### **Program outcome**

# B. A

- The students of arts faculty gain the inspiration of appearing competitive examinations or they seek for higher education.
- The program inspires the students to deal with the problems arises in their path in future.
- The students B.A. in these three years gains the knowledge of the English, Marathi, Hindi, Economics, Music, Sociology, Political Science, History, Geography and Public Administration.
- The interested students participate in Collegiate, Inter-Collegiate, Taluka, District, State and National level sports programs through Physical Education Department.
- The students starts thinking of becoming a good citizen.

### B. Com

- The students of commerce faculty get fundamental knowledge and skills for doing business and commercial activities of their own choice.
- The program encourages the students to appear competitive exams or to become CA, MBA etc.
- The students become conscious to know the accounting knowledge, management principles, retail trading, banking and insurance transactions, business economics and financial management throughout the program in the Institution.
- The students acquire the knowledge in the management accounting, corporate accounting, statistical and mathematical techniques and knowledge relating to corporate law and business laws.
- The students become capable of doing business on their own or can choose a profession or can become employees having basic knowledge and skill required for such activities.

### B.Sc.

- The students of science faculty develops observation, decision power, analytical and logical thinking, clarity in thought and expression, systematic approach and decision making.
- The program encourages the students to appear competitive examinations or go for higher education.
- The students automatically get ready to do jobs in banks, Educational Institutions, Industries, Pathological Laboratories etc.
- The program also develops the outgoing students towards the Research work.

#### M.A. & M. Com.

- The programs helps the students to gain the knowledge in the field of Marathi, Hindi, Geography and Commerce.
- The students are encouraged to appear competitive examinations and towards research work.

# **Program Specific Outcomes**

# B. A. English Compulsory

- Students will develop communication skill and knowledge of spoken English.
- They become confident in Listening, speaking, reading and writing skills.

# B. A. English optional

- The students become confident in speaking English.
- Students are encouraged in preparing, organizing activities.
- Students become automatically good readers..

#### B. A. Marathi S. L.

- Students develop the communication skill and literature of Marathi language.
- The students develop reading and writing skill.

### B. A. Marathi optional

- Students are encouraged in preparing and organizing activities.
- Students automatically write articles and Poems.

### M. A. Marathi

- The students prepare for competitive examinations and build their career.
- The students attract towards higher education and research work.

#### B. A. Hindi S. L.

- Students can understand that moral values reflected in Hindi literature.
- Students are encouraged for higher studies and research work in Hindi Literature.

# B. A. Hindi optional

• Students can understand that moral values reflected in Hindi literature. Students are encouraged for higher studies and research work in Hindi Literature

#### M. A. Hindi

- The students prepare for competitive examinations and build their career.
- The students attract towards higher education and research work.

### B. A. Economics

- Students understand the role of finance in management, Banking and markets.
- The students are trained in using statistical methods.
- The students get knowledge of aspects and features of Indian economics.
- Students gain the knowledge of classical and modern theory of interest.

# B. A. Geography

- The students gather the information and knowledge of basics in geography.
- The students become sustain and compete in competitive world.
- The students understand the natural processes on the earth and earth surface.

### M. A. Geography

- The program is helpful to the student for the knowledge of geographical aspects such as climate oceanic activities etc. at local, regional, national and global level.
- The students understand the study of geographical elements.
- The students prepare for competitive examinations and build their career.
- The students attract towards field projects and research work.

#### B. A. Music

- Students make their career as a singer or perform his/her musical instrument.
- Students can conduct their own concerts where they can perform individually or as a group.
- Students may be encouraged for post graduate courses in music.

### B. A. History

- Students get the knowledge of History of various national events and heroes.
- Students develop their memory power in remembering the historical events, places and eras.
- Students were motivated to study the history of various countries.
- Students can choose history as a main subject for state or civil services.
- Students may go for the higher studies in history, archeology and also do research work.

#### B. A. Political Science

- Students understand the need for a constitution and explain the role of constitution in a democratic society.
- Students use various political concepts and ideology to analyze new situations.
- Students can work as political analyst, political party adviser, as a research scholar or as a political thinker and writer.

#### **B. A. Public Administration**

- Students understand the basic concepts of Public Administration.
- Students gain the knowledge of basic administrative system in India and work for reforms in it.
- Students understand the concept of Office Administration and able to work as administrative officer ( Class I to Class IV).
- Students develop a leadership quality.

# B. A. Sociology

- Students understand the principles and concepts Sociology.
- Students develop their understandings about society and social issues.
- Students understand the study of the social issues and find solutions.
- Students go for higher studies in sociology.

### B. Com

- The students be able to understand the basic as well as fundamental knowledge and skills for doing business and commercial activities of their choice.
- Students get admissions to become CA, CS or to MBA, M.Com etc.
- The students become capable of doing a business of their own choice.

#### M. Com

- The post graduate program provides advanced knowledge in the field of business and management.
- The students gain the basic skills required for carry out business activities and research, etc.
- The students prepare for NET, SET, and other competitive examinations. Students work as tax consultant.

# B. Sc. Botany

- The students work in laboratories, museums, in botanical gardens, or in industry.
- The students go for higher studies in Life science, agriculture, environmental sciences or education.
- The program encourages the students to develop awareness of organic farming.

# B. Sc. Zoology

- The students gain the knowledge of animal science, natural phenomenon.
- The students understand the scientific terms, concepts, facts, phenomenon.
- The students get the knowledge and skills in practical work, experiments and laboratory materials.
- The students develop scientific attitude which is the major objective. This makes the students open minded, critical observations, curiosity, thinking etc.

# **B. Sc. Chemistry**

- The students integrate their knowledge of chemical theories.
- The students follow and understood general laboratory practice guidelines, including safety.
- The students understand the chemical experiments used in industries.
- The students interpret and analyze chemical analysis and related data.

# **B. Sc. Computer Science**

- The students be aware of the history of the discipline of Computer Science and understand the conceptual underpinnings of the subject.
- The students understand the nature of the software development process, including the need to provide appropriate document.
- The students understand standard techniques for solving a problem on a computer, including programming techniques and techniques for the representation of information.
- The students gain the knowledge of computer hardware and networking.
- The students understand the effect of information technology on society.
- The student be able to communicate with persons effectively and recognize the need for life-long learning and development.

#### **B. Sc. Mathematics**

- Students apply logic and induction principle.
- The students find supremum and infimum and understand definition of limit and continuity.
- Students learn integration through infinite sum.
- Students know the solutions of differential equations.
- Students understand the significance of differentiability.
- The students apply Laplace and Fourier Transforms to find the solution of ordinary and partial differential equations.

# **B. Sc. Physics**

- The students understand the core knowledge on various papers of Physics.
- Clear concepts help them in understanding physical phenomenon in nature.
- The program identify their area of interest and further specialize in the Physic

#### **B. Sc. Electronics**

- The students attain a sound level in basic Electronics and understand the importance of research and higher studies.
- The students develop problem-solving skills, experimental and data analysis skills in Electronics.
- The students learn various concepts which help them in understanding construction and working of electronics equipments.

### **Course Outcome**

# B. A. F. Y. (SEMESTER I & II ) English Compulsory

- CO 1: Student developed speaking skills and the related sub-skills.
- CO 2: They can focus a lot on listening style and became better speaker of English language
- CO 3: Students can realize the proper style of English for oral communication and can use words and sentences.
- CO 4: Students speak English by using proper sentence structures.

# B. A. F. Y. (SEMESTER I & II) Optional English

- CO 1: Students are able to identify English Literature.
- CO 2: Students are now aware of different ages of English Literature
- CO 3: Student is able for learning literary and critical terms.
- CO 4: Students realize the differences in old English and modern English.

- CO 5 : Student realizes the different structures which are used in English language.
- CO 6: Student apply the various styles of English language used in different walks of life.

# B. A. S. Y. (SEMESTER III & IV) Compulsory English

- CO 1: The students identify the meaning, scope, development and major trends in drama.
- CO 2 : The students know the literary achievements of some of the significant English writers and playwrights.
- CO 3: They know about the various types of drama.
- CO 4: The students realize the significance and development of English drama.
- CO 5: The students analyze the different themes and styles as reflected in the prescribed Drama.

# B. A. S. Y. (SEMESTER III & IV) Optional English

- CO 1: The students identify the major trends in English Poetry from Chaucer to the Modern period through detailed study of prescribed poetical works of English poets.
- CO 2: The students read and critically appreciate the poems with poetical stanzas forms.
- CO 3: The students organize the poetry related activities for the society in future.
- CO 4: The students are able to describe the meaning of the prescribed poems.
- CO 5: The students improved the literary and critical competence.

# B. A T. Y. (SEMESTER V & VI) Optional English

- CO 1: Students are able to apply literary theories and principles of criticism to the literary texts from classical times to the present and evaluate it.
- CO 2 : Students can apply various approaches and principles from literary theories to understand the literary text from different perspectives.
- CO 3: Students can analyze a literary text critically and interpret it.
- CO 4: Students analyze the philosophical base behind various literary texts by reading the philosophical ideas reflected in literary texts.
- CO 5: The students are now able to analyze the English Literature and developed the interest of reading various genres of English Literature.

# HINDI

### B. A. F. Y. (SEMESTER I & II)

- CO 1: Students are able to translate literary text from Hindi to other languages and vice versa.
- CO 2: Students identify the different types of Hindi Literature.
- CO 3: Students recognize the significance of story as a literary genre.
- CO 4: Students read various stories and develop their understanding towards life and literature.
- CO 5 : Student apply the various styles of Hindi language used in different walks of life

# B. A. S. Y. (SEMESTER III & IV)

- CO 1 : Students are able to read at their own various prose pieces.
- CO 2 : Students read various stories and develop their understanding towards life and literature.

- CO 3: Students are able to use various techniques to write essays.
- CO 4: Students write good essays on various topics and subjects on their own.
- CO 5: The students are able to describe the meaning of the prescribed poems.

# B. A. T. Y. (SEMESTER V & VI)

- CO 1 : Students apply Hindi grammar, and are able for translation.
- CO 2: Students make use of grammatically correct Hindi.
- CO 3: Student are able for critical analysis of literary texts in Hindi
- CO 4 : Students make effective use of Hindi language for Newspaper articles and translations
- CO 5 : Student are able to work as professional translator, editor and writer.

#### M. A. Hindi

- CO 1 : The students are able to face competitive examinations
- CO 2: The students attract towards Research work in Hindi Literature.
- CO 2: The students are able to do jobs in various fields such as Institutions, Media, Journalism, Business, etc.

#### **ECONOMICS**

# B.A. F. Y. (SEMESTER I & II)

- CO 1: The students analyze the concept of micro Economics, Consumers behavior, Demand analysis, cardinal and ordinal utility.
- CO 2: The students are able to use elasticity of demand, price, income and cross elasticity of demand.
- CO 3: The students are fully confident with the knowledge of ATM, core Banking, E-Banking and the concept of banking system in India.
- CO 4: The students are able to analyze money and Capital markets, kinds of banks, functions of banks, banking system and concept of central bank.
- CO 5: The students analyze the theory of distribution like wags, interest, rent and profit.

### B.A. S. Y. (SEMESTER III & IV)

- CO 1: The students are able to analyze the concept of macro economics national income such as-GNP, NNP,GDP,NDP, PCI, Disposable Income.
- CO 2: The students use the different concepts in development economics.
- CO 3 : The student analyze the various theories of development national and International level and the types of growth and Development plan models used in Indian planning.
- CO 4: The students to use the concepts of statistical methods for collection of Data, enquiry, primary and secondary methods of collection of data, classification and tabulation of data and able to use the concept of central tendency such as- Mean, Median, Mode, Quartiles, Deciles and Percentile.
- CO 5: The students are able to analyze the concept of value of money-various approach.
- CO 6: The students are encouraged for the awareness of environment.

# **B.A. T. Y. (SEMESTER V & VI)**

- CO 1: The students are able to analyze the various issues/components of the Indian economy.
- CO 2: The students are able to analyze the demographic features, size, sex ratio, growth rate, migration, Industrial development, Industrial policy, FERA, FEMA, Act. and Concept of LPG.
- CO 3: The student are able to explain depth of knowledge of Agricultural Economics such as agricultural, Finance, Prices, inputs, Subsidies, Labor market, etc.
- CO 4: The student analyze the increase in Agricultural Income and the growth in Agricultural Development.

CO 5: The students are able to analyze the role of government in the society.

#### **GEOGRAPHY**

# **B.A. I Year (SEMESTER I & II)**

- CO 1: The student identify the concept of Geography.
- CO 2: The students know the universe & solar system, its structure, its function, relations among them, elements of solar system.
- CO 3: The students knows the career opportunities in the geographical field such as land survey, private companies, etc."
- CO 4: Students know the human phenomenon to adopt and modify the environment under its varied conditions.
- CO 5: The student know the concept of Map and Scale. The students are able to convert map scale as per measurement and area including unit conversions.

# **B.A. II Year (SEMESTER III & IV)**

- CO 1: Students are familiar with weather phenomena
- CO 2: Students are able to collect climatic information/data and their application in today life
- CO 3: The students can draw climatic graphs and diagrams.
- CO 4: They can handle the weather instruments, and can interpret daily weather maps.
- CO 5: Students effectively understand the basic concepts, processes, and analytic tools in oceanography.

# **B.A. III Year (SEMESTER V & VI)**

- CO 1: Students become aware about the local and global environmental aspects and familiarized with environmental issues and problems and their management.
- CO 2: Students analyze the geographical position of India with reference to the world
- CO 3: Students acquire the knowledge of Map projections and its uses.
- CO 4: Students identify the conservation of natural resources and its management for sustainable development.
- CO 5: Student becomes skillful to use of Quantitative Techniques in the Geographical study.
- CO 6: The students are expert in Surveying and measurement of area of Land.

# M.A. I Year (SEMESTER I & II)

- CO 1 : Students acquire the knowledge of different internal and external processes which affects land topography.
- CO 2: Students know the origin and development of continents and ocean basins.
- CO 3: Students analyze the different climatic aspects which affects our human activities in the world.
- CO 4 : Students know about various minerals, energy, chemical and biological resources of the ocean and the collection of data and preparation of reports.
- CO 5 : Students analyze the theoretical perspectives of economic geography and urban Geography.

# M.A. II Year (SEMESTER III & IV)

- CO 1 : The students know about the concept of region & regional planning and they understand its role in planning.
- CO 2 : Students know the concepts in agricultural geography and familiar with the agriculture and its relation with globalization, privatization and liberalization.
- CO 3: Students acquire the knowledge of emerging issues regarding population.

- CO 4: The students know the concept of Biogeography and other concepts related with biogeography.
- CO 5: Students identify the recent techniques in Remote Sensing and Geographic Information System.

#### **HISTORY**

### **B.A. I Year (SEMESTER I& II)**

- CO 1: Students get the knowledge of the history of the ancient India
- CO 2: Students get the knowledge of the history, culture and traditions of the ancient India & Medieval India
- CO 5: Students can relate and understand their life with the life of ancient and Medieval India.
- CO 3: They are trained to draw the relief features using contours.
- CO 4: Students recognize the features on earth surface through the SOI Topographical maps.

# **B.A. II Year (SEMESTER III& IV)**

- CO 1: Students get the knowledge of the history, culture and traditions of the Maratha
- CO 2: Students get the knowledge of the history culture and traditions of the Modern India.
- CO 3: Students develop their interest in Historical studies of Maratha empire.
- CO 4: Students develop interest to discover India through its study of Maratha empire.
- CO 5: Students can relate and understand their life with the Modern India

# **B.A. III Year (SEMESTER V & VI)**

- CO 1: The students be acquainted with the Major revolutions in India, Europe and the Continents.
- CO 2: Students get the knowledge of historical development of various countries and different civilizations in the world
- CO 3: The students can understand Historiography.
- CO 4: The students develop their interest in Historical studies of the Modern Maharashtra
- CO 5: The students identify history as an academic discipline

#### Music

# B. A. S. Y. (SEMESTER I & II)

CO 1: The students have the knowledge of various Ragaas, musicians and their contributions, Notes, Script, Scientific definitions from various perspectives.

# B. A. S. Y. (SEMESTER III & IV)

- CO 1: Learners can do creative presentation in Bada Khayal and Chota khayal in different Alap and Taan.
- CO 2: Learners can present Dhrupad, Sargam, Bhajan, Devotional songs etc.
- CO 3: Various Taal can orally presented in single, double, triple and quadraple Laykari. Bada Khayal and Chota Khayal in Various Alaps and Ragaas.
- CO 4: The students present Dhumar, Chatrang, Sugam and songs.
- CO 5: Students can write classification of various Ragaas and about various treatises in Music

and Musicians.

# III Year (SEMESTER V& VI)

- CO 1: Bada Khayal, Chota Khayal, Dhumar, Dhrupad and various other songs can be sung in various Ragaas by the students.
- CO 2: The students can do oral presentation of various Taal, Thumri, dadra and other songs in classical music.
- CO 3: The students get the scientific knowledge of all Ragaas.
- CO 4: Students can do script writing of various Taal and various Raag Swars.
- CO 5: The students know music and literature and the impact of Western music on Indian classical music.
- CO 6: Students can perform Gazals and Natyageet and compose folksongs, patriotic Bhajans, filmi songs etc..

### POLITICAL SCIENCE

### B.A. I Year (SEMESTER I & II)

- CO 1: The students demonstrate an understanding of the concepts & central themes of the political ideologies examined.
- CO 2: The students compare and contrast different ideological traditions.
- CO 3: The students are able to explain the Governmental mechanism of Maharashtra and of formation of Sanyukta Maharashtra.
- CO 4: The students can criticize the government of Maharashtra.
- CO 5: The students are able to explain the Governmental mechanism of Maharashtra.

### **B.A. II Year (SEMESTER III & IV)**

- CO 1: The students explain the need for a constitution, the key features and the role of constitution in a democratic society.
- CO 2: The students appreciate the fundamental rights of the citizens of India.
- CO 3: The students analyze the thoughts of western political thinkers.
- CO 4: The students use concepts to analyze new situations.
- CO 5: The students explain the nature and value of thoughts of Indian and western political thinkers.

# **B.A. III Year (SEMESTER V & VI)**

- CO 1: The students get the knowledge of the major concepts of International Relations, like-power, balance of power, conflict, co-operation, theories of International relations, globalization, etc.
- CO 2: The students work effectively in teams and project groups.
- CO 3: The students identify and explain the central principles, institutions, procedures and decision making process of the UK political system and evaluate the basic strengths and weaknesses of the UK political system through the application of political concepts & ideas.
- CO 4: The program provides the students with the capacity to identify issues and problems relating to the realization of human rights.

- CO 5: The students promote human rights of child, women, aged persons, youths through legal as well as illegal means.
- CO 6: The students participate in legal political and other debates involving human rights in a knowledgeable and constructive way.

# **PUBLIC ADMINISTRATION**

# **B.A. I YEAR (SEMESTER I & II)**

- CO 1: The students are aware of the theoretical and conceptual framework of the subject such as its meaning, nature, scope and importance.
- CO 2: The students are able to compare Public Administration with other disciplines and systems such as Public Management, Corporate Governance and Bureaucracy.
- CO 3: The students get information of Parliamentary system as well as how the Legislature, Judiciary and Executive work.
- CO 4: The students are able to work effectively on any administrative post; right from Class I to Class IV.
- CO 5: They are able to apply the theory in practice. They possess a sufficient knowledge of organizational structure, system, principles and types of organization.
- CO 6: The students find out the multi-dimensionality of problems and processes of Indian Administration;

# **B.A. II YEAR (SEMESTER III & IV)**

- CO 1: The students get the knowledge of designing and developing HRM tools.
- CO 2: The students explain the importance of human resources and their effective management in organizations.
- CO 3: The students analyze the key issues related to administering the human elements such as discipline, administrative ethics etc.
- CO 4: The students explain the role of Indian Administration as the main instrument of State to achieve its developmental goals. Develop employer-employee relations better.
- CO 5: The students manage stress and maintain more efficiency of the organization.
- CO 6: The students analyze the working of revenue, police and judicial administration.
- CO 7: The students apply and implement the schemes as well as major issues and concerns in implementation.

# **B.A. III YEAR (SEMESTER V & VI)**

- CO 1: The students develop local leadership and exhibit the efforts for rural development
- CO 2: The students get awareness about the basic governing system as well as development measures.
- CO 3: The students get the knowledge the financial system.
- CO 4: The students get the conceptualization of the developmental process as nations develop, cities grow, and planning is practiced at the top to bottom.
- CO 5: The students know the application of recent trends in Indian context.

### **SOCIOLOGY**

# **B.A. I Year (SEMESTER I & II)**

- **CO 1:** The students develop their understandings towards different ideas and thoughts in Sociology.
- **CO 2:** The students are aware of structure of Indian Society
- **CO 3:** The students develop their understandings of class and social settings of India.
- **CO 4: The students** analyze various tenets associated with the social structures

# **B.A. II Year (SEMESTER III& IV)**

- CO 1: The students get sociological understanding of various social issues in Indian Society.
- CO 2: The students know how to deal with various social issues
- CO 3: The Students get knowledge about various social movement
- CO 4: The students are able to understand ideologies behind various social movements.
- CO 5: The students can compare various ideologies and movements and understand the motives and issues of society

# **B.A. III Year (SEMESTER V & VI)**

- CO 1: The students get theoretical understanding of social thinkers and their work in sociology.
- CO 2: The students are acquainted with the development of different thoughts .

### **COMMERCE**

# **B.com I Year(SEMESTER I)**

- CO 1: The students acquire the theoretical and practical knowledge of basic accounting, royalty accounts, joint ventures, Final Accounts of sole trader and hire purchase system.
- CO 2: The Students enhance of the data analytical skill by using statistical tools and techniques such as masseur of central tendency, dispersion, correlation and regression analysis.
- CO 3: The students acquire the business related economics terms and communication skills
- CO 4: The students acquire theoretical and practical knowledge of hire purchase, installment purchase system, consignment account, insurance claim and trust account.
- CO 5: The students enhance the data analytical skill by using mathematical tools and techniques and the students use index number, probability, permutation and combination to solve mathematical problems.

# **B.** Com II Year(SEMESTER III)

- CO 1: The students identify the company accounting for issues and forfeiture of shares, redemption of debentures and preference shares with out of profit and out of fresh issue method, amalgamation and absorption of companies.
- CO 2: The students identify the costing methods and techniques such as meaning of cost accounting single output, material, labor cost, overheads etc.
- CO 3: The students identify the methods & techniques used for human resource management such as job analysis, job appraisal, recruitment, selection, etc.
- CO 4: The students acquire the advance company accounts, advance cost accounts and income tax.
- CO 5: The students acquire the knowledge of various business laws, business risk management and business planning
- CO 6: The students acquire the skill development course such as business environment, E-

insurance

### **B.com III Year(SEMESTER V & VI)**

- CO 1: The students acquire the advance account, accounting standards, Management accounts.
- CO 2: The students acquire the Auditing skill, Human Resource Management and marketing Management skill.
- CO 3: The students acquire field work experience such as internships.
- CO 4: The students acquire various accounting methods such as electricity accounting, departmental account, packages accounts and insolvency etc.
- CO 5: The students acquire ratio analysis, working capital management capital budgeting.
- CO 6: The students acquire skill enhance course in accounting & tally and accounting & auditing practice.

### M.com I Year(SEMESTER I & II)

- CO 1: The student get the knowledge about advanced statistical techniques such as correlation, regression, probability, etc.
- CO 2: The students get knowledge about how behavior of an individual which can be manipulated for managing people in organizations.
- CO 3: The student get the awareness of general economic environment within which businesses and other organizations operate.
- CO 4: The students are able to acquire the knowledge regarding indirect tax like GST. This would help the student for preparing for various competitive examinations.
- CO 5: The students use various technologies of e-commerce business transactions which enable the students even to set up their own start up e-business ventures.
- CO 6: The course help the students to understand- the accounting standards and their role in the accounting process.

### M.com II Year(SEMESTER III & IV)

- CO 1: The students are enable for the advanced functions and tools of financial management.
- CO 2: The students develop the advance accounting skill.
- CO 3: The student get knowledge of basic principles of marketing Management and their applications in the business & the business & industry.

### SCIENCE FACULTY

#### **BOTANY**

# **B.Sc. I YEAR(SEMESTER I & II)**

- CO 1: Students are able to classify microorganism on the basis of host.
- CO 2: Students are able to study systematic position and identification of thallus and occurrence of Cryptogams.
- CO 3: Students are able to solve the problems of Environment like Pollution, Aforestration, Soil conservation etc.
- CO 4: The students are able to classify Pteridophytes & Gymnosperms.

  The students are able to classify and study different families of Angiospermic Plants and to prepare and preserve Herbarium sheets of endangered plant species.
- CO 5: Able to describe the reasons for performing natural classification over artificial classification.

### **B.Sc.II YEAR(SEMESTER III & IV)**

- CO 1: Students are able to solve the problems of Environment like Pollution, Aforestration, Soil conservation, soil composition, soil profile, pH of soil etc.
- CO 2: Students are able to distinguish between taxonomy and systematic.
- CO 3: Able to correlate the reason that botanical Taxonomy study as hierarchical level.
- CO 4: Students acquired good knowledge about economic importance of cereals & pulses. Also able to identify and estimate active constituents of medicinal plants.
- CO 5: Students identify the morphology of Flowering plants like types of leaves, roots, flowers and fruits.
- CO 6: Students able to perform cultural practices in field.

### **B.Sc. III YEAR(SEMESTER V & VI)**

- CO 1: The students are able to recognize all physiological processes in plant body and able to recognize need of mineral nutrients by plants and its recycling.
- CO2: Performs independently isolation of protoplasts and its fusion.
- CO 3: Developed skill in genetic engineering.
- CO 4: Students able to identify the nature of disease of plants and describe modes of plant disease transmission.
- CO 5: Students easily prepare different medium.
- CO 6: The students are able to measure the spore width, diameter etc. by calibration of microscope.

#### **MATHEMATICS**

### **B.Sc. I Year (SEMESTER I & II)**

- CO 1: The Students can use n<sup>th</sup> order differentiation for functions.
- CO 2: The students analyze the mean value theorems for application point of view.
- CO 3: The Students calculate the rank and eigen values of matrix
- CO 4: The students can apply De' Morvies theorem for complex quantities.
- CO 5: The students can solve problems of beta and gamma functions

# **B.Sc. II Year (SEMESTER III & IV)**

- CO 1: The students know the definition of the limit of a sequence, evaluate the limits of a wide class of real sequences
- CO 2: The students categorize group structures & analyze classes of rings
- CO 3: The students are familiar with the methods solutions of ordinary differential equations
- CO 4: The students realize the concept of integration given by Rimeann.
- CO 5: The students can handle the problems of partial differential equations.

### **B.Sc. III Year (SEMESTER V& VI)**

- CO 1: The students get the knowledge of metric space.
- CO 2: The students acquire the knowledge of the problems of vectors space.
- CO 3: The students are able to apply their knowledge of statics and dynamics in their daily life.
- CO 4: The students solve the problems of numerical analysis.
- CO 5: The students get the knowledge of solving differential equations using Laplace and Fourier Transforms.

# Zoology

# **B.Sc. F. Y. (SEM I & II)**

- CO 1: Learners are able to identify microscopic organisms by Staining techniques.
- CO 2: Learners are able to analyze process of cell division and bio molecules by Squash and chromatography techniques
- CO 3: Learners are able to analyze the bimolecular by chromatography techniques.
- CO 4: Learner are able to appreciate the functional aspects of extra embryonic membranes and classify the different types of placenta..
- CO 5: Learner are able to understand causes of infertility and importance of stem cells.
- CO 6: Learner use various Histochemical techniques for analysis of different biochemical like Proteins, carbohydrates, Lipids. and Nucleic acid.

### BSc.II Year (SEMESTER III & IV)

- CO 1: Learners would be able describe the concepts and different types of immunity.
- CO 2: Learner able to introduce the concept of sex determination and its types, sex.
- CO 3: Influenced and sex limited genes.
- CO 4: Learners would be able to understand complete blood count, blood grouping, blood films, differential count.
- CO 5: Learner is able to understand blood techniques bleeding time and clotting time.
- CO 6: Able to demonstrate an understanding of fundamental biochemical principles, such as the structure of biomolecules, metabolic pathways, and the regulation of biological/biochemical processes.

# **B.Sc.III Year (SEMESTER V & VI)**

- CO 1: The students are able to know the Sericulture, Apiculture, lac culture, Poultry techniques etc.
- CO 2: The students discuss the significance of Tran genesis with reference to animal models.
- CO 3: The students explain the principles and application of animal cell cloning and gene therapy along with ethical concerns.
- CO 4: The students are able to describe the contents and properties of the most important bioinformatics databases, perform text- and sequence-based searches, and analyze and discuss the results in light of molecular biological knowledge.
- CO 5: Students are able to know the knowledge of aquaculture and animal behavior.
- CO 6: Learners are able to enhance the skill of developing entrepreneurship.

### **CHEMISTRY**

# **B.Sc. I Year (SEMESTER I & II)**

- CO 1: The students can understand Bohre atomic model, concept of shells, subshells and orbitals, types of catalyst, application of catalysis.
- CO 2: The students can determine the viscosity of given liquid, surface tension, equivalent weight.
- CO 3: The students can derive the kinetic gas equation, solve the numerical on critical constants and Vander Waals constants.
- CO 4: The students know the Vapor pressure, Surface Tension of liquid.
- CO 5: The students can determine the crystal structure of NaCl, electro kinetic or Zeta

- potential, electrophoresis and electro osmosis of sol.
- CO 5: The students know the Law of mass action, Reactions of acidic radicals, Lewis acid and base concept.

### **B.Sc. II Year (SEMESTER III & IV)**

- CO 1: The students know the chemical kinetics concepts, laws of photochemistry, phase equilibria.
- CO 2: The students write the Principle of volumetric analysis, types of titrations ,properties of P block element
- CO 3: The students can draw mechanism of various Name reactions, organic compounds and their derivatives.
- CO 4: The students are familiarize with the concept of hybridization, coordination chemistry.
- CO 5: The students got thorough knowledge regarding chemical kinetics, basic terms used in electrochemistry, First law of thermodynamics.
- CO 6: The students familiarize the students with concept of stereochemistry, carbohydrates, polymers, oils and fats.

# **B.Sc. III Year (SEMESTER V & VI)**

- CO 1: The students learn about synthetic dyes, drugs, pesticides, alkaloids and vitamins. The students can handle colorimeter, and determine the rate constant of the reaction, molecular weight and analyze the ores.
- CO 2: The students can analyze environmental and food samples practically.
- CO 3: The students can handle chromatographic techniques and analyze water and metal samples.
- CO 4: Student acquired experimental skill in Separation of organic binary mixture containing two solid components
- CO 5: Students acquired skill of handling instruments and chromatographic techniques and developed the experimental skill for pharmaceutical, clinical, cosmetic and fuel analysis.

# **Computer Science**

# **B.Sc.** CS I Year(SEMESTER I & II)

- CO 1: The students identify the components of a personal computer system
- CO 2: The students demonstrate input/output functions and able to draw flowcharts for the solution.
- CO 3: The students write a maintainable C program and apply own logic to develop programs in c language for a given algorithm.
- CO 4: Design new algorithms or modify existing ones for new applications and able to analyze the space and time efficiency of most algorithms.
- CO 5: Choose an appropriate data structure for a particular problem.

# **B.Sc. CS II Year(SEMESTER III & IV)**

- CO 1: Analyze the structure of OS and basic architectural components involved in OS design
- CO 2: Independently understand basic computer network technology.
- CO 3: Understand and building the skills of sub netting and routing mechanisms."
- CO 4: Organize and manage their files within the Linux file system

- CO 5: Understand the structure and model of the Java programming language and Use the Java programming language for various programming technologies.
- CO 6: Understand and examine the structure of various number systems and its application in digital design.

# **B.Sc. CS II Year(SEMESTER V & VI)**

- CO 1: Create conceptual and logical database designs for a business information problem.
- CO 2: Construct a database management system that satisfies relational theory and provide users with business queries, business forms, and business reports.
- CO 3: Analyze the core terms, concepts, and tools of relational database management systems.
- CO 4: Demonstrate skills to work in teams in teams and utilize effective group techniques to manage a complex project.

### **B.Sc. CS II Year(SEMESTER III & IV)**

- CO 1: The students are able to demonstrate skills to work in teams in teams and utilize effective group techniques to manage a complex project.
- CO 2: Student design and Run web page on various browsers
- CO 3: The students are able to write HTML page with PHP Code and works with different PHP classes.
- CO 4: The students get job of PHP web developer or web designer.
- CO 5: The students develop programs and perform mathematical Modeling in SCILAB