SWAMI VIVEKANAND SENIOR COLLEGE, MANTHA DIST. JALNA (MS)

FACULTY : SCIENCE

B.Sc. : General

Programme Outcomes

At the time of graduation, the students will be able to-

PO1: Understand basic principles of science
PO2: Analyse and predict conclusion from data/information
PO3: Perform necessary arithmetic calculations
PO4: Understand various units and its conversions
PO5: Correlate various principles in science to generate new approaches
PO6: Understand steps in the operations of various equipments and instruments
PO7: Perform qualitative, quantitative analyses in science specific areas
PO8: Understand mechanism of various scientific processes

B.Sc. Botany

Programme Specific Outcomes

At the time of graduation, the students will be able to-

PSO1: Understand the basic concepts of taxonomy and ecology
PSO2: Acquire knowledge about economics and medicinal plants in agriculture and medicine
PSO3: Analyse the relationship between plants and microbes
PSO4: Understand the biology of diversity of seed plants or phanerogams
PSO5: Understand behaviours of fossils and gymnosperm plants
PSO6: Understand plant diseases, chemical properties and evolutionary relationship among taxonomic groups

Course Outcomes
B. Sc. First Year

Paper I- Diversity of Cryptogams-I

Upon completion of the course, the students will be able to-

CO1: Identify various types of plants in kingdom Plantae
CO2: Identify Cryptogams
CO3: Identify various types of Algae
CO4: Describe various types of bacteria
CO5: Describe various types of fungi
CO6: Identify various types of viruses

Paper II- Morphology of Angiosperms

Upon completion of the course, the students will be able to-

CO1: Describe various types of habitat habit and morphological characters
CO2: Identify various types of root, stem and leaves
CO3: Identify various types of inflorescence and flowers
CO4: Identify various types of fruits
CO5: Describe modifications of roots stems and leaves

Paper V- Diversity of Cryptogams-II

Upon completion of the course, the students will be able to-

CO1: Describe Cryptogams
CO2: Describe characteristic feature of Bryophytes
CO3: Describe Characteristic feature of Pteridophytes
CO4: Identify various types of Bryophytes
CO5: Identify various types of Pteridophytes

Paper VI- Histology, Anatomy and Embryology

Upon completion of the course, the students will be able to-

CO1: Describe various types of tissues

CO2: Describe anatomical characters of monocot and dicot plants

CO3: Describe various types of ovules

CO4: Describe vascular elements in tissues

B. Sc. Second Year

Paper IX- Taxonomy of Angiosperms

Upon completion of the course, the students will be able to-

CO1: Describe various Classification Systems of plants

CO2: Describe characteristics of various angiosperm families

CO3: Describe various taxonomic terminologies

CO4: Describe importance of plant studies

CO5: Describe various tools used in taxonomy

Paper X- Plant Ecology

Upon completion of the course, the students will be able to-

CO1: Describe importance of plant studies

CO2: Describe various terminologies used in ecology

CO3: Describe soil structure and soil types

CO4: Describe various methods of conservation

CO5: Describe ecological adaptations in plants

Paper XIII- Gymnosperms and Utilization of plants

Upon completion of the course, the students will be able to-

CO1: Differentiate angiosperm and gymnosperm

CO2: Describe the characteristic feature of gymnosperm plants

CO3: Describe economic importance of cereals pulses

CO4: Describe importance of timber plants

CO5: Describe medicinal values of plants

CO6: Describe uses of plants and their parts in various industries

Paper XIV- Plant Physiology

Upon completion of the course, the students will be able to-

CO1: Describe various physiological processes of plants

CO2: Describe photosynthesis

CO3: Describe transpiration

CO4: Describe respiration

CO5: Describe stomata and functions of stomata

CO6: Describe osmosis

B. Sc. Third Year

Paper XVII- Cell & Molecular Biology

Upon completion of the course, the students will be able to-

CO1: Describe Cell and cell structure

CO2: Describe molecular basis of cell

CO3: Describe various types of cells

CO4: Describe mitosis and meiosis

CO5: Identify various cell organelles

CO6: Describe various stages of cell division

Paper XVIII (C) – Plant Pathology

Upon completion of the course, the students will be able to-

CO1: Diagnose plant disease in laboratory and field.
CO2: Describe various fungal and bacterial diseases on plants.
CO3: Describe various types of keys used for plant disease identification
CO4: Understand world of bacteria and fungi and their interaction with plants.
CO5: Describe seed-borne pathogens and their effect on seeds.

Paper XXI- Genetics & Biotechnology

Upon completion of the course, the students will be able to-
CO1: Describe genetics
CO2: Describe the basic information about gene, hybridisation and genetic material
CO3: Describe various genetic abnormalities
CO4: Describe mutation and chromosomal aberrations
CO5: Describe uses and applications of r-DNA technology

Paper XXII (C)- Microbiology and Disease Management

Upon completion of the course, the students will be able to-
CO1: Describe importance of sign and symptoms for detection of pathogens and disease, integrated methods of disease management, use of biological and chemicals in disease management.
CO2: Handle microscope
CO3: Isolates plant pathogens by culture method.
CO4: Understand industrial application of microbes in making, organic acids, alcohols, milk products, antibiotics and biopesticides.
CO5: Formulate different fungicides.

B.Sc. Chemistry

Programme Specific Outcomes

At the time of graduation, the students will be able to-
PSO1: Understand the fundamental principles of Chemistry
PSO2: Develop skills in evaluation and interpretation of chemical information and data
PSO3: Identify and estimate organic and inorganic compounds using classical and modern laboratory methods
PSO4: Analyze various organic mixtures and individual compounds
PSO5: Develop skills in the safe-handling of chemical materials, taking into account of their physical and chemical properties including any specific hazards associated with their use
PSO6: Gain comprehensive knowledge about fundamental properties of elements
PSO7: Acquire knowledge regarding importance of various elements present in the periodic table, coordination chemistry, structure of molecules, properties of compounds and structural determination of complexes using theoretical and instrumental methods
PSO8: Perform accurate quantitative measurements with an understanding of the theory and use of contemporary chemical instrumentation, interpret experimental results, perform calculations on these results and draw reasonable accurate conclusion
PSO9: Synthesize, separate and characterize compounds using published reactions, protocols, standard laboratory equipment and modern instrumentation
PSO10: Acquire problem solving skills in three basic areas of Chemistry, i.e., Inorganic, Organic and Physical Chemistry

Course Outcomes

F.Y. B.Sc. Semester I

Paper No. I (Inorganic Chemistry)

Upon completion of the course, the students will be able to-
CO1: Predict atomic structure and explain various quantum numbers
CO2: Explain standardized names and symbols to represent atoms, molecules, ions and chemical reactions
CO3: Explain trends of periodic properties of elements in periodic table
CO4: Predict biological role of Alkali and Alkaline earth metals

Paper No. II (Organic Chemistry)

Upon completion of the course, the students will be able to-

CO1: Explain various effects, and properties of organic compounds, nature of bond

CO2: Discuss nature of bond breaking and mechanical phenomenon

CO3: Explain concept of isomerism and types of stereochemical configuration

CO4: Discuss mechanistic pathways of simple organic reaction

Semester II

Paper No. IV (Physical Chemistry)

Upon completion of the course, the students will be able to-

CO1: Differentiate colloids, liquid crystals and properties of solid, liquid and gas

CO2: Derive differential equations related to order of reactions

CO3: Explain and correlate various laws with respect to gaseous state

CO4: Categorize catalysis on the basis of phases

CO5: Identify areas of applications of colloids, enzyme catalysts in day to day life

Paper No. V (Inorganic Chemistry)

Upon completion of the course, the students will be able to-

CO1: Demonstrate preparation, physical and chemical properties, structural properties, applications of various elements

CO2: Discuss chemical bonding, hybridization and molecular geometry on the basis of VBT

CO3: Differentiate types of indicators and correlate with appropriate titration method

CO4: Explain various aspects of radioactivity

Practicals (Lab course)

Upon completion of the course, the students will be able to-

CO1: Prepare and standardize various solutions

CO2: Determine basicity of given organic acid

CO3: Determine viscosity of given liquid

CO4: Identify acidic and basic radicals in given mixture

CO5: Identify types of organic compounds by chemical analysis method

S.Y. B.Sc. Semester III

Paper No. VII (Organic Chemistry)

Upon completion of the course, the students will be able to-

CO1: Give types of alcohol and its identification in simple organic compounds

CO2: Differentiate alcohol and phenols in simple and complex organic molecules

CO3: Explain the structure of carbonyl compounds and type of various name reaction involving carbonyl group

CO4: Analyse effect of substituent on acidity of carboxylic acid

CO5: Analyse effect of basicity in various simple heterocycles

Paper No. VIII (Physical Chemistry)

Upon completion of the course, the students will be able to-

CO1: Distinguish isothermal, adiabatic, isochoric and other thermodynamic processes

CO2: Correlate law of mass action, equilibrium constant with free energy

CO3: Solve numerical problems related to efficiency, work done, heat change

CO4: State and explain postulates of laws of Thermodynamics

CO5: Interpret interrelations between Clapeyron, Clausius and other relevant equations

Semester IV

Paper No. X (Inorganic Chemistry)

Upon completion of the course, the students will be able to-

CO1: Present in depth knowledge of abundance, position, preparation, properties and chemical behaviour of various d and f block elements from the periodic table

CO2: Identify co-ordination compounds and its applications

CO3: Differentiate aqueous and non aqueous solvents

Paper No. XI (Physical Chemistry)

Upon completion of the course, the students will be able to-

CO1: Explain different types of conductomertic titrations

CO2: Solve mathematical problems on electro-chemistry

CO3: Explain phase diagrams of one component systems

CO4: Explain phase diagrams of two component systems

CO5: Classify electrochemical and electrolytic cells

Practicals (Lab course)

Upon completion of the course, the students will be able to-

CO1: Determine concentration values of sample solutions using instrumentation

CO2: Evaluate and interpret heat of neutralization reactions

CO3: Analyse quantitatively, specific elements by volumetric and gravimetric methods

CO4: Determine critical solution temperatures of heterogeneous phases

CO5: Determine the molar refractive index of given sample by refractometer

CO6: Prepare organic derivatives and determine physical constants

CO7: Estimate ester, amide and other organic molecule entities

T.Y. B.Sc. Semester V

Paper No. XIII (Physical Chemistry)

Upon completion of the course, the students will be able to-

CO1: Explain synthesis of nanomaterials

CO2: Solve mathematical problems on determination of bond length

CO3: Derive Schrodinger wave equation of Hydrogen atom

CO4: Explain basic features of different spectrometers

CO5: Determine structure of molecules applying magnetic property

Paper No. XIV (Organic Chemistry)

Upon completion of the course, the students will be able to-

CO1: Find out types of sets of proton in organic compound

CO2: Solve simple PMR problems with given data

CO3: Classify various organometallic compounds andactivity is simple organic transformation

CO4: Identify and classify various active Methylene compounds

Semester VI

Paper No. XVI (Inorganic Chemistry)

Upon completion of the course, the students will be able to-

CO1: Explain nature of metal-ligand bonding and illustrate splitting of d orbitals

CO2: Demonstrate mechanism of sodium potassium cycle

CO3: Describe essential and trace elements and their role in biological system

CO4: Categorize chromatographic techniques with reference to adsorbents and other components

Paper No. XXII (Organic Chemistry)

Upon completion of the course, the students will be able to-

CO1: Explain effect of aromaticity on strength of basicity of heterocyclic compound
CO2: Classify carbohydrates and its utility in day to day life
CO3: Explain synthesis of paracetamol
CO4: Explain properties of good Drugs

Practicals (Lab course)
Upon completion of the course, the students will be able to-
CO1: Identify organic mixtures by chemical analysis method
CO2: Analyse inorganic radicals by chemical analysis method
CO3: Identify and separate given mixtures by gravimetric and volumetric method
CO4: Analyse percent composition of acid mixture by Conductometric method
CO5: Identify empirical formula by potentiometric method

B.Sc. Zoology

Program Specific Outcomes
At the time of graduation, the students will be able to-
PSO1: Understand concept of cell biology and genetics
PSO2: Study various phylum and their classification
PSO3: Understand mammalian physiology
PSO4: Recognize relationship between structure and function at all levels: molecular, cellular, and organismal
PSO5: Understand the chemistry and structure of all biological macromolecules including proteins and nucleic acids, determine their biological properties
PSO6: Understand ature and basic concepts of physiology, biochemistry, ecology, evolution and biotechnology
PSO7: Study animal diversity, including knowledge of specification, classification and evolutionary relationship of major groups of animals
PSO8: Understand biological, chemical and physical features of environment, e.g. terrestrial, freshwater, marine, host that animals inhabit
PSO9: Gain knowledge in the field of environment conservation, evolution and behaviour of animals
PSO10: Understand functions of organisms at the level of the gene, genome, cell, tissue, organ and organ-system
PSO11: Understand applications of rDNA technology to think critically and solve problems in the fields of biotechnology by applying research strategies

Course Outcomes
F.Y. B.Sc.

Semester I
Paper I- Protozoa to Annelida
Upon completion of the course, the students will be able to:-
CO1: Identify animals by observation
CO2: Describe unique characters of Protozoa, Porifera, Coelenterate, Helminthes and Annelids
CO3: Explain life functions of Protozoa, Porifera, Coelenterate, Helminthes and Annelids
CO4: Describe ecological role of phylum Protozoa, Porifera, Coelenterata, Helminthes and Annelida
CO5: Identify diversity from Protozoa, Porifera, Coelenterate, Helminthes and Annelids

Paper II- Cell Biology
Upon completion of the course, the students will be able to:-
CO1: Describe in detail the structure of cell
CO2: Describe function and the composition of the plasma membrane
CO3: Explain principles of the cell theory
CO4: Differentiate between prokaryotes and eukaryotes
CO5: Understand importance of the nucleus and its components
CO6: Understand how the endoplasmic reticulum and Golgi apparatus interact with one another and know with which other organelles they are associated

CO7: Identify three primary components of the cell‟s cytoskeleton and how they affect cell shape, function, and movement

Semester II

Paper IV- Arthropoda to Echinodermata and Hemichordata

Upon completion of the course, the students will be able to:-

CO1: Identify animals by observation
CO2: Describe unique characters of Arthropods, Mollusks, Echinoderms and Hemichordates
CO3: Explain life functions of Arthropods, Mollusks, Echinoderms and Hemichordates
CO4: Explain ecological role of phylum from Arthropoda to Hemichordata
CO5: Explain in detail diversity from Arthropods to Hemichordate

Paper V- Genetics – I

Upon completion of the course, the students will be able to:-

CO1: Describe chemical basis of heredity
CO2: Explain role of genetics in evolution
CO3: Evaluate conclusions that are based on genetic data
CO4: Find the results of genetic experimentation in animals

S.Y. B.Sc.

Semester III

Paper VII- Vertebrate Zoology

Upon completion of the course, the students will be able to:-

CO1: Describe unique characters of urochordates, cephalochordates and fishes
CO2: Recognize life functions of urochordates to fishes
CO3: Explain ecological role of different groups of chordates
CO4: Explain the diversity of chordates and describe unique characters of amphibians, reptiles, aves and mammals
CO5: Describe life functions of amphibians, reptiles, aves and mammals
CO6: Explain ecological role of different classes of vertebrates

Paper VIII- Genetics - II

Upon completion of the course, the students will be able to:-

CO1: Explain in detail gene expression and its behaviour in transformation
CO2: Describe the role of genetics in evolution
CO3: Evaluate conclusions that are based on genetic data in population genetics
CO4: Describe genetic diseases and disorders
CO5: Explain the techniques that are used in genetic engineering

Semester IV

Paper XI- Animal Physiology

Upon completion of the course, the students will be able to:-

CO1: Describe in detail the physiology at cellular and system levels
CO2: Explain the role of different bio-molecules
CO3: Explain how mammalian body get nutrition from different bio-molecules
CO4: Describe the functions of different systems
CO5: Describe the physiology of respiratory, renal, endocrine and reproductive systems to define normal and abnormal functions

Paper XII- Biochemistry and Endocrinology

Upon completion of the course, the students will be able to:-

CO1: Describe in detail the metabolism of carbohydrates, proteins, fats

CO2: Explain the fundamental biochemical principles
CO3: Describe basic laboratory techniques in biochemistry
CO4: Describe the structure and function of endocrine glands
CO5: Explain the role of hormones

T.Y. B.Sc.
Semester V

Paper XV- Ecology

Upon completion of the course, the students will be able to:-
CO1: Describe abiotic and biotic factors that affect, the distribution, dispersal, and behaviour of organisms
CO2: Identify factors that affect biological diversity and the functioning of ecological systems
CO3: Use an ecological vocabulary in arguments and explanations of ecological phenomena
CO4: Apply concepts and theories from biology to ecological examples
CO5: Analyse and interpret ecological information, research and data

Paper XVI-F- Parasitic Protozoa & Helminth-I

Upon completion of the course, the students will be able to:-
CO1: Understand views of parasites and parasitism, including social and cultural perceptions of parasitism, and varying views of parasitism among scientists from different disciplines
CO2: Identify, describe and contrast unicellular parasites and parasitic worms.
CO3: Familiarity with common protozoan and helminth parasites of humans as well as some related parasites of livestock and companion animals.
CO4: Analyze case studies and scenarios, interpret data and use evidence to address problems in parasitology, including clinical, public health and biological issues.

Semester VI

Paper XIX- Evolution

Upon completion of the course, the students will be able to:-
CO1: Describe evolutionary history of man
CO2: Describe origin of species on earth
CO3: Have an enhanced knowledge and appreciation of evolutionary biology and behaviour
CO4: Perform, analyse and report on experiments and observations in whole-organism biology
CO5: Gain information regarding animal classification and systematic, animal structure and function relationships, evolution between and within major animal groups, human evolution and animal reproduction and development

Paper XX-F- Parasitic Protozoa & Helminth -II

Upon completion of the course, the students will be able to:-
CO1: Understand Taxonomic diversity of parasites, and the universality and variety of symbiotic associations.
CO2: Analyze research challenges in diagnosis, treatment and control of parasitic infections in humans and in veterinary contexts through examination of evidence.
CO3: Demonstrate an understanding of the roles of parasites and of infectious diseases on the ecology and evolution of their hosts, and of the role of symbiosis in the evolution of life on earth.
CO4: Evaluate the impacts of parasitic diseases on human societies

B.Sc. Microbiology

Programme Specific Outcomes

At the time of graduation, the students will be able to-
PSO1: Understand fundamental principles involved in Microbiology
PSO2: Acquire detail knowledge of microorganisms, their types and significance

PSO3: Understand metabolic and structural significance of bio-molecules
PSO4: Acquaint with concepts of Immunity, Antigen, Antibody and Immune system
PSO5: Understand importance and applications of various enzymes in replication transcription and translations
PSO6: Acquire detail knowledge of industrial production of enzymes, antibiotics and vitamins

Course Outcomes

F.Y. B. Sc. Semester I

Paper I – Fundamentals of Microbiology

At the end of the course, the students will be able to-
CO1: Identify distribution of microorganism in nature
CO2: Determine evolution of microbiology and their role in various biological processes
CO3: Classify Microorganisms into different category according to taxonomic ranks
O4: Determine Biochemical properties of microorganisms
CO5: Calculate magnification, resolving power, depth of focus, numerical aperture of Microscope

Paper II- Microbial Techniques and General Microbiology

At the end of the course, the students will be able to-
CO1: Conceptualize microorganisms and their types, importance and Practical aspects
CO2: Distinguish between beneficial and harmful Microbes
CO3: Cultivate, observe and perform microscopic identification of bacteria, fungi and other microbes
CO4: Describe concept, methods and pattern of Sterilization and its practical applicability
CO5: Discuss role of Microorganisms in spreading diseases, usefulness in agriculture, environment and industrial sector

Semester II

Paper-IV Cytology and general Microbiology

At the end of the course, the students will be able to-
CO1: Describe different structural parts & its arrangement of Microbial cells
CO2: Classify bacteria on nutritional requirements
CO3: Determine Bacterial growth curve
CO4: Calculate mathematics of bacterial growth curve **CO5:** Describe mode of nutrient uptake by bacteria **CO6:** Describe Bacterial photosynthesis
CO6: Discuss advances in Microbiology
CO7: Determine shape, size and structure of bacteria by various staining procedures

Paper V- Basic Biochemistry

At the end of the course, the students will be able to-
CO1: Describe structures, functions and classification of carbohydrates, proteins, amino acids, lipids, nucleic acids
CO2: Discuss metabolic and structural significance of bio-molecules
C03: Describe functional groups and biochemical interactions present in bio-molecules
C04: Explain concept of pH, buffer, titration curve and pKa value
CO5: Explain concept of enzyme, physicochemical factors contributing to enzyme activity
CO6: Discuss nutrients uptake of microbes, anaerobic respiration and photosynthesis

S.Y. B. Sc. Semester III

Paper VII- Environmental Microbiology

At the end of the course, the students will be able to-
CO1: Determine sources of Air, Water and Soil pollution and their effects
CO2: Describe processes involved in purification of sewage and portable water
CO3: Determine Air sampling techniques and its effectiveness
CO4: Classify eneterobacter by various Biochemical tests: IMViC, MPN, Elevated temperature test

CO5: Calculate BOD, COD, Chlorine in water
CO6: Discuss relationship between soil microorganisms, Role of bio-fertilizers
CO7: Describe various biogeochemical cycles

Paper VIII-Immunology
At the end of the course, the students will be able to-
CO1: Explain concept of Immunity, Antigen, Antibody, Immune system
CO2: Describe structure, Classes, biological activity and gene Organization of antibodies and their diversity
CO3: Rationalize Expression of Ig genes, Monoclonal antibody (Chimeric Antibody and Humanized Antibody) and its formation and applications
CO4: Describe Lymphocyte (T and B cell) Activation and Regulation, Effecter Mechanism, Complement System: Activation and its Regulation
CO5: Discuss Diagnostic application of immunology: Practical aspects of Antigen-Antibody Interaction: Precipitation and Agglutination
CO6: Perform Blood grouping, isolation of bacterial Antigen and Ag-Ab reactions

Semester IV

Paper XI-Applied Microbiology

At the end of the course, the students will be able to-
CO1: Describe composition of milk, associated microorganism and Milk Sterilization
CO2: Discuss Food and Microorganisms, source of food contamination and food preservation
CO3: Describe Food born disease and Intoxication and Pathogen associated with food poisoning
CO4: Discuss mechanism of preparation of fermented foods and probiotics with the help of microorganisms**Paper XII-Clinical Microbiology**
At the end of the course, the students will be able to-
CO1: Determine mode of entry, infection, symptoms, Laboratory diagnosis and treatment for Bacterial, fungal, Protozoan infections
CO2: Describe life cycle, pathogenesis, laboratory diagnosis of HIV, Oncogenic viruses
CO3: Determine nutrients for cultivation of pathogenic bacteria
CO4: Identify epidemiology of general bacterial, fungal, protozoan infections
CO5: Identify normal micro-flora of humans
CO6: Determine antibiotic resistance by Bacteria

T.Y. B. Sc. Semester V

Paper XV-Microbial Genetics

At the end of the course, the students will be able to-
CO1: Differentiate gene expression pattern between microorganisms and eukaryotes
CO2: Discuss importance and applications of different genes (structural genes, functional genes etc)
CO3: Discuss importance and applications of various enzymes in the processes viz. replication transcription and translations etc
CO4: Describe various types of RNA and their role during translation, tRNA activations etc
CO5: Discuss mutation, its types and related effects like loss of function and gain of functions etc
CO6: Explain re-combinations- transduction, conjugation with types and transformations etc

Paper XVI-Microbial Metabolism
At the end of the course, the students will be able to-
C01: Describe enzyme as biocatalyst, its classification and mechanism of action
CO2: Discuss metabolic role of coenzymes
CO3: Give industrial applications of free and immobilized enzyme
CO4: Explain bacterial anabolic-catabolic pathways and their regulation
CO5: Discuss modes of energy yielding metabolism, microbial fermentation and its significance
C06: Determine factor affecting enzyme activity, overall enzyme kinetics viz. Km, Vmax, Kcat
C07: Prepare buffers, reagents and stock solutions

Semester VI

Paper XIX-Recombinant DNA Technology

At the end of the course, the students will be able to-

CO1: Discuss handling and applications of different DNA and RNA modifying enzymes

CO2: Elaborate techniques used for DNA transformation in host cells

CO3: Describe design of various vectors used for plants, animals and microorganisms and their modification strategies

CO4: Design cloning strategies for various applications

CO5: Differentiate transformed and non-transformed colonies

Paper XX-Industrial Microbiology

At the end of the course, the students will be able to-

CO1: Elaborate various aspects of industrial technology related to Microbiology

CO2: Screen industrially important strains

CO3: State and explain principles of fermenter design and computer assisted fermentation control

C04: Discuss fermentation process and downstream processing

CO5: Formulate media, aspects of raw material used, methods of strain improvement

CO6: Describe industrial production of enzyme, antibiotics, amino acids and vitamins

CO7: Produce, purify and estimate various products, like enzymes, ethanol, acids, and antibiotics with the help of microbes

B.Sc. Physics

Programme Specific Outcomes

At the time of graduation, the students will be able to-

PSO1: Understand basic concepts of Mechanics, Optics, Thermodynamics and Mathematical methods of Physics

PSO2: Use effectively various basic measuring Instruments in laboratory

PSO3: Acquire Knowledge of mathematical Physics, Electronics, Statistical Physics and its applications

PSO4: Understand basic Laws of practical Physics

PSO5: Draw appropriate conclusions on outcomes of experiments

PSO6: Acquire ability to understand different types of crystal structures, classical and quantum theory of specific Heat, Electrodynamics with applications and Fibre Optics and its uses

PSO7: Understand and apply simple basics of Quantum mechanics

PSO8: Understand and solve Maxwell‟s equations

PSO9: Gain comprehensive knowledge of various techniques used in laser and its applications

Course Outcomes

F.Y. B. Sc. Semester I

Paper I –Mechanics, Properties of Matter

Upon completion of the course, the students will be able to:

CO1: Describe acceleration due to gravity, Newton‟s law of gravitation and basics of potential and fields

CO2: Discuss basic properties of matter, Young‟s modulus, Bulk modulus and Modulus ofrigidity

CO3: Discuss properties of matter especially viscosity and surface tension

CO4: Define the general terms in acoustics intensity, loudness, reverberation etc.

Paper II- Heat & Thermodynamics

Upon completion of the course, the students will be able to:

CO1: Define Thermal Conductivity, coefficient of thermal conductivity, Thermal diffusivity, and resistivity; give comparison of conductivities of various metals

CO2: Describe reason for modification of gas equation; derive Vander Waals equation of state; define critical constants

CO3: Explain Transport phenomenon, mean free path with expression, thermal conductivity and viscosity
CO4: Formulate and solve problems in Thermodynamics and Heat; explain adiabatic
Process, isothermal process, reversible process, irreversible process and derive relevant equation, draw indicator diagram
CO5: Derive Thermodynamic parameters, Heat engine and Carnot Heat Engine, Maxwell‟s equation and their applications

Semester II

Paper-IV Geometrical and Physical Optics

Upon completion of the course, the students will be able to:
CO1: Describe and determine concept of cardinal point and different eye pieces
CO2: Explain interference phenomenon of light and its relevant experiments
CO3: Explain concept of diffraction of light and grating
CO4: Describe polarization of light and its related Experiments

Paper V- Electricity & Magnetism

Upon completion of the course, the students will be able to:
CO1: Describe the concept of Scalar, vector triple product of vector algebra and Solve divergence, gradient and curl
CO2: Explain Coulomb‟s law, Gauss law and dielectrics with mathematical derivation
CO3: Explain the concept of Biot-Savrat‟s Law, Ampere‟s Law and Ballistic Galvanometer
CO4: Elaborate growth and decay of LCR circuit

S.Y. B. Sc. Semester III

Paper VII- Mathematical Physics and Relativity

Upon completion of the course, the students will be able to:
CO1: Explain partial differentiation, successive differentiation and total differentiation **CO2:** Describe ordinary differential equation and solutions of first and second order differentiation equation
CO3: Elaborate theories and methods of statistical Physics and quantum statics
CO4: Explain principle of special theory of relativity and derive relevant equations including Einstein equation

Paper VIII- Modern Physics

Upon completion of the course, the students will be able to:
CO1: Explain Photoelectric Effect and its applications in various processes
CO2: Describe X- Ray radiation and its spectra
CO3: Explain theoretical aspect of Atomic mass, nuclear fission and Energy released in nucleus
CO4: Describe Particle accelerator, Cyclotron and Deuterons

Semester IV

Paper XI- General Electronics

Upon completion of the course, the students will be able to:
CO1: Describe semiconductors, Zener diode, Transistor and give its application
CO2: Explain Amplifier, RC coupling and Transistor biasing and discuss its applications
CO3: Describe theoretical and practical aspects of Oscillator and Multi-vibrator
CO4: Elaborate modulation, FM Modulation and AM wave

Paper XII- Solid State Physics

Upon completion of the course, the students will be able to:
CO1: Explain types of solids, miller indices, inter planner spacing and different types of Crystal structures
CO2: Elaborate concept of inter atomic forces and Kroning Penney Model
CO3: Describe classical theory of lattice heat capacity and Debye model; discuss limitations of Debye model
CO4: Discuss applications of free electron theory of Metals, Hall effect, Hall voltage and Hall coefficient and importance of Hall Effect

CO5: Describe transport properties of electrical conductivity thermal conductivity

T.Y. B. Sc. Semester V

Paper XV- Classical & Quantum Mechanics

Upon completion of the course, the students will be able to:
CO1- Explain basic concept of Classical Mechanics, mechanics of particle, and mechanics of system of particle by using Newton‟s laws of motion
CO2- Derive Lagrange‟s equation and its various applications
CO3- Explain basic concepts of constraints, its types and Virtual work done
CO4- Discuss mathematical basics of quantum mechanics, explain matter wave, Group velocity, particle velocity, operators, wave function and expectation values
CO5- Derive Schrodinger time dependent and independent equation and describe particle in one-dimensional box

Paper XVI- Electrodynamics

Upon completion of the course, the students will be able to:
CO1: Describe and understand diversions, curl, and Gauss Law applications in Electrostatics
CO2: Explain concepts of self-induction, mutual induction and equation of continuity
CO3: Describe origin of Maxwell‟s equations in magnetic and dielectric media
CO4: Derive electromagnetic wave equation in conduction medium
CO5: Explain transport of energy and poyinting vector, poyinting theorem
CO6: Describe boundary condition for electromagnetic field vectors B, E, D and H

Semester VI

Paper XIX- Atomic, Molecular Physics & LASER

Upon completion of the course, the students will be able to:
CO1: Explain Thomson‟s atom model, Rutherford‟s nuclear atom model and Bohr's atomic model
CO2: Describe the concepts of Vector atom model, quantum numbers, Coupling Scheme and Pauli‟s exclusive principle
CO3: Explain Zeeman Effect and Stark effect
CO4: Describe Rotation, Vibration Spectra, Raman Effect and its applications in various fields
CO5: Discuss LASER system and its properties, types of LASER and its medical, biological and industrial applications

Paper XX- Non-conventional Energy Sources and Optical Fiber

Upon completion of the course, the students will be able to:
CO1: Explain the concept of technologies of non-conventional sources of energy
CO2: Describe various renewable energy technology
CO3: Discuss non-conventional energy sources: Biomass, wind energy, tidal energy, ocean energy, geothermal energy and solar energy
CO4: Elaborate the concept of solar energy and its applications in various fields
CO5: Describe structures of optical fibers
CO6: Describe fiber fabrication techniques and testing of optical fiber cables

B.A. English

Program Specific Outcomes

At the time of graduation, the students will be able to-

PSO1: Have a good understanding of Basic English Grammar
PSO2: Use Received Pronunciation to make their English more intelligible
PSO3: Understand the structure of drama and novel
PSO4: Get acquainted with the history of English literature passing through different ages
PSO5: Understand various poetic types such as sonnet, ode, elegy, lyric and so on
PSO6: Achieve the skill of reading a literary text critically
PSO7: Gain knowledge of applying theories of literary criticism for the sound understanding of a literary artefact
PSO8: Know how literature is the product of the time in which it is penned
PSO9: Incorporate values in their own life which are reflected in literary texts

Course Outcomes
F.Y. B. A. Semester I & II

Paper I & II–English Compulsory

Upon completion of the course, the students will be able to-

CO1: Differentiate various types of genres
CO2: Explain nature and structure of sonnet
CO3: Identify parts of speech appearing in sentences
CO4: Distinguish between open and close class items is clear to students
CO5: Have a good knowledge of tenses

Paper I & III– Optional English: The Structure of English

Upon completion of the course, the students will be able to-

CO1: Have thoroughly understood the Received Pronunciation
CO2: Reproduce all forty-four speech sounds
CO3: A sound knowledge of syllable, phone, intonation, tone group, etc
CO4: Be well versed in sentence types, elements of clause structure, various phrases, etc
CO5: Comprehend the process of word formation

Paper II & IV– Optional English: Reading Literature

Upon completion of the course, the students will be able to-

CO1: Know poetical types especially lyric, sonnet and ode
CO2: Read and interpret novel
CO3: Have knowledge of drama, especially of tragedy and comedy
CO4: Read and interpret Shakespearean sonnets
CO5: Read and interpret Keats‟ odes

Paper I & II– Additional English

Upon completion of the course, the students will be able to-

CO1: Distinguish between various genres of English Literature
CO2: Understand author‟s purpose and tone
CO3: Distinguish between main ideas from specific details depicted in literary pieces
CO4: Expand and comprehend the text
CO5: Improved their language skills

S.Y. B. A. Semester III & IV

Paper III & IV–English Compulsory

Upon completion of the course, the students will be able to-
CO 1: Distinguish between spoken language and the written
CO 2: Understand and acquire English language skills through creative writing
CO 3: Use English language appropriately, creatively and imaginatively
CO 4: Identify the main ideas and themes depicted in a text
CO5: Have competence in various concepts in grammar and writing skills

Paper V & VII– Optional English: Literature in English 1550 - 1750
Upon completion of the course, the students will be able to-
CO1: Have developed and applied the literary knowledge
CO2: Know the nature and structure of epic and mock epic
CO3: Differentiate between various types of literary genres
CO4: Distinguish between good and evil, moral & immoral depicted in literature
CO5: Study literature critically

Paper VI & VIII– Optional English: Literature in English 1750 - 1900
Upon completion of the course, the students will be able to-
CO1: Have obtained sufficient knowledge of poetical types like ballad and dramatic monologue
CO2: Understand the socio-economical and cultural situation of English society in the 19thcentury by reading the novel of Thomas Hardy
CO3: Be acquainted with the dramatic techniques of Oscar Wilde by studying his play The Importance of Being Earnest
CO4: Understand Coleridge‟s ballad The Rime of the Ancient Mariner
CO5: Have the ability of reading and interpreting Robert Browning‟s dramatic monologue The Last Ride Together

Paper III & IV–Additional English
Upon completion of the course, the students will be able to-
CO1: Distinguish the difference between speech and writing
CO2: Understand and acquire English language skills through creative writing
CO3: Use English language appropriately, creatively and imaginatively
CO4: Identify the main ideas and themes portrayed in a text
CO5: Be proficient in various concepts in grammar and writing skills

T.Y. B. A. Semester V & VI

Paper IX & XIII– Optional English: Twentieth Century Literature in English

Upon completion of the course, the students will be able to-
CO1: Acquaint themselves with twentieth century literary and social background
CO2: Understand all the strands of the play Pygmalion
CO3: Know the features of prescribed poems by Eliot and Yeats
CO4: Comprehend all the features of the novels Sons and Lovers and Lucky Jim
CO5: Have a sound knowledge of the contemporary world as depicted in the play Look Back in Anger
Paper X & XIV– Optional English: An Introduction to Literary Criticism & Terms
Upon completion of the course, the students will be able to-
CO1: Understand various forms of literature and the literary terms **CO2:** Know importance of literary criticism to understand literature **CO3:** Understand classicism in literature
CO4: Come across perspectives of a critic while analysing and interpreting a text
CO5: Apply criticism while understanding a text

Paper XI & XV– Optional English: Indian Writing in English
Upon completion of the course, the students will be able to-
CO1: Acquainted them with the history of Indian English literature.

CO2: Distinguish between various genres of English literature.
CO3: Have a good knowledge of major authors and their literary contribution in Indian English Literature.
CO4: Understand characterization in literary pieces.

F.Y. B. Sc.
Semester I & II

Paper I &II– English Compulsory
Upon completion of the course, the students will be able to-
CO 1: Recognize all characters from the prose
CO 2: Understand and classify various themes of poetry
CO 3: Understand figures of speech deployed in a literary piece
CO 4: Use various tenses in speech and writing
CO 5: Write précis.

Paper I &II–Additional English
Upon completion of the course, the students will be able to-
CO1: Distinguish between various genres of English literature
CO2: Understand author‟s purpose and tone
CO3: Come across main ideas reflected in a literary piece
CO4: Expand and comprehend the text
CO5: Improve their language skills.
CO6: They have improved their language skills

S.Y. B. Sc.
Semester III & IV Paper III &IV– English Compulsory
Upon completion of the course, the students will be able to- **CO1:** Distinguish the difference between speech and writing **CO2:** Understand language skills through creative writing
CO3: Use English language appropriately, creatively and imaginatively
CO4: Identify the main ideas and themes reflected in a text
CO5: Understand various concepts in grammar

Paper III &IV– Additional English
Upon completion of the course, the students will be able to-
CO1: Understand themes of the prescribed short stories
CO2: Write job application letter
CO3: Come across the structure of short story
CO4: Be familiar with the nature and structure of drama
CO5: Write situational conversation

F.Y. B. Com.
Semester I & II

Paper I &II–Compulsory English
Upon completion of the course, the students will be able to-
CO1: Understand the importance of English Grammar and its use
CO2: Use different kinds of sentences
CO3: Use speech sounds in speech and writing
CO4: Frame sentences in different tenses
CO5: Differentiate between varied parts of speech

Paper I &II–Additional English
Upon completion of the course, the students will be able to-
CO1: Distinguish between various genres of English literature

CO2: Understand author‟s purpose and tone
CO3: Read and understand a text critically
CO4: Improve their linguistic skills by studying literature
CO5: Know how figures of speech enhance the impact of literature

S.Y. B. Com.

Semester III & IV Paper III & IV–Compulsory English

Upon completion of the course, the students will be able to-
CO1: Draft official letter
CO2: Prepare agenda and minutes of a meeting
CO3: Face interviews
CO4: Write a resume
CO5: Be proficient in report writing

Paper III &IV–Additional English

Upon completion of the course, the students will be able to-
CO1: Understand themes of short stories
CO2: Write job application letters
CO3: Understand the nature and structure of one-act play
CO4: Frame dialogues in speech and writing
CO5: Undertake situational conversation

B.A. ECONOMICS

Program specific outcomes

At the time of graduation, the students will be to -
PSO1: know broad characteristics of Indian Economy and World Economy
PSO2: Analyze nature and behaviour of market, demand and supply in market
PSO3: Acquaint with Government policy and Industrial policy
PSO4: Know about new Economic reforms like globalization
PSO5: Acquire knowledge of various aspects of Economics, like human development, human welfare
PSO6: Familiar with aspects of Economic planning, strategy of planning and achievements of planning

Course Outcomes
F.Y. B.A.
Semester – I

Micro Economics

Upon completion of the course, the students will be able to-
CO1: Discuss basic concepts of Economics
CO2: Discuss basic aspects of Demand and Supply Theories
CO3: Analyze consumer‟s behaviour
CO4: Discuss basic aspects of consumer‟s equilibrium
CO5: Analyze and explain market equilibrium

Indian Economy

Upon completion of the course, the students will be able to-
CO1: Discuss broad features of the Indian Economy
CO2: Indentify major issues related to population and population policy
CO3: Define natural resources in India
CO4: Describe nature and types of unemployment and concept of poverty
CO5: Explain new economic reforms and concept of globalization

Semester - II

Price Theory

Upon completion of the course, the students will be able to-
CO1: Discuss concept of Production function
CO2: Analyze cost and Revenue **CO3:** Classify market in various types CO4: Evaluate theories of distribution
CO5: Understand meaning and related concepts of factor pricing

Money, Banking and Finance

Upon completion of the course, the students will be able to-
CO1: Explain basic aspect about money
CO2: Evaluate principle of Commercial Banks and Banking Structure in India
CO3: Discuss New Concepts in banking sector
CO4: Discuss functions of Reserve Bank of India
CO5: Define the term money market and capital market

S.Y. B.A.
Semester - III

Macro Economic

Upon completion of the course, the students will be able to-
CO1: Discuss basic aspects of macro Economics
CO2: Describe concept of National Income
CO3: Explain theory of money and identify the index number
CO4: Explain theories of employment
CO5: Explain Keynesian theory of employment and Nature of trade cycle

Economics of Development

Upon completion of the course, the students will be able to-
CO1: Discuss concept of economic development and growth
CO2: Analyze theories of Adam Smith and Malthus
CO3: Give factors in development process
CO4: Get aware about Models of Economic Growth
CO5: Explain role of sector approach in Economical Development

Semester - IV

Public Finance

Upon completion of the course, the students will be able to- **CO1**: Discuss nature, scope and importance of public finance **CO2:** Explain Public Revenue
CO3: Comprehend public expenditure
CO4: Describe concept, source, causes and effects and importance of public debt
CO5: Explain meaning, objective and components of Union Budget

Statistical Methods

Upon completion of the course, the students will be able to-
CO1: Analyze collection of data – Primary and Secondary data
CO2: Describe types of series – simple, Discrete and continuous series **CO3:** Discuss Arithmetic mean – its merits and demerits, mode and median **CO4:** Evaluate Range, mean deviation and standard deviation
CO5: Explain variance and Co-efficient of variation

T.Y. B.A. Semester V
International Economics

Upon completion of the course, the students will be able to-
CO1: Explain basic concept of international economics
CO2: Describe Gains from trade
CO3: Discuss types of tariffs and quotas
CO4: Evaluate concept and components of balance of payment

CO5: Discuss Demerits and limitations of devaluation

Agriculture Economics

Upon completion of the course, the students will be able to-
CO1: Discuss the role and importance of Agriculture
CO2: Describe various technologies used in Agriculture
CO3: Explain Government Agriculture Policies
CO4: Acquire knowledge of Indian agricultural development from last 50 years

History of Economic Thought

Upon completion of the course, the students will be able to-
CO1: Explain concept of Mercantilism
CO2: Sketch out Adam Smith division of labour and theory of value
CO3: Comprehend Tomas R. Malthus – theory of population
CO4: Describe Karl Marks theory of dynamics of social change, theory of surplus value
CO5: Explain concept of aggregate economy and the role of fiscal policy

Semester – VI

Research Methodology

Upon completion of the course, the students will be able to-
CO1: Discuss meaning, nature, scope and objectives of social science research
CO2: Describe Facts – features Primary data collection **CO3:** Discuss motivating factors of social research **CO4:** Comprehend meaning and need of research design

Industrial Economics

Upon completion of the course, the students will be able to-
CO1: Discuss importance and role of Industries in Economic and social development
CO2: Know industrial organization, ownership structure
CO3: Analyze location and dispersion of industries
CO4: Explain composition of industrial sector

BA History

Programme specific outcomes

At the time of graduation, the students will be to -
PSO1: Understand the background of ancient, medieval, and modern Indian history as well as world history
PSO2: Understand past and present existing social, political, religious and economic background of people
PSO3: Develop practical skills helpful in the study and understanding of historical events, like- drawing of historical maps, charts, diagrams; preparation of historical models tools
PSO4: Develop interests in the study of history and activities relating to history, like- reading of historical documents maps, charts
PSO5: Write articles on historical topics

Course Outcomes

F.Y. B.A. Semester I

Shivaji and His Times (1630 to 1707 A.D.)

Upon completion of the course, the students will be able to-
CO1: Explain formation of welfare state during the Maratha rule
CO2: Discuss industrial agricultural aspects of Chhatrapati Shivaji „regime
CO3: Explain administrative aspects of the Swarajya
CO4: Elaborate inspiration behind the establishment of Swarajya
CO5: Explain reasons behind Chhatrapati Shivaji's early conflicts with the regional lords and the outsiders
CO6: Discuss Maratha war of independence.(1689 to 1707A.D.)
History of Modern Maharashtra (1818 to 1905 A.D.)

Upon completion of the course, the students will be able to-
CO1: Discuss history of modern Maharashtra
CO2: Evaluate renaissance and social reform movement in Maharashtra **CO3**: Explain early political awakening of freedom struggle in Maharashtra **CO4**: Discuss British administration in Bombay presidency
CO5: Identify social institutions of 19th Century

Semester – II History of Marathas (1707 TO 1818 A.D.)
Upon completion of the course, the students will be able to-
CO1: Discuss importance of the Maratha history in 18th century
CO2: Asses circumstances under which rise of the Peshwa took place **CO3**: Explain political scenario of the Maratha power in the 18th century **CO4**: Evaluate policies adopted by early Peshwas
CO5: Explain circumstances of the Maratha power at battle of Panipat
CO6: Explain reasons of political disintegration of the Maratha
CO7: Discuss nature of Anglo-Maratha relations
CO8: Discuss central and provincial administration of Marathas under the Peshwas

20th Century Maharashtra (1905 – 1960 A.D.)
Upon completion of the course, the students will be able to-
CO1: Explain salient features of 20 the century Maharashtra
CO2: Evaluate consolidation of British power in Maharashtra
CO3: Analyse social religious, consciousness in Maharashtra
CO4: Discuss freedom struggle in Hyderabad state specially in Marathwada region
CO6: Differentiate the Dalit movement and non Brahmin movement

S.Y. B.A. Semester III
History of early India (UPTO 300 B.C.)
Upon completion of the course, the students will be able to-
CO1: Describe Prehistory and Proto-history
CO2: Classify urbanization in the Gangetic Basin
CO3: Classification of Buddhism and Jainism
CO4: Acquire knowledge about Sanskrit, Pali literature
CO5: Identify Early Indian Maps
CO6: Acquire knowledge of Vedic, Jain, Buddhist culture and their literature
CO7: Discuss ancient Republic and Mahajanpadas

British Rule in India (1757 to 1857 A.D.)
Upon completion of the course, the students will be able to-
CO1: Explain modern Indian history
CO2: Identify expansion of British Rule in India
CO3: Distinguish detail account of British Raj as well as its overall impacts on The Indian Society
CO4: Evaluate renaissance and social reform movement in India
CO5: Explain early resistance to British rule
CO6: Discuss reasons behind the revolt 1857

Semester IV
B.A. T.Y.
Historiography
Upon completion of the course, the students will be able to-
CO1: Write articles on historical topics, Writings History and Techniques of historical Writing
CO2: Developed their ability to access critically historical analysis and argument past and present
CO3: Gained an understanding of the development of the academic study of history Throughout the world since the later eighteenth century
CO4: Explain recent and contemporary debates in the theory and practices of historical writings

CO5: Gained insight into current methodologies, theories, and concepts, currently in use within the historical discipline
CO6: Discuss Historiographical traditions outside the west
CO7: Identify history as scientific discipline

History of National Movement (A.D. 1885-1947)

Upon completion of the course, the students will be able to-
CO1: Explain early political awakening in Indian freedom struggle
CO2: Discuss origin and development of Indian national congress
CO3: Explain various phases of the national movement
CO4: Identify difference between moderates, extremists and revolutionaries
CO5: Comprehend socio-religious scenario and the social reformation
CO6: Discuss freedom movement under the Mahatma Gandhi‟s leadership
CO7: Explain Revolutionary movement in India
CO8: Discuss evolutionary process of constitutional developments

Women Struggle in Modern India

Upon completion of the course, the students will be able to-
CO1: Discuss women contribution in Indian freedom struggle
CO2: Explain actual condition of women in Colonial period
CO3: Discuss past and present existing social, political, religious and economic condition of women in modern India
CO4: Explain various superstitions, wrong traditions related to women in modern Indian history

Semester VI

Fields of History

Upon completion of the course, the students will be able to-
CO1: Explain advance and assist Archaeological research
CO2: Discuss participation in archaeology throughout society, identifying and addressing barriers to inclusivity
CO3: Explain various career opportunities in the field of Museology, and tourism
CO4: Identify various types of career opportunities in the field of Tourism, Archaeology Museology etc

Landmarks in the History of Modern World

Upon completion of the course, the students will be able to-
CO1: Discuss rise of Modern World
CO2: Classify growth of capitalism
CO3: Identify world maps –Oceanic Explorations, Europe in 1815, important stages of World War, and important centres of International trade
CO4: Explain rise and development of Democracy in modern world
CO5: Discuss freedom struggle in America, French, Russia, China, India and other part of the world
CO6: Explain new ethics of politics, philosophy, political, economical, and military trends in modern world

Glimpses of the history of Marathwada

Upon completion of the course, the students will be able to-
CO1: Discuss salient features of history of Marathwada
CO2: Analyse contribution of Marathwada in Hyderabad Freedom Struggle
CO3: Discuss Marathwada freedom struggle with Indian freedom Struggle
CO4: Explain women contribution of Marathwada in freedom struggle
CO5: Identify socio- religious movements in Marathwada
CO6: Explain work of Swami Ramanand Teerth, and Police Action by Indian Government

BA Political Science

Programme Specific Outcomes
At the time of graduation, the students will be able to-
PSO1: Understand basic concepts of Political Science
PSO2: Describe origin and politics of Maharashtra state
PSO3: Explain Indian Government and Politics
PSO4: Identifyideology of political parties
PSO5: Discuss concept and approaches of international relations
PSO6: Understand western political thoughts
PSO7: Explain major political ideologies
PSO8: Understand Indian political thoughts

F.Y. B.A. Semester I

Basic Concepts of Political Science
Upon completion of the course, the students will be able to-
CO1: Describe Fundamental concepts of Political science
CO2: Explain origin of state
CO3: Write meaning and theory of Sovereignty.
CO4: Explain concept of Citizenship

Government and Politics of Maharashtra
Upon completion of the course, the students will be able to-
CO1: Describe origin of Maharashtra state
CO2: Classify organs of the state government
CO3: Explain cooperative movement and movements of Peasants
CO4: Explain Dalit and Feminist movements in Maharashtra

Semester – II

Basic Concepts of Political Science
Upon completion of the course, the students will be able to-
CO1: Explain concept of Rights
CO2: Identify importance of liberty, equality and justice
CO3: Write down meaning, types and merits-demerits of Democracy
CO4: Write meaning and functions of Welfare state

Government and Politics of Maharashtra
Upon completion of the course, the students will be able to-
CO1: Write down structure and functions of Panchayati Raj in Maharashtra
CO2: Write down importance of Panchayati Raj in Maharashtra
CO3: Explain ideology and programmes of main National political parties in Maharashtra
CO4: Explain ideology and programmes of main domestic political parties in Maharashtra

S.Y. B.A. Semester – III

Indian Government and Politics
Upon completion of the course, the students will be able to-
CO1: Write down sources and features of Indian Constitution
CO2: Explain fundamental rights and directive principles of state policy given in Indian Constitution
CO3: Classify structure of the Union government of India
CO4: Write down budgetary process and functions of important parliamentary committees
CO5: Explain structure and functions of Attorney General and CAG of India

International Relations

Upon completion of the course, the students will be able to-

CO1: Discuss meaning, nature, scope and significance of International relations

CO2: Explain main approaches to the study of International relations

CO3: Describe India‟s foreign policy in regards of its principles and objectives

CO4: Explain concepts of National Interest, National Power and Deterrence

CO5: Describe Balance of Power and NAM

Semester – IV

Indian Government and Politics

Upon completion of the course, the students will be able to-

CO1: Write down structure and functions of Supreme court of India and recognise its importance

CO2: Discuss about relations between Centre and States. Explain the division of powers between them

CO3: Describe composition, power and function of Election commission of India and explain the electoral reforms in India

CO4: Identify challenges before Indian democracy

International Relations

Upon completion of the course, the students will be able to-

CO1: Identify relevance of Collective security and UNO in international environment

CO2: Identify major issues like terrorism and environmentalism in internationalism

CO3: Outline structure and functions of international organisations such as IMF, WB, WTO

CO4: Explain organisation of SAARC and ASEAN.

T.Y. B.A.

Semester – V

Indian Political Thinkers

Upon completion of the course, the students will be able to-

CO1: Write down views of Raja Ram Mohan Roy on Religion and Social and Political system of India.

CO2: Describe religious, political and social thoughts of Dayanand Saraswati

CO3: Explain liberal and political thoughts of Gopal Krishna Gokhale

CO4: Recall views of Lokmanya Tilak on Nationalism and Social reform

CO5: Write Mahatma Gandhi‟s views on religion and explain his concept of “Ram Rajya”

Western Political Thinkers

Upon completion of the course, the students will be able to-

CO1: Recall Aristotle‟s views on state, citizenship and revolution

CO2: Describe Machiavelli‟s advice to Prince, views on religion, morality and human nature

CO3: Classify theory of Social Contract of Hobbes, Locke

CO4: Explain concept of Utilitarianism of J. S. Mill and write down his views on liberty and representative government

Political Ideologies

Upon completion of the course, the students will be able to-

CO1: Classify major political ideologies

CO2: Describe Nationalism

CO3: Describe Feminism

CO4: Discuss on Liberal ideology

Semester – VI

Indian Political Thinkers

Upon completion of the course, the students will be able to-

CO1: Write views of Maulana Azad on religion and politics and Hindu-Muslim Unity. Explain his ideas of nationalism and synthesis nationalism

CO2: Explain Views of J. Nehru on democracy and socialism, nationalism and internationalism
CO3: Recall critique of Marxism by M. N. Roy and explain his radical thoughts
CO4: Recall relevance of thoughts of Dr. Ambedkar and his views on religion, society, democracy and economy
CO5: Explain idea of total revolution by Jaya Prakash Narayan

Western Political Thinkers

Upon completion of the course, the students will be able to-
CO1: Classify theory of Social Contract of Rousseau
CO2: Describe views of Jeremy Bentham on State, Government and Rights and Utilitarianism
CO3: Explain Marxism and its importance
CO4: Write down Laski‟s views on Liberty

Political Ideologies

Upon completion of the course, the students will be able to-
CO1: Describe socialism and communism
CO2: Understand Anarchism
CO3: Indicate the need of Environmentalism in politic
CO4: Criticize ideology of fascism

B.A. Sociology

Program Specific Outcomes
At the time of graduation, the students will be able to-
PSO1: Understand nature, scope and basic concepts of Sociology
PSO2: Learn critical evaluation of theories in sociology
PSO3: Understand concepts of social relations, social control, values and culture
PSO4: Acquire significance of social institution, caste system, religion, nationalism, integrity, equality and justice
PSO5: Follow new stream of thoughts and theories of social thinkers
PSO6: Gain knowledge about various social groups like tribal community, women community, etc

B. A. Sociology
SEMISTER I

Introduction to sociology

At the completion of the course, the students will be able to:
CO1: Explain concepts of theoretical perspectives in sociology and how they are used in sociological explanations of social behaviour
CO2: Describe how social interactions are influenced by local, regional, national, and global cultures
CO3: Describe origin and the development of sociology in general and development in India in particular
CO4: Elaborate various approaches and principles of sociology
CO5: Give importance and uses of sociology in present society

Individual and Society

At the completion of the course, the students will be able to:
CO1: Give Importance of Indian culture and Socialization
CO2: Describe concept of social Structure
CO3: Elaborate origin of caste system
CO4: Explain factor of social change and social control
CO5: Write concept of conformity and deviance

SEMISTER II

Introduction to subfield of sociology

At the completion of the course, the students will be able to:
CO1: Give Importance of Scope
CO2: Describe concept of social psychology
CO3: Elaborate origin of the political sociology

CO4: Explain factor of anthropology
CO5: Write concept of applied sociology

Indian Social Composition
At the completion of the course, the students will be able to- At the completion of the course, the students will be able to-
CO1: Explain features of Indian society
CO2: Describe population factor & Impact
CO3: Write importance of Secularism in Indian society
CO4: Elaborate structure of rural society in India
CO5: Give importance of Democracy in India

SEMISTER III

Problems of rural India
At the completion of the course, the students will be able to:
CO1: Explain Problem's of rural women
CO2: Describe Domestic violence law
CO3: Explain education Dropout in rural area
CO4: Give India rural area Economy
CO5: Elaborate major issue in Development

Contemporary Urban issues
At the completion of the course, the students will be able to:
CO1: Explain concept of Urbanization
CO2: Elaborate cause and impact of Indian Migration
CO3: Explain various types of urban planning
CO4: Give importance of Globalization
CO5: Evaluate urban change

SEMISTER IV

Population in India
At the completion of the course, the students will be able to:
CO1: Explain basic concepts of Indian population **CO2:** Describe density of population in India **CO3:** Write on human population dynamics
CO4: Elaborate population growth and environment
CO5: Give importance of population policy in India

Sociology of development
At the completion of the course, the students will be able to:
CO1: Describe conceptual perspectives on development
CO2: Explain concept of sustainable development
CO3: Write on problems of Poverty & Unemployment,
CO4: Elaborate view of capitalist socialist and mixed approaches
CO5: Give importance Impact of Government schemes in India

SEMISTER V

Sociological Tradition
At the completion of the course, the students will be able to:
CO1: Give Scope industrial revolution
CO2: Describe French revolution
CO3: Explain theory low of three stages
CO4: Elaborate Durkheim theory of suicide

CO5: Describe theory of Karl Marx‟s Class struggle

Introduction to research methodology

At the completion of the course, the students will be able to:
CO1: Give Scope and Importance of Social Research
CO2: Describe Types of Research
CO3: Explain Scientific Research Process
CO4: Elaborate difference between Theory and Research
CO5: Describe problem of objectivity in Research

Social Problem in India

At the completion of the course, the students will be able to:
CO1: Explain Problems of corruption in India
CO2: Elaborate causes & Effects of Suicide in India
CO3: Give importance of industrial Project in India
CO4: Explain deference between rural and urban society in India
CO5: Describe educational equality in India

SEMISTER VI

Sociological Theories

At the completion of the course, the students will be able to:
CO1: Explain theory of social action
CO2: Elaborate Robert matrons theory of role set
CO3: Describe Lewis Coser theory of violence
CO4: Explain symbolic interaction theory
CO5: Write on theory of power and authority

Social Research Methods

At the completion of the course, the students will be able to:
CO1: Explain techniques of Sociological Investigation
CO2: Describe use of computer in social research
CO3: describe introduction of SPSS
CO4: Elaborate utility of social research
CO5: Give use of internet in social research

Social Disorganisation in contemporary in India

At the completion of the course, the students will be able to:
CO1: Explain concept and cause of social disorganisation
CO2: Elaborate women violence in India
CO3: Describe terrorism and nakshalism in India
CO4: Explain Regional imbalance in India
CO5: Write changing values and culture

Project Work

At the completion of the course, the students will be able to:
CO1: Write Importance of research culture
CO2: How collects data in field work
CO3: Describe impact of problems on society
CO4: Elaborate importance of research methodology

M.A. English

Program Specific Outcomes At the time of post graduation, the students will be able to-

PSO1: Appreciate literary texts aesthetically
PSO2: Teach English language
PSO3: Acquire literary and linguistic competence
PSO4: Acquaint themselves with the history of English literature
PSO5: Understand how contemporary historical political, social and other realities influence the literary output
PSO6: Proficient enough to distinguish between the features of various genres

Course Outcomes

M A English Part I Semester I & II

Paper I– Literature in English- 1550-1798

Upon completion of the course, the students will be able to-
CO1: Know the social, political and literary history of the period
CO2: Acquaint themselves with Metaphysical Poetry
CO3: Learn peculiarities of Shakespearean Plays
CO4: Know the implication of literature in human life
CO5: Understand the basics of criticism

Paper II– Literature in English- 1798-2000

Upon completion of the course, the students will be able to-
CO1: Know the characteristics of Romanticism
CO2: Understand the Romantic poetry
CO3: Have a sound understanding of contemporary world as reflected in Romantic poetry
CO4: Learn the notion of problem plays

Paper III– Structure of Modern English

Upon completion of the course, the students will be able to-
CO1: Pronounce and write speech sounds
CO2: Acquaint themselves with three fold pronunciation
CO3: Deal with phonemes and syllabus
CO4: Understand the notion of dialect
CO5: Have a command on various phrase types, word formation, clauses, etc

Paper IV– Colonial Post Colonial Literature

Upon completion of the course, the students will be able to-
CO1: Understand the idea of Colonization
CO2: Know the impact of colonization on the colonised countries
CO3: Unravel the complexities of India during the British Raj
CO4: Come across exploitation Africa by the colonial powers
CO5: Know the concept of Magic Realism

M A English Part II
Semester III & IV

Paper V– Critical Theory

Upon completion of the course, the students will be able to-
CO1: Acquaint themselves with major modern critical schools
CO2: Understand multi-faceted critical and intellectual position of theorists
CO3: Trace socio-political and cultural situation deployed in literary text
CO4: Properly understand structuralism
CO5: Have a sound understanding of various critical theories

Paper VI–Indian Writing in English
Upon completion of the course, the students will be able to-

CO1: Get introduced to Indian English literature
CO2: Understand undercurrents depicted in the prescribed poems
CO3: Know Indian literary theory
CO4: Come across the socio-political and other strands depicted in literary piece
CO5: Aesthetically enjoy short stories of Sadat Hassan Manto

Paper VII–English Language Teaching

Upon completion of the course, the students will be able to-
CO1: Acquire new methodologies of teaching English language
CO2: Know a brief history of language teaching
CO3: Have skills of planning lessons and handling material
CO4: Acquire and teach communication skills
CO5: Make the process of teaching and learning more interesting

Paper VIII Major Form: Fiction

Upon completion of the course, the students will be able to-
CO1: Be familiarized with various trends and movements concerning fiction
CO2: Understand novel as a genre, literary history and important shifts in styles and themes
CO3: Learn the experiences and world view as reflected in the novels they have studied
CO4: Be familiarized with socio, cultural, political aspects of novels
CO5: Know issues of the colonised world as dealt with in the prescribed texts