra Movement and Contribution of its leaders in detail.
CO 6	Grasping visionary policies of Shri Yeshwantrao Chavan.
CO 7	Evaluating agricultural and industrial growth, understanding various progressive movements in Maharashtra.
CO 8	Grasping the cultural Development in various fields thoroughly.

Paper XI &XVI:

Introduction to Historiography and Application in History

Course Outcomes	Students are;
CO 1	Understanding the development of historiography from beginning.
CO 2	Knowing the various traditions of History writing, acquire the Knowledge of basic skills of historiography.
CO 3	Grasping the steps of historical research, understanding various careers in History.

Course Outcome (B.A. Political Science)B.A. I: CBCS (With effect from 2018-19)
Sem I: Paper I: Introduction to Political Science

Course Outcomes	Students are;
CO 1	Understanding the meaning and importance of Political Science.
CO 2	Understanding the sub-disciplines of Political Science.
CO 3	Explaining Democracy and State.
CO 4	Understanding key concepts of political science.

Sem II: Paper II: Indian Constitution

Course Outcomes	Students are;
CO 1	Understanding the making of Indian constitution.
CO 2	Understanding the philosophy of Indian constitution.
CO 3	Understanding critically analysing legislature, executive and judiciary system of India.

B.A.I: Old (Up to 2017-18)
Sem I: Paper I: Indian Government

Course Outcomes	Students are;
CO 1	Understanding historical background, preamble and making of Indian constitute
CO 2	Examining the fundamental rights and duties of Indian citizens with a study of the significance and status of Directive Principles.
CO 3	Critically analysing the important institutions of India Union : President, Prime minister, Parliament, Judiciary.

Sem II: Paper II: Political Process in India

Course Outcomes	Students are;
CO 1	Assessing the nature of Indian Federalism with focus on Union –State Relations.
CO 2	Critically analysing the important constitutional and legal bodies.
CO 3	Critically evaluating the Indian party system and looking at the Ideology of dominant national parties.
CO 4	Critically evaluating the role of various pressure groups in Indian political system.
CO 5	Understanding Major challenges in Indian politics.

B.A. II: CBCS (With effect from 2019-20) Sem III: Paper III: Political Process in India

Course Outcomes	Students are;
CO 1	Assessing the changing nature of Indian Federalism with focus on Union –State Relations.
CO 2	Evaluating electoral process in India with focus on Election Commission and review of selected general elections.
CO 3	Critically evaluating the Indian party system and looking at the Ideology of dominant national parties and rise and role of Regional parties.
CO 4	Understanding Major Issues in Indian politics.

Sem III: Paper IV: Indian Political Thought Part I

Course Outcomes	Students are;
CO 1	Analysing the selected thought of Kautilya.
CO 2	Analysing the selected thought of Mahatma Phule.
CO 3	Analysing the selected thought of Justice M.G.Ranade.
CO 4	Analysing the selected thought of B.G. Tilak.

Sem IV: Paper V: Local Self Government

Course Outcomes	Students are;
CO 1	Understanding historical background of local self government.
CO 2	Examining the Institutions of Rural and Urban local self government.
CO 3	Discussing the constitutional amendments and challenges before local self government.

Sem III: Paper VI: Indian Political Thought Part II

Course Outcomes	Students are;
CO 1	Analysing the selected thought of M.K.Gandhi.
CO 2	Analysing the selected thought of Jawaharlal Nehru.
CO 3	Analysing the selected thought of Justice Dr.B.R.Ambedkar.
CO 4	Analysing the selected thought of M.N. Roy.

B.A.II: Old (Up to 2018-19)
Sem III: Paper III: Basic Concepts of Political Science

Course Outcomes	Students are;
CO 1	Explaining nature and scope ofPoliticalScience CO 2) Explaining the Conceptof State and Nation.
CO 2	Examining the fundamental rights and duties of Indian citizens with a study of the significance and status of Directive Principles.
CO 3	Explaining the Concept of Sovereignty and its theories.
CO 4	Understanding selective political concepts.

Sem III: Paper IV: Ancient Political Thought

Course Outcomes	Students are;
CO 1	Analysing the sources and characteristics of Ancient Indian Political Thought.
CO 2	Explaining Theories of origin of state and Ancient political bodies.
CO 3	Explaining Republic and local self Institutions in ancient India.
CO 4	Analysing the Mandal theory.

Sem IV: Paper V: Local Self Government and Movements inMaharashtra

Course Outcomes	Students are;
CO 1	Examining the Institutions of Rural and Urban local self government and Discussing the constitutional amendments and challenges before local self government.
CO 2	Describing and Analysing political and social movements in Maharashtra.
CO 3	Describing and Analysing Neo movements in Maharashtra.

Sem IV: Paper VI: Modern Indian Political Thought

Course Outcomes	Students are;
CO 1	Analysing the selected thought of B.G.Tilak.
CO 2	Analysing the selected thought of M.K.Gandhi.
CO 3	Analysing the selected thought of Dr.B.R.Ambedkar.
CO 4	Analysing the selected thought of Jawaharlal Nehru.

B.A. II: Sem III: Paper I: Social Reforms in India (IDS)

Course Outcomes	Students are;
CO 1	Understanding the salient features of prominent socio-religious reform movements.
CO 2	Explaining the thought and work of Mahatma Phule for radical transformation of Indian society.
CO 3	Knowing the measures taken by Rajashri Shah Maharaj for emancipation of lower classes and women.
CO 4	Understanding the thoughts of Ambedkar on the annihilation of the caste system and untouchability in India.
CO 5	Knowing how the Indian constitution embodies the values of social justice and equality.

B.A. II: Sem IV: Paper II: Social Reforms in Maharashtra (IDS)

Course Outcomes	Students are;
CO 1	Knowing about the beginnings of social reforms in Maharashtra by the ParamhansaMandali and PrarthanaSamaj.
CO 2	Understanding the contribution of women reformers.
CO 3	Explaining the contribution of Social reformers in the fight for social justice.
CO 4	Explaining the role played by educational reforms in transformation of society.

B.A.-III: Sem V: Paper VII: Modern Government

Course Outcomes	Students are;
CO 1	Critically analysing the nature of Unitary and Federal government.
CO 2	Explaining legislature and its types.
CO 3	Discussing Executive, its types and function of judiciary.
CO 4	Critically analysing Election and Types of representation.

B.A.-III: Sem V: Paper VIII: Public Administration

Course Outcomes	Students are;
CO 1	Explaining the nature, scope of Public Administration; Politics and Administration; Principles of Organisation.
CO 2	Discussing the personnel administration.
CO 3	Discussing Financial Administration, budgetary process in India and parliamentary financial committees.
CO 4	Understanding the concept of good governance, discussing right to information.

B.A.-III: Sem V: Paper IX: International Politics

Course Outcomes	Students are;
CO 1	Studying the international political system.
CO 2	Studying the international & regional organizations.
CO 3	Studying the relations of India with neighboring countries.

B.A.-III: Sem V: Paper X: Constitution of United States of America

Course Outcomes	Students are;
CO 1	Understanding and Criticallyanalysing the political system of U.S.A.

B.A.-III: Sem V: Paper XI: Classical western political thought

Course Outcomes	Students are;
CO 1	Critically examining classical western political thought with focus on Plato, Aristotle, Machiavelli and Montesquieu.

B.A.-III: Sem VI: Paper XII: Modern Political Concepts

Course Outcomes	Students are;
CO 1	Studying the modern political concepts: Feminism, Multiculturalism, Environmentalism and Civil Society.

B.A.-III: Sem VI: Paper XIII: Administrative Thinkers

Course Outcomes	Students are;
CO 1	Critically examining Administrative Thinkers with focus on Henri Fayol, Max Weber, Rensis Likert and F.W.Riggs.

B.A.-III: Sem VI: Paper XIV: Foreign Policy of India

Course Outcomes	Students are;
CO 1	Analysing determinants and basic principles of India's Foreign Policy.
CO 2	Evaluating India's relations with U.S.A., Russia, Pakistan and China.

B.A.-III: Sem VI: Paper XV: Constitution of China & Sweden

Course Outcomes	Students are;
CO 1	Understanding and Criticallyanalysing the political system of China and Sweden.

B.A.-III: Sem VI: Paper XVI: Modern Western political Thought

Course Outcomes	Students are;
CO 1	Critically examining Modern Western Political Thought with focus on F.W.Hegel, Karl Marx, Nikolay Lenin and Antonio Gramsci.

Course Outcome(CO): B.A.: EconomicsB.A. I: Sem I: Indian Economy

Course Outcomes	Students are;
CO 1	Understanding characteristics features of structural changes in Indian Economy.
CO 2	Comprehending the nature and impact of new economic reforms on theIndian Economy.
CO 3	Knowing the problem of unemployment, poverty, rising economic and social inequality and problems of regional imbalances in India.
CO 4	Evaluating the changing role of agricultural, industrial and service sector and foreign sector in Indian Economy.
CO 5	Measuring the growth, volume, composition and direction of India's foreign capital inflow since 1991.
CO 6	Measuring the problems and prospects of cottage and small scale industries, and industrial sicknesses.

Course Outcomes(CO): B.A. II: Economics
B.A.II: Sem III & IV
Bank and Financial Institutions

Course Outcomes	Students are;
CO 1	Understanding the Meaning, Function and role of commercial banking.
CO 2	Comprehending the procedure of an account opening, operating and closing.
CO 3	Knowing the structure, function and role of RBI in economic Development.
CO 4	Judging the progress of financial inclusion.
CO 5	Evaluating the importance, characteristics and components of the financial market.
CO 6	Understanding the role and types of development bank and non banking financial intermediaries.
CO 7	Realizing the banking reforms and Basel Norms I and II.
CO 8	Identifying recenttrendsin Indian banking such as E-banking, MRCI clearing, ATMs, Credit card, Debit Card, Travelers cheque, Giftcheque andDe-mataccount.

Macro Economics

Course Outcomes	Students are;
CO 1	Identifying the basic concept and theories of Macro Economics.
CO 2	Inculcating awareness about changing Macro Economics Policies and Theories.
CO 3	Understanding various concepts such as GDP, GNP, NNP,Per Capital, Disposable income, Per capita income and nationalincome.
CO 4	Identifying the factors determining gross domestic product, employment, the general level of prices and interest rate.
CO 5	Realizing the low of markets, consumption function and investment function.
CO 6	Judging the role of fiscal policy, monetary policy in Developingeconomy.
CO 7	Knowing features, phases and theories of trade cycle.
CO 8	Evaluating types, merits, demerits of taxes.
CO 9	Comprehending the role of public finance in Developingeconomy.

Course Outcome(CO): B.A.: Economics
B.A.-III: Sem V & VI: Micro Economics

Course Outcomes	Students are;
CO 1	Knowing the decision making of consumers.
CO 2	Identifying the nature of revenue and cost of production.
CO 3	Comprehending the demand function and production function.
CO 4	Realizing various production theories.
CO 5	Clarifying the meaning of marginal, average, tal revenue marginal, average andtal cost and it's implication.
CO 6	Getting awareness of different market structure.
CO 7	Understanding pricing in different markets.
CO 8	Judging the factor pricing.

B.A.-III Research Methodology

Course Outcomes	Students are;
CO 1	Understanding the basic framework of research process and defining various research designs and techniques.
CO 2	Identifying various sources of information for literature review and data collection.
CO 3	Discussing the ethical dimensions of conducting applied research &Appreciating the components of scholarly writing and evaluating its quality.
CO 4	Knowing various aspects of Research in Economics.
CO 5	Understanding various data analysis techniques (Mean, Mode, Median, Range, Standard Deviation, Karl person coefficient of correlation).
CO 6	Ability of interpretation of data and report writing.

B.A.-III History of Economic Thoughts

Course Outcomes	Students are;
CO 1	Acquaintance with the economic thoughts of Classical, Nationalist and Socialist Thinkers.
CO 2	Judging the Development of economic thoughts.
CO 3	Evaluating the Development of Indian economic thoughts.
CO 4	Realizing the economic concepts and theories of Neo-classicals and Indian thinkers

B.A-III Economics of Development

Course Outcomes	Students are;
CO 1	Understanding the concept and aspects of economic Development.
CO 2	Knowing the theories of economic growth &Development.
CO 3	Measuring the concept and issues of economic planning.
CO 4	Discussing the need, types and necessary conditions of economy

B.A.-III International Economics

Course Outcomes	Students are;
CO 1	Elaborating the importance of the Studying International Economics, finding similarities and dissimilarities in inter-regional and international trade.
CO 2	Knowing the changes in the import-export policies of India, Evaluating various types of exchange rates and its merits and demerits.
CO 3	Discussing the types and effects of tariffs and quotas.
CO 4	Judging the function, merits and demerits of Foreign Capital, and International Corporation (IMF, IBRD, W and SAARC).
CO 5	Realizing the volume, composition and direction of Balance of trade and Balance of payments.

Course Outcome(CO): (B.A. Sociology)
B.A. part-I, Semester I&II (Old)
Paper no-I: - Introduction sociology& Paper No-II:-Principles of Sociology

Course Outcomes	Students are
CO 1	understanding the basic concept of Sociology, subject matter &importance of Sociology and origin and Development of sociology
CO 2	Understanding the Knowledge of human Society and Sociology**.**

B.A. part-I, Sociology (C.B.C.S) Sem –I DSC –B2 Sociology Paper-I
Paper no-I: - Introduction of sociology

Course Outcomes	Students are
CO 1	Getting ability to draw attention to the variety of concepts in sociology.
CO 2	Studying and clarifying the basic concepts in sociology like social interaction, social structure, society and culture etc.

B.A.I Part-I Sem-II Sociology Paper –II

Course Outcomes	Students are
CO 1	Studying various theoretical approaches in sociology.
CO 2	Able to focus on how to apply sociology in various professions and career opportunities

B.A. II: Sem –III
Paper -IV: Social Movements in India

Course Outcomes	Students are
CO 1	Able to draw attention the variety of ideas and debates about India.
CO 2	Studying the various social movements in India.

B.A. II: Sem -IV
Paper V: Gender and Violence

Course Outcomes	Students are
CO 1	Understanding the logic of the violence
CO 2	Recognizing how to prevent Gender Violence.

B.A. Part-II: Sem –III
Paper III: Social Issues in India

Course Outcomes	Students are
CO 1	Getting introduction of major social issues as well as challenges before Indian Society.
CO 2	Creating awareness and helping out various remedies regarding present social issues in India.

B.A. II Part –II Sem -IV
Paper VI: Sociology of Health

Course Outcomes	Students are
CO 1	Getting introduction of the sociology of health, illness and medical practice.
CO 2	Studying major disease in India and remedies.
CO 3	Creating awareness regarding health problems.

Scientific Method

Course Outcomes	Students are
CO 1	Implementing the scientific approach.
CO 2	Getting Introduction the various Scientific methods.
CO 3	Developing the research attitude.

B.A. Part-II, Semester III&IV Paper No-III: - Structure of IndianSociety
Paper no-V: - Social Change in Indian Society

Course Outcomes	Students are
CO 1	Getting acquainted with the structure and changing nature of Indian society.
CO 2	Understanding various segments and unity of the Indian society.
CO 3	Discussing a brief outline of the making of the Indian Society.

B.A. Part-II, Semester III&IV Paper No-IV: - Social problems in India
Paper no-VI: - Social problems in Contemporary India

Course Outcomes	Students are
CO 1	Getting introduction of major Social Problems and challenges before the problem of the Indian society.
CO 2	Getting aware of Contemporary Social Problems in India .

B.A. Part-II, Semester III&IV
IDS Paper: - History of Social reforms in IndiaIDS Paper: - Social reformers in Maharashtra

Course Outcomes	Students are
CO 1	Getting acquainted with the great social reformers and their contribution the Social change.
CO 2	Understanding the ideal thoughts of social reforms in order contribute social evolutionary movement.

BA III: SEM V
Paper no. VII: Western Sociological Thinkers

Course Outcomes	Students are
CO 1	Getting Acquainted with the sociological thought of the Pioneers of Sociology.
CO 2	Making awareness of the perennial of structure versus agency.

BA III: SEM V
Paper no. VIII: Methods Of Social Research (Part I)

Course Outcomes	Students are
CO 1	Imparting basic Research Skills
CO 2	Getting Introduction of various steps in conducting research.
CO 3	Getting Acquainted with different types of research and issues in research.

BA III: SEM V
Paper no. IX: Rural Sociology

Course Outcomes	Students are
CO 1	Understanding the profile of Rural Community.
CO 2	Getting introduction of the basic concepts of Rural Community and Rural sociology.

Paper no. X: Industrial Sociology

Course Outcomes	Students are
CO 1	Understanding the concept and aspects of economic Development.
CO 2	Knowing the theories of economic growth &Development.
CO 3	Measuring the concept and issues of economic planning.
CO 4	Discussing the need, types and necessary conditions of economy.

Paper no. XI: Social Anthropology

Course Outcomes	Students are
CO 1	Providing the conceptual Understanding about anthropology
CO 2	Understanding the social aspects of tribes in India.

BA III: SEM VI: Paper no. XII
Indian Sociological Thinkers

Course Outcomes	Students are
CO 1	Getting introduction of diversification in Indian society through the different ideologies given by various Indian Sociologists.

BA III: SEM VI: Paper no. XIII
Methods of Social Research (Part-II)

Course Outcomes	Students are
CO 1	Imparting basic Research Skills
CO 2	Getting introduction of various steps in conducting research.
CO 3	Getting Acquainted with different types of research and issues in research.

Paper no. XIV : Rural Sociology in India

Course Outcomes	Students are
CO 1	Getting introduction of the Indian Rural Social Structure.
CO 2	Understanding the nature of village studies conducted by different Indian Sociologists.

Paper no. XV:Industrial Sociology

Course Outcomes	Students are
CO 1	Understanding the workers' role and workers' relations with industrial organization.
CO 2	Analysing the changing trends in industrial relations.

BA III: SEM VI: Paper no. XVI:
Social Anthropology

Course Outcomes	Students are
CO 1	Understanding the economic and developmental aspects of tribal's in India.
CO 2	Analysing the tribal problems.

Course Outcomes (CO): Botany
B.Sc. I Paper I Diversity in non-vascular plants.
B.Sc –II Paper VAlgae, Fungi, Bryophytes and Industrial application

Course Outcomes (CO)	By the end of this Course students are:
CO -1	Developing interest in plant diversity.
CO -2	Developing skill of identification of Algae, Fungi and Bryophytes.
CO -3	Creating interest in biological industry

B.Sc –I Paper No. II- Plant Biochemistry, physiology and Ecology. B.Sc –II Paper No .IV-Plant physiology, Ecology and Horticulture.

Course Outcomes (CO)	By the end of this Course students are:
CO -1	Acquiring basic knowledge about biochemical, physiological mechanism in plants.
CO -2	Imparting knowledge of Horticulture

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B.Sc –I Paper III -Diversity in vascular plants. B.Sc –II Paper IV - Pteridophytes, Gymnosperms, Angiosperms and Anatomy.

Course Outcomes (CO)	By the end of this Course students are:
CO-1	Imparting knowledge of Diversity in vascular plant.
CO-2	Imparting knowledge of Characters of vascular plants and
	classification of plants.
CO-3	Imparting knowledge of External &internal characters of plants.

B.Sc –I Paper IV- Cytology, Genetics and utilization of plants. B.Sc –II PaperVIII- Cytogenetic and utilization of plants.

Course Outcomes (CO)	By the end of this Course students are
CO -1	Knowing about Structure of cell. Resource of plants to fulfill the basic needs.
CO -2	Knowing about Types of organisms and characteristics.
CO -3	Knowing about History, distribution, structure and functions of different cell organelles,
CO -4	Knowing about Transmission of character Mendelism.

B.Sc. III: Botany
.Biology of non vascular plants and paleobotany

Course Outcomes (CO)	By the end of this Course students are
CO -1	Developing skill of identification of Algae, a Fungi and Bryophytes.
CO -2	Bringing investigation of palaeobotanical study in India.
CO -3	Knowing scope and application of Paleobotany
CO -4	Knowing types of fossils, geological time scale.

Genetics and Analytical Technique in plant science

Course Outcomes (CO)	By the end of this Course students are
CO -1	Knowing about interaction of genes, multiple alleles and linkage and crossing over.
CO -2	Knowing about sex linked inheritance, chromosomal aberrations.
CO -3	Understanding principle and techniques of chromatography.
CO -4	Understanding principle and techniques of microscopy.

Fundamentals of plant physiology and ecology

Course Outcomes (CO)	By the end of this Course students are
CO -1	Understanding process of photosynthesis, C_3, C4, CAM pathways.
CO -2	Understanding the process of respiration, growth and developmental process in plant.
CO -3	Knowing the biotic and a biotic components of ecosystem.
CO -4	Knowing food chain & food web in ecosystem.

Plant Biochemistry

Course Outcomes (CO)	By the end of this Course students are
CO -1	Understanding the biochemistry of cell
CO -2	Understanding the different biochemical reaction of biomolecules in plant cell.
CO -3	Knowing about Composition and structure of biomolecules

Biology of vascularplants.

Course Outcomes (CO)	By the end of this Course students are
CO -1	Understanding diversity among vascular plants.
CO -2	Understanding development and life cycle of vascular plants.
CO -3	Understanding External and internal structures of vascular plants.
CO -4	Understanding Mechanism of pollination and fertilization of angiosperms.

Microbiology and plant pathology

Course Outcomes (CO)	By the end of this Course students are
CO -1	Understanding the microbes in biological world.
CO -2	Understanding Types of microbes and their classification.
CO -3	Discussing the plant and pathogen interaction.
CO -4	Explaining principles and concepts of host-parasite interactions, systemic and acquired resistance and major signaling pathways.

Plant breeding, Biostatistics, Ethnobotany and Horticulture

Course Outcomes (CO)	By the end of this Course students are
CO -1	Implementing the recent techniques in plant improvement.
CO -2	Defining the terms in inferential statistics for botany.
CO -3	Defining branches and scope of horticulture.
CO -4	Getting Introduction and role of Ethnobotany in modern medicine.

Molecular biology and Biotechnology

Course Outcomes (CO)	By the end of this Course students are knowing about
CO -1	Defining terminologies related to cell and molecular biology.
CO -2	Identifying localization and describe all cell organelles.
CO -3	Describing DNA replication, Transcription and Translation.
CO -4	Describing Plant Tissue Culture techniques and Genetic Engineering.

Chemistry: Course Outcomes
B.Sc.-I: Semester-I
Inorganic Chemistry: (Paper- I)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Getting to know the structure of atoms and their principles, details of periodic table.

CO-2	Knowing various types of ionic bond and ionic compound study.
CO-3	Knowing study of Molecular orbital Theory.

Organic Chemistry:(Paper-II)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Understanding the fundamentals of Organic Chemistry.
CO-2	Imparting the knowledge of stereochemistry of different organic compounds among the students.
CO-3	Studying aromaticity, electrophilic substitution reactions and their mechanism
CO-4	Knowing various method of preparation and chemical reaction of cyclo alkane, cyclo alkene and alkadiene.

Semester II
Physical Chemistry (Paper–III)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Impart the knowledge regarding chemical thermodynamics and feasibility, direction and equilibrium condition of reactions.
CO-2	Understanding mechanism of reaction and to get optimum conditions for a reaction by utilising the study of Chemical Kinetics.

Analytical Chemistry:(Paper-IV)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Provide a basic understanding of the principles , instrumentation and applications of chemical analysis.
CO-2	Study various chromatographic techniques like paper, thin layer, column, and gas chromatography..
CO-3	Impart basic knowledge regarding titrimetric analysis.
CO-4	Makingaware about water and fertilizer analysis

Physical Chemistry :(Paper-V)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics.
CO-2	Making students capable of understanding redox reactions and to construct electrochemical cells. learn various laws of electrochemistry and their applications
CO-3	Study the properties of liquids like surface tension, viscosity, refractive index and their experimental determination.
CO-4	Know about surface phenomena like adsorption w.r.t. its characteristics, determination and applications

Industrial Chemistry:(Paper-VI)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Providing a basic understanding of the principles, instrumentation and applications of chemical analysis.
CO-2	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography electrochemistry and their applications
CO-3	Explaining the difference between classical and industrial chemistry, unit operations , unit processes , flow sheets etc.
CO-4	Knowing the process of corrosion and how to deal with it by using electroplating.
CO-5	Getting familiar with the industrial process with respect to paper industry , soaps and detergents etc.

Semester-IV
Inorganic Chemistry:(Paper-VII)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Knowing study of 14 elements in the periodic table.
CO-2	Knowing the new productivity.
CO-3	Knowing the Studying of electronic configuration, oxidation state, colour spectra, and magnetic properties.
CO-4	Knowing about the study of solving energies of the metals, semiconductors and superconductors.
CO-5	Knowing the study of various organometallic compounds is very useful in various fields like agriculture, pesticides, pharmaceuticals.

Organic Chemistry :(Paper-VIII)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Imparting knowledge about the synthesis, reactivity and applications of carboxylic acids..
CO-2	Knowing amines and diazonium salts with respect to
	classification, preparation and applications.
CO-3	Understanding the nomenclature and reactivity of aldehydes, ketones.
CO-4	Studying the classification, configuration and structure of carbohydrates.
CO-5	Learning the basic knowledge of conformational analysis of organic compounds..

B.Sc.-III:Semester-V

Physical Chemistry :(Paper-IX)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Making students capable of understanding redox reactions and toconstructelectrochemicalcellsandlearningvariouslawsof electrochemistry and their applications.
CO-2	Imparting the concepts of quantum mechanics, likeSchrodinger equation and quantum numbers
CO-3	Learning about interaction between radiation and matter which leads to molecular spectroscopy
CO-4	Understanding various laws of photochemistry and photophysical processes

Inorganic Chemistry:(Paper-X)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Knowing the study of electronic configuration,oxidation state, colour spectra, and magnetic properties.
CO-2	Studying of co-ordination chemistry needs an understanding of the different terms used further topic covers Werner's theory, EAN, VBT, VSEPR, CFSE, and MO theory
CO-3	Knowing the study of catalyst, non-aqueous solvents and chelation.

Organic Chemistry :(Paper-XI)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Studying about introduction to spectroscopy
CO-2	Imparting the knowledge of UV, Visible spectroscopy and its application
CO-3	Understanding IR Spectroscopy and its application.
CO-4	Studying NMR Spectroscopy and its application.
CO-5	Knowing Mass Spectroscopy and its application
CO-6	Solving combined spectroscopic problems

Industrial Chemistry :(Paper-XII)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography.
CO-2	Imparting basic knowledge regarding titrimetric analysis.
CO-3	Getting familiar with the industrial process with respect to sugar industry, soaps and detergents, heavy chemicals production industries etc..
CO-4	Getting introduction the nano materials with respect to preparation, characterisation, and applications.

Semester-VI
Physical Chemistry :(Paper-XIII)

Course Outcomes	After successful completion of three year degree program in Chemistry students should be able;
CO-1	Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study ofChemical Kinetics
CO-2	Knowing about surface phenomena like adsorption w.r.t. its characteristics, determination and application.
CO-3	Getting the knowledge about Phase equilibria, wrt. one, two and
	three component systems. study crystal structure by using Bragg's equation.
CO-4	Developing practical skill regarding chemical kinetics and get acquaint to handle various instruments like potentiometer, conductometer, refractometer, colorimeter, pH meter, viscometer, stalagmometer etc.

Inorganic Chemistry:(Paper-XIV)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Knowing that nuclear energy may be boon and bane and know the radioactivity elements in the series of actinides.
CO-2	Coming to know that manufacturing process of iron and steel and study of various methods.
CO-3	Knowing that some biological role of alkali and alkaline earth metals, Hb, Mb, and some enzymes.
CO-4	Knowing the various types of reaction mechanism of the inorganic co-ordinated compounds.

Organic Chemistry: (Paper-XV)

Course Outcomes	After successful completion of three year degree program in Chemistry students are;
CO-1	Making students capable of understanding Name reactions and their mechanism.
CO-2	Studying the applications of different reagents in organic synthesis.
CO-3	Imparting the knowledge of different natural products.
CO-4	Knowing about pharmaceutical chemistry and study ofdifferent drugs.
CO-5	Understanding the knowledge of electrophilic addition to carbon carbon double and triple bond compounds

Analytical Chemistry:(Paper-XVI)

Course Outcomes	After successful completion of three year degree program in Chemistry students should be able
CO-1	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography.
CO-2	Imparting basic knowledge regarding titrimetric analysis.
CO-3	Learning about analytical techniques like potentiometry, conductometry, flame photometry, colorimetry, spectrophotometryetc
CO-4	Knowing about pharmaceutical chemistry and study ofdifferent drugs.

Physics
Course Outcomes (CO)
B. Sc. I, Semester I(with effect from 2018-19)
Physics Paper I: DSC 1 A: Mechanics I

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding and recognizing scalar and vector physical quantities.
CO-2	Understandingand applying the ordinary differential equations to physical Problems
CO-3	Understandingthe Newton's laws of motion.
CO-4	Understandingthe conservation of momentum and energy and related physical phenomenon.
CO-5	Understandingthe rotational motion, moment of inertia and able to determine the M. I. of various systems in rotational motion.

Physics Paper II: DSC 2 A: Mechanics II

course outcomes (CO)	By the end of this Course students are:
CO-1	Applying gravitational laws to a physical problem
CO-2	Recognizing simple harmonic motions in nature and solve their equations
CO-3	Understanding properties of matter (e.g. elasticity and surface tension) and apply this knowledge to physical problem.

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B. Sc. I, Semester II Physics paper III
DSC B: Electricity and Magnetism I

course outcomes (CO)	By the end of this Course students are:
CO-1	Getting ability to Prove and apply Gauss, Stokes and Greens theorems
CO-2	Understanding electrostatic field and potential and determine the same for different physical bodies.
CO-3	Getting knowledge of Capacitor and its types.

Physics Paper IV DSC 2B: Electricity and Magnetism II

course outcomes (CO)	By the end of this Course students are:
CO-1	Solving and building desired A. C. circuits
CO-2	Getting knowledge of magnetic effect of electric current and different magnetic materials.
CO-3	Understanding how different energies will covert in to electrical energy using magnetic field.
CO-4	Getting ability of understanding Maxwell's equations and its applications.

Course outcomes (CO)
B. Sc. II, Semester III (with effect from 2019-20) Physics
Paper V: General Physics, Sound and Acoustics

course outcomes (CO)	By the end of this Course students are:
CO-1	Getting ability to prove and apply Gauss, Stokes and Greens theorems
CO-2	Understanding processional motion and its applications
CO-3	Understanding Properties of matter (e.g. elasticity and viscosity) and apply this knowledge to physical problem.
CO-4	Understanding acoustic transducers, their working and applications.
CO-5	Understanding acoustics of a building and its applications.

Physics Paper VI: Electronics and semiconductor devices

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding CRO and its uses.
CO-2	Understanding and Built different oscillators
CO-3	Understanding in detail the OP-AMP, feedback mechanism and uses of Op-amp.
CO-4	Understanding and design different logic circuits.
CO-5	Understanding two transistors viz UJT and FET and their uses.

B. Sc. II, Semester IV:
Paper VII Optics

course outcomes (CO)	By the end of this Course students are:
CO-1	Acquiring the basic concepts of wave optics
CO-2	Describing how light can constructively and destructively interfere
CO-3	Explaining why a light beam spreads out after passing through an aperture
CO-4	Summarizing the polarization characteristics of electromagnetic waves
CO-5	Appreciating the operation of many modern optical devices that utilize wave optics.
CO-6	Understanding optical phenomena such as polarization, birefringence, interference and diffraction in terms of the wave model.
CO-7	Analyzing simple examples of interference and diffraction phenomena.
CO-8	Getting familiar with a range of equipment used in modern optics.

B. Sc. II, Semester IV:
Paper VIII Relativity and Modern Physics

course outcomes (CO)	By the end of this Course students are:
CO-1	Acquiring the knowledge of special theory of relativity.
CO-2	Understanding the wave particle duality and its quantum mechanics.
CO-3	Understanding vector atom model and different quantum numbers.
CO-4	Understanding different nuclear energy sources and process of energy production.

B. Sc. III Semester V
PAPER IX: MATHEMATICAL & STATISTICAL PHYSICS

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding micro and macro canonical ensembles, phase space, state.
CO-2	Knowing about how to distinguish between Mathematical &Statistical Physics.
CO-3	Improving the mathematical skills to solve to problems in physics.
CO-4	Understanding different types of differential equations &their solutions.

PAPER X: QUANTUM MECHANICS

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding the idea of wave function &uncertainty relations.
CO-2	Getting some concepts of physics by quantum mechanics.
CO-3	Solving problems on barrier potential well, one and three dimensional potential well
CO-4	Understanding the Schrodinger's equation for hydrogen atom.

PAPER XI: CLASSICAL MECHANICS

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding the concept of force, constraints, Newton's laws of motions.
CO-2	Knowing about Formulation of Langrangian equation of motion and solution of problems.
CO-3	Understanding the difference between Classical &Quantum Mechanics.
CO-4	Understanding Euler's Theorem and its equation of motion.

PAPER XII: ATOMIC, MOLECULAR SPECTRA & ASTRONOMY AND ASTROPHYSICS

Course Outcomes (CO)	By the end of this Course students are:
CO-1	Developing a basic understanding of physics of atoms and molecules: definitions, units, laws and rules.
CO-2	Identifying atomic effect such as Zeeman effect, Paschen-Back effect
	and Raman effect.
CO-3	Understanding of basic concepts of Astronomy &Astrophysics
CO-4	Analyzing the spectra of diatomic molecules such aselectronic, rotational, Vibrational spectra.

B. SC. III SEM VI
PAPER XIII: NUCLEAR AND PARTICLEPHYSICS

Course Outcomes (CO)	By the end of this Course students are:
CO-1	Understanding the size of nucleus and all its properties.
CO-2	Knowing various method of accelerating various types of particles.
CO-3	Understanding the construction &working of Nuclear Detectors.
CO-4	Understanding the different Nuclear Energy Levels.

PAPER XV: ELECTRODYNAMICS & ELECTROMAGNETIC WAVES

Course Outcomes (CO)	By the end of this Course students are:
CO-1	Knowing the basic concepts about Electrodynamics &Electromagnetic waves.
CO-2	Understanding concept of Poission's&Laplace's equations andits Solutions.
CO-3	Understanding the various laws like Faraday's Law, Lenz's Law and BiotSavarot'sLaw.
CO-4	Learning the basic Maxwell's equation and its physical significance.

Paper XIV: Energy studies and Material Science

Course Outcomes (CO)	By the end of this Course students are:
CO-1	Understanding basics of renewable energy sources
CO-2	Understanding Physics and mathematics of wind turbine generator.
CO-3	Understanding conversion of solar energy into electric energy, photovoltaic cell, solar PV system and solarpotentials.
CO-4	Understanding different types of disorder in the crystalline solids and it's important.
CO-5	Gaining basic knowledge of superconductivity.

Paper XVI: Solid State Physics

Course Outcomes (CO)	By the end of this Course students are:
CO-1	Developing a clear concept of the crystal classes and symmetries
CO-2	Understanding the relationship between the real and reciprocal space
CO-3	Acquiring ability of Calculating the Braggs conditions for X-ray diffraction in crystals
CO-4	Understanding of electronic and vibrational properties of solid state systems
CO-5	Understanding Band theory of solids and use in different physical phenomenon.
CO-6	Understanding construction, working and applications of IC 555.

MATHEMATICS: course outcomes (CO)
B.Sc-I Paper I (up to 2018)
(Complex number & Algebra), Paper II (Calculus),
Paper III (Geometry) Paper IV (Differential Equations)

course outcomes (CO)	Students are;
CO-1	Developing the interest towards mathematics.
CO-2	Creating the relationship of mathematics with other subjects.
CO-3	Developing the understanding and fluency in mathematics thorough inquiry and connecting mathematical concepts.
CO-4	Developing the knowledge of applications of derivative and integration, etc.

B.Sc.-I Paper I Sem I (CBCS, with effect from 2018-19)
Differential Calculus
Course code: DSC -5A

course outcomes (CO)	students are;
CO-1	Understanding Hyperbolic functions and finding the relation between hyperbolic and circular functions
CO-2	Understanding use of nth derivatives to find higher order derivatives
CO-3	Understanding use of Leibnitz theorem
CO-4	Understanding Lagrangze method undetermined multipliers and to find maxima, minima of functions

B.Sc.-I Paper I Sem II (CBCS, with effect from 2018-19)
Calculus Course code: DSC -6A

course outcomes (CO)	students are;
CO-1	Understanding Hyperbolic functions and finding the relation between hyperbolic and circular functions
CO-2	Understanding use of nth derivatives to find higher order derivatives
CO-3	Understanding use of Leibnitz theorem
CO-4	Understanding Lagrangze method undetermined multipliers and find maxima, minima of functions.

B.Sc.-I Paper III Sem II (CBCS, with effect from 2018-19)
Differential Equation Course code:
DSC-5B

course outcomes (CO)	students are;
CO-1	Understanding meaning of differential equation ,it's order and degree.
CO-2	Understanding various types of differential equation depending on order and degree.
CO-3	Evaluating how to find solution of differential equations.

B.Sc.-I Paper IV Sem II (CBCS, with effect from 2018-19)
Higher order ordinary differential and Partial differential equation
Course code: DSC- 6B

course outcomes (CO)	students are;
CO-1	Understanding types of differential equation with more than 2 variables
CO-2	Understanding difference between ordinary and partial differential equation
CO-3	Understanding types of solution of partial differential equation
CO-4	Studying construction of partial differential equation

B.Sc-II (up to 2019)
Paper V (differential Calculus) Paper VI (differential equations)
Paper VII(Integral Calculus) Paper VIII(Discrete Mathematics)

course outcomes (CO)	students are;
CO-1	Developing problem solving skills for various types of equations such as wave equation, heat equation and Lapse equations.
CO-2	Developing the knowledge of how to draw graphs, paths, walks and Curvatures.
CO-3	Developing several perspectives of differential equations.
CO-4	Creating interest with finite sets particularly those areas relevant to business.

Statistics: Course Outcomes: B. Sc. I (up to 2017-18) (Old)

Descriptive Statistics- I (Paper-I)

Course Outcomes	Students are:
CO-1	Getting acquainted with some basic concepts in statistics.
CO-2	Making familiar with some elementary statistical methods of analysis of data like measures of central tendency, dispersion, moments, skewness and kurtosis and interpretingthem.
CO-3	Studying analysis of data pertaining to attributes and to interpret the results.

Elementary Probability Distributions(Paper-II)

Course Outcomes	Students are:
CO-1	Getting acquainted with some basic concepts of probability.
CO-2	Distinguishing between random and non-random experiment.
CO-3	Finding the probabilities of various events.
CO-4	Understanding the concept of conditional probability and independence of events.
CO-5	Distinguishing between univariate and bivariate probability distributions.

Descriptive Statistics- II(Paper-III)

Course Outcomes	Students should be able to :
CO-1	Understanding the concept of correlation and correlation coefficient.
CO-2	Interpreting value of correlation coefficient and its use in regression analysis.
CO-3	Understanding the concept of multivariate distributions.
CO-4	Applying correlation and regression theory in various fields like business, agriculture, industry etc.

Discrete Probability Distributions (paper-IV)

Course Outcomes	Students are:
CO-1	Applying discrete probability distributions in different situations.
CO-2	Defining discrete variable and study their distributions.
CO-3	Applying discrete probability distributions with real life situations.
CO-4	Understanding concept of bivariate distributions and related probabilities.

B.Sc. I (CBCS) (With effect from 2018-19)

DSC-7A STATISTICS-I Descriptive Statistics- I (Paper-I)

Course Outcomes	Students are :
CO-1	Getting acquainted with some basic concepts in statistics.
CO-2	Making familiar with some elementary statistical methods of analysis of data like measures of central tendency, dispersion, moments, skewness and kurtosis and to interpret them.
CO-3	Analysing data pertaining to attributes and to interpret the results.

DSC-8A STATISTICS-II Elementary Probability Distributions(Paper-II)

Course Outcomes	Students are:
CO-1	Getting acquainted with some basic concepts of probability.
CO-2	Distinguishing between random and non-random experiment.
CO-3	Finding the probabilities of various events.
CO-4	Understanding the concept of conditional probability and independence of events.
CO-5	Distinguishing between univariate and bivariate probability distributions.

DSC-7B STATISTICS-III
Descriptive Statistics- II(Paper-III)

Course Outcomes	Students are:
CO-1	Understanding the concept of correlation and correlation coefficient.
CO-2	Interpreting value of correlation coefficient and its use in regression analysis.
CO-3	Understanding the concept of multivariate distributions.
CO-4	Applying of correlation and regression theory in various fields like business, agriculture, industry etc.

DSC-8B STATISTICS-IV
Discrete Probability Distributions(paper-IV)

Course Outcomes	Students are:
CO-1	Applying discrete probability distributions in different situations.
CO-2	Defining discrete variable and study their distributions.
CO-3	Applying discrete probability distributions with real life situations.
CO-4	Understanding concept of bivariate distributions and related probabilities.

B.Sc. II (up to 2018-19) (Old)
Continuous Probability Distributions-I (paper-V)

Course Outcomes	Students are:
CO-1	Understanding concept of discrete and continuous distributions with real life situations.
CO-2	Distinguish between discrete and continuous distributions.
CO-3	Finding various measures of r. v.'s and probabilities.
CO-4	Knowing the relations among the different distributions.
CO-5	study transformation of r. v.' s.

Bivariate discrete distributions and Multiple Regression Analysis (paper-VI)

Course Outcomes	Students are:
CO-1	Understanding concept of multiple linear regression.
CO-2	Understanding concept of multiple and partial correlation.

CO-3	Studying the sampling theory.
CO-4	Need of vital statistics and its applications.

Continuous Probability Distributions-II(paper-VII)

Course Outcomes	Students are:
CO-1	Studying some continuous probability distributions with real life situations.
CO-2	Distinguishing between various distributions.
CO-3	Finding various measures of continuous r. v.' s and probabilities.
CO-4	Understanding the relations among different distributions.
CO-5	Studying chi-square, t and F distributions with applications.

Statistical Methods (paper-VIII)

Course Outcomes	Students are:
CO-1	Knowing the concept and use of time series.
CO-2	Understanding the meaning, purpose and use of statistical quality control and its applications.
CO-3	Applying the small and large sample tests in various situations,.

B.Sc. II (CBCS) (With effect from 2019-20)
DSC-7C: Probability Distributions-I (paper-V)

Course Outcomes	Students are:
CO-1	Understanding concept of discrete and continuous distributions with real life situations.
CO-2	Distinguish between discrete and continuous distributions.
CO-3	Finding various measures of r. v.' s and probabilities.
CO-4	Knowing the relations among the different distributions.
CO-5	study transformation of r. v.' s.

DSC-8C: Statistical methods-I(paper-VI)

Course Outcomes	Students are:
CO-1	Understanding concept of multiple linear regression.
CO-2	Understanding concept of multiple and partial correlation.
CO-3	Studying the sampling theory.
CO-4	Need of vital statistics and its applications.

DSC-7D: Probability Distributions-II(paper-VII)

Course Outcomes	Students are:
CO-1	Studying some continuous probability distributions with real life situations.
CO-2	Distinguishing between various distributions.
CO-3	Finding various measures of continuous r. v.' s and probabilities.
CO-4	Understanding the relations among different distributions.
CO-5	Studying Chi-square, t and F distributions with applications.

DSC-8D: Statistical methods –II(paper-VIII)

Course Outcomes	Students are:
CO-1	Knowing the concept and use of time series.
CO-2	Understanding the meaning, purpose and use of statistical quality control and its applications.
CO-3	Applying the small and large sample tests in various situations,.

B.Sc. III: Sem III
Probability Distributions (paper-IX)

Course Outcomes	Students are:
CO-1	Understanding concept of univariate continuous probability distributions.
CO-2	Understanding concept of multivariate continuous probability distributions.
CO-3	Understanding concept of truncated probability distributions.
CO-4	Studying applications of bivariate normal distributions.

Statistical inference –I (paper-X)

Course Outcomes	Students are:
CO-1	Knowing the concept of point estimator.
CO-2	Finding estimators of parameters using different methods of estimation.

Design of Experiment(Paper-XI)

Course Outcomes	Students are:
CO-1	Understanding importance of DOE.
CO-2	Implementing and layout different design of experiment.
CO-3	Studying applications of DOE with different situations of heterogeneity.

Operation Research(Paper-XII)

Course Outcomes	Students are:
CO-1	Understanding concept of linear programming and solution of LPP.
CO-2	Applying other operation research techniques like T. P.,A.
	P. etc.
CO-3	Making use of decision problems in various fields.

B.Sc. III: Sem IV
Probability Theory (Paper-XIII)

Course Outcomes	Students are :
CO-1	Drawing random sample from continuous distributions.
CO-2	Knowing the concept of convergence, weak law of large numbers.
CO-3	Understanding concepts of Markov chain with its applications to real life situations like queuing theory.

Statistical inference-II(Paper-XIV)

Course Outcomes	Students are:
CO-1	Studying the estimation method like interval estimation.
CO-2	Studying parametric and non-parametric tests with its applications.
CO-3	Understanding concept of sequential test.

Sampling Theory(paper-XV)

Course Outcomes	Students are:
CO-1	Studying the concept of sample and population.
CO-2	Studying the working of SRSWR and SRSWOR with estimators mean and variance.
CO-3	Studying applications of other sampling techniques like stratified random sampling, systematic and cluster sampling.
CO-4	Determining the sample size.

Quality management and Data mining(paper-XVI)

Course Outcomes	Students are:
CO-1	Acquiring knowledge regarding to quality and quality tools.
CO-2	Knowing the concept of DMAIC cycle
CO-3	Understanding single and double sampling with reference to product control.
CO-4	Knowing the concept of data mining.

Course outcomes (CO) CBCS: (With effect from 2018-19)
B.Sc.I. :Sem.I: Paper I-Animal Diversity

course outcomes (CO)	By the end of this Course students are:
CO -1	Imparting knowledge of biodiversity related to non-chordates form Protista to hemichordata.
CO -2	Making the Understanding theCharacters, classification and phylogenic relations among various phyla ofnon-chardates.
CO -3	Making aware of importance of biodiversity and its conservation.

B.Sc.I. Paper-II: Animal Physiology

course outcomes (CO)	By the end of this Course students are:
CO -1	Understanding various normal physiological activities in mammalianbody.
CO -2	Making aware of finely balanced metabolic activities carried out in the body and need for maintaining the homeostasis.

B.Sc.I.: Semester II

Paper III: Cell Biology and evolution

course outcomes (CO)	By the end of this Course students are:
CO -1	Imparting knowledge of basic structural and functional unit of life and its organization.
CO -2	Imparting knowledge the structure and functions of various cell organelles.
CO -3	Imparting knowledge organic evolution and various theories of evolution.
CO -4	Imparting knowledge evidences of evolution and mass extinctions.

PaperIV:Genetics

course outcomes (CO)	By the end of this Course students are:
CO 1	Imparting knowledge of science of inheritance.
CO 2	Imparting knowledge of patterns of inheritance co-dominance.
CO 3	Imparting knowledge of linkage and crossing over.

B.Sc. II: Semester III:(Old) (Up to 2018-19) Paper V Animal Diversity-III

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding the Characters, classification and phylogenic relations among various phyla from arthropoda to Hemichordata.
CO-2	Generating the interest for subject among the students by the study of some amazing invertebrates.
CO-3	Understandingthespecializedcharactersofphylabythestudyof representative animal of that phylum.
CO-4	Imparting knowledge of some highly specialized characters of the phyla with suitable examples.

Paper VI: Genetics and Biological chemistry

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding the concepts of genetics like Linkage, crossing over, sex determination, gynandromorphs, and interaction of genes, lethal genes and human twins.
CO-2	Understanding the concepts like pH and buffers.
CO-3	Imparting the knowledge of classification and biological significance of carbohydrates, proteins and lipids.
CO-4	Imparting knowledge about nucleic acids and enzymes.
CO-5	Making aware about the significance of metal ions to Human.

Semester IV

Paper VII: Animal diversity-IV

course outcomes (CO)	By the end of this Course students are:
CO-1	Understanding the Characters, classification and phylogenic relations among reptiles, aves and mammals.
CO-2	Making aware about poisonous and non-poisonous snakes, venom and its effect, snake bite and first aid.
CO-3	Understanding the detailed characters of mammalian by studying representative animal: rat.
CO-4	Generating the interest for subject among the students by the study of amazing vertebrates.
CO-5	Imparting knowledge of some highly specialized characters of the classes with suitableexamples.

Paper VIII: Histology and Physiology

course outcomes (CO)	By the end of this Course students are:
CO-1	Imparting knowledge of histological structures of mammalian organs.
CO-2	Imparting knowledge of hormones.
CO-3	Understanding physiology of reproduction.
CO-4	Making aware of contraceptives and their types.
CO-5	Imparting knowledge of modern technique like IVF.
CO-6	Understanding the defense mechanism of our body.

B. Sc. (Computer Science) Part – I Semester – I (up to 2017-18)
Paper-I Introduction to Computers & Modern Operating Environment

Course Outcomes (CO)	At the end of course students are:
CO-1	To introduce the basic knowledge of computers among students
CO-2	To introduce the computer software and hardware to the student
CO-3	To develop the skills in handling of application software's to the students.

Paper-II Introduction to Programming in 'C'

Course Outcomes (CO)	At the end of course students are:
CO-1	Acquiring basic knowledge about Programming in C.
CO-2	Gathering extensive knowledge in C programming and developing Programming skills.
CO-3	Strengthening the knowledge on control structure, arrays etc., of C Programming.

B.Sc. (Computer Science) Part - II Semester-II
Paper-III Introduction to Database & HTML

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding the concept of DBMS and Data Models.
CO-2	Understanding the DBMS architecture and ER Diagram
CO-3	Understanding concept of web page development.

Paper-IV Programming techniques Using'C'

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding the concept of function and its different types.
CO-2	Understanding and performing different operation using pointer and structure.
CO-3	Understanding different file handling operation.

B. Sc. (Computer Science) Part – II Semester – III (upto2018-19)
Paper-V Fundamentals of Software Engineering

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding the concepts of System Analysis
CO-2	Understanding the concepts of Software Engineering
CO-3	Learning different System Analysis methods.
CO-4	Understanding the concept of System Design, implementation and testing

Paper-VI Object Oriented Programming Using C++

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding the concepts of OOP.
CO-2	To learn the concepts of Classes in C++.
CO-3	To understand how to create constructor and destructor
CO-4	To understand operator overloading process.

B.Sc. (Computer Science) Part –II Semester-IV
Paper–VII Relational Database Management System

Course Outcomes (CO)	At the end of course students are:
CO-1	Learning the concepts of relational data model
CO-2	To learn the concepts of SQL and PL-SQL.
CO-3	To learn the concepts of Cursor And Triggers.
CO-4	To learn the concept of MySQL database

Paper-VIII Advanced Object Oriented Programming Using C++

Course Outcomes (CO)	At the end of course students are:
CO-1	To learn the concepts of Relational Inheritance
CO-2	To learn the concepts of Polymorphism
CO-3	To learn the concepts of File handling
CO-4	To learn UML diagrams

B. Sc. (Computer Science) Part – I Semester – I CBCS (With effect from2018-19)

DSC-11A: PROBLEM SOLVING USINGCOMPUTERS

Course Outcomes (CO)	At the end of course students are:
CO-1	Acquiring basic knowledge about Programming in C.
CO-2	Gathering extensive knowledge in C programming and developing Programmingskills.
CO-3	Strengthening the knowledge on control structure, arrays etc., of C Programming.

DSC-12A Database Management System

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding the concept of DBMS and Data Models.
CO-2	Understanding the DBMS architecture and ER Diagram.
CO-3	Understanding concept of object modeling.

B. Sc. (Computer Science) Part – I Semester – II DSC-11B Programming Skills Using 'C'

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding the concept of function and its different types.
CO-2	Understanding and performing different operation using pointer and DMA.
CO-3	Understanding different file handling operation.

DSC-12B Relational Database Management System

Course Outcomes (CO)	At the end of course students are:
CO-1	Learning the concepts of relational data model
CO-2	Performing different DDL, DML , DQL queries.
CO-3	Understanding concept of functional dependency.

B.Sc. (Computer Science) (Optional))-Part – II CBCS (With effect from 2019-20)
Sem-III
DSC-11C: PHP and MySQL

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding the concepts of PHP scripts.
CO-2	Understanding different Branching and Looping statements.
CO-3	Learning how to developing applications in PHP using MySQL.
CO-4	Learning and develop various PHP technology applications that definitely meets the current industry needs.

DSC12C : Object Oriented Programming Using C++

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding how C++ improves C with object oriented features and learning how to design C++ classes for code reuse.
CO-2	Learning syntax and semantics of C++ programming language and learning how to write inline functions for efficiency and performance.
CO-3	Learning how to overload functions and operators in C++ and learning how inheritance promote code reuse in C++.

B. Sc. (Computer Science) Part – II Semester – IV

DSC-11D Cyber Security Essentials

Course Outcomes (CO)	At the end of course students are:
CO-1	Understanding concept of information security management.
CO-2	Learning different access controls methods.
CO-3	Understanding wireless network security.
CO-4	Learning cyber security laws and importance of security audit.

Course Outcomes	Students are
CO-1	Understanding concept of data, collection, representation, analysis, and interpretation, of statistical data, concept of sampling.
CO-2	Understanding concept of representation of data for the comparison of two or more data, Study different measures of central tendency, different measures of dispersion, , uses of C.V.
CO-3	Studying concept of Symmetrical distribution, moments (raw and central), Skewness and Kurtosis and different measures.
CO-4	Understanding the concept of Bi-variate and Tri-variate data and to study concept of Simple, Partial and multiple Correlation, linear and Non-linear Regression, Multivariate regression analysis

Statistics Paper II-: Probability Theory and Discrete Probability Distributions (GEC 108)

Paper IV: Continuous Probability Distribution & Testing of Hypothesis (GEC208)

Course Outcomes	Students are
CO-1	Understanding the fundamental principle of counting, concept of random experiment, sample space, event, types of events, equi-probable space, Classical and Axiomatic approach of probability, Concept of probability model, addition and multiplication rule of probability
CO-2	Understanding concept of discrete random variable and its probability distribution, mean and variance of discrete variable, study Discrete Uniform, Binomial and Poisson distributions
CO-3	Understanding concept of continuous random variable and its probability distribution, mean and variance of continuous variable, study continuous Uniform, Exponential and Normal distribution
CO-4	Understanding the concept of parameter, statistic, hypothesis, small sample and large sample tests, simulation.

Electronics Paper I & III (GEC 103 & 203) – Electronics Devices and Circuits

Course Outcomes	Students are
CO-1	Understanding all components and understand basic circuit theory, Understanding network laws and theorems.
CO-2	Understanding working of PN junction diode, rectifiers and regulated power supply
CO -3	Understanding working of BJT, CB, CE &CC configurations and current gains and Understand transistor as an amplifier, concept load line & Q-Point stabilization
CO -4	Understanding different multistage amplifiers, different multistage amplifiers, feedback in amplifier with types, different oscillators, the working of Unipolar devices, Study of IC 741.

Electronics Paper II & IV (GEC 104 & 204) – Digital Electronics I & II

Course Outcomes	Students are
CO-1	Understanding different number systems and their inter conversions. Understand different logic gates and Boolean Algebra to simplify logic equations.
CO-2	Understanding different arithmetic and combinational circuits, sequential circuits viz. Flip flops, shift registers and counters, &, sequential circuits viz. Flip flops, shift registers and counters.
CO-3	Understanding IC 555 with their specifications and applications, Memory Devices.
CO-4	Understanding Microcomputer Organization and Architecture of µP 8085, Instruction set and Programming of µP 8085.Brief study of 8086.

Mathematics Paper I (GEC 105) : Discrete Mathematics

Course Outcomes	Students are
CO-1	Understanding concept of set theory and combinatorial arguments.
CO-2	Understanding functions and their properties.
CO-3	Knowing concept of recurrence relation.
CO-4	Developing logic.

Mathematics Paper II (GEC 106) : Algebra

Course Outcomes	Students are
CO-1	Understanding concept of set theory and relations.
CO-2	Understanding the concept of divisibility of integers and related theorems.
CO-3	Know the concept of congruence relation and its properties.
CO-4	Understanding Boolean algebra concepts.

Mathematics Paper III (GEC 205) : Graph Theory

Course Outcomes	Students are
CO-1	Acquiring knowledge of graphs and operations on graphs
CO-2	Studying tree graphs and theorems on it

Mathematics Paper IV (GEC 206) : Calculus

Course Outcomes	Students are
CO-1	Using of nth derivatives to find higher order derivatives
CO-2	Understanding use of Leibnitz theorem
CO-3	Understanding Lagrangze's method for undetermined multipliers

Course Outcomes
B.Sc. Computer Science (Entire)-II (effect from2019-20)

Sem- III & IV
Paper V (DSC-301) – Relational Database Management System

Course Outcomes	Students are
CO-1	Improving data operations skills.
CO-2	Handling database.
CO-3	Designing and developing proper database.
CO-4	Use SQL/MY-SQL queries to manage database.

Paper VI (DSC-302) -Object Oriented Programming C++

Course Outcomes	Students are
CO-1	Using Object Oriented Programming.
CO-2	Using various control structures to improve programming logic.
CO-3	Designing classes and objects.
CO-4	Using constructor and destructor.
	Utilizing the OOP techniques like operator overloading, inheritance and polymorphism.

Paper VII (DSC-401) - Data Structure Using C++

Course Outcomes	Students are
CO-1	Understanding the most basic aspects of data structures including Stacks, Queue, Linked list and Tree.
CO-2	Understanding different sorting and searching algorithms.
CO-3	Understanding implementation of linked list, stack and queue.

Paper VIII (DSC-402) - Cyber Security Essentials

Course Outcomes	Students are
CO-1	Understanding importance of cyber security and security management.
CO-2	Learning different security threats.
CO-3	Understanding cyber security laws and importance of security audit.
CO-4	Learning concept of wireless network security.

PaperV (GEC-303) – Computer Organization

Course Outcomes	Students are
CO-1	Understanding Digital Circuit Design using K-Map methods
CO-2	Understanding Memory Modules & its Organization including Cache Memory, Virtual Memory, Paging Segmentation.
CO-3	Understanding Input Output Organization with different data transfer schemes & methods
CO-4	Understanding CPU-ALU Organization with different techniques like Stack, RISC ,CISC etc.

PaperVI (GEC-304) – Computer Instrumentation

Course Outcomes	Students are
CO-1	Understanding measurement and instrumentation system.
CO-2	Understanding various active and passive transducer and sensors. Understanding instrumentation amplifier and signal conditioning system.
CO-3	Understanding various Actuators and DAS.
CO-4	Understanding detailed working of Digital Instruments & Display Devices.

Paper–VII (GEC 403) (Microcontroller Architecture &Programming)

Programme Outcomes	Students are
CO-1	Understanding 8051 family and architecture of µC 8051.
CO-2	Understanding addressing modes and instruction sets of µC 8051.
CO-3	Understanding facilities in µC 8051 viz. timer, time delay calculations in different modes and serial communications.
CO-4	Understanding programming of µC 8051 and real world interfacing. Understanding embedded C programming skills for 8051

Paper–VIII (GEC 404) (Communication Techniques)

Programme Outcomes	Students are
CO-1	Understanding functioning of Basic communication systems.
CO-2	Understanding Analog Modulation & Demodulation techniques.
CO-3	Understanding Digital Modulation & Multiplexing techniques. ASK, FSK PSK & BPSK. TDMA &FDMA
CO-4	Understanding Wireless Communication systems. GSM

Mathematics Paper V (GEC-305) – Linear Algebra

Course Outcomes	Students are
CO-1	Understanding use of matrices.
CO-2	Understanding concept and theory of vector space
CO-3	Knowing about inner product space and Gram-Schmidt process to find orthonormal basis
CO-4	Finding Eigen values and Eigen vectors

Mathematics Paper VI (GEC-306) – Numerical Methods

Course Outcomes	Students are
CO-1	Understanding finding numerical solution of non linear equations using different method and their comparison
CO-2	Understanding concept of numerical interpolation
CO-3	Studying numerical integration and different methods
CO-4	Studying solution of first order ordinary differential equation by different methods

Mathematics Paper VII(GEC-405) – Computational Geometry

Course Outcomes	Students are
CO-1	Understanding two dimensional transformation and geometric interpretation of homogenous coordinates
CO-2	Understanding three dimensional transformation and vanishing points
CO-3	Studying parametric representation of plane curves
CO-4	Studying space curve, Bezier curve

Mathematics Paper VIII(GEC-406) – Operation Research

Course Outcomes	Students are
CO-1	Studying basics , characteristics , scope and limitations of operation research
CO-2	Finding solution of linear programming problem by different methods
CO-3	Studying transportation and assignment problems
CO-4	Knowing the concept of theory of games

Course Outcomes B.Sc. Computer Science(Entire)-III

Sem V & VI

Paper IX & XV -Operating Systems and Linux

Course Outcomes	Students are
CO-1	Understanding design issues related to process management and various related algorithms
CO-2	Understanding design issues related to memory management and various related algorithms
CO-3	Understanding design issues related to File management and various related algorithms

Paper X & XVI-Dot Net Programming part I and II

Course Outcomes	Students are
CO-1	Learning Object Oriented Programming language
CO-2	Handling abnormal termination of a program using exception handling.
CO-3	Studying web development concept using ASP.net
CO-4	Designing User Interface using different UI components.

Paper XI & XVII- Data Communication and Computer Networks

Course Outcomes	Students are
CO-1	Understanding different types of networks, various topologies and Application of networks.
CO-2	Understanding types of addresses, data communication.
CO-3	Understanding the concept of networking models, protocols, functionality of each layer.
CO-4	Learning basic networking hardware and tools, Understanding wired and wireless networks, its types, functionality of layer.

Paper XII & XVIII- Software Engineering and UML

Course Outcomes	Students are
CO-1	Understanding importance of Object Orientation in Software engineering
CO-2	Understanding the components And techniques of Unified Modeling Language
CO-3	Understanding techniques and diagrams related to structural modeling
CO-4	Understanding techniques and diagrams related to behavioral modeling

Paper XIII & XIX- Programming in Java part I and Advanced Java Programming

Course Outcomes	Students are
CO-1	Learning Object Oriented Programming language.
CO-2	Handling abnormal termination of a program using exception Handling.
CO-3	Creating flat files, and studying web development concept using Servlet and JSP.
CO-4	Designing User Interface using Swing and AWT, learning socket programming concepts.

Paper XIV & XX-E-commerce and Web technology

Course Outcomes	Students are
CO-1	Understanding importance of E-commerce
CO-2	Understanding concepts of data encryption and decryption
CO-3	Understanding use of digital signature in e business
CO-4	Understanding the concept of Web, designing static web pages using HTML