# BHAWABHUTI MAHAVIDYALAYA AMGAON PROGRAMME OUTCOMES

### Students of all undergraduate programmes at the end of graduation would be able to:

- **PO1: CRITICAL/LOGICAL THINKING ABILITY**: Take decisions based on issue specific or universal logic that is in line with personal, organizational and society interests and would differentiate among wrong and right assumptions.
- **PO2: EFFECTIVE COMMUNICATION**: Communicate at personal level in a well-rounded manner. Communicate using correct language. Communicate at office, organization in certain terms.
- **PO3: SOCIAL INTERACTION**: Produce meaningful interaction in the society so as to benefit mutually. The graduate would be effective at group activity.
- **PO4: EFFECTIVE CITIZENSHIP:** Play a role of nationalistic citizen either in civil life or in the Services.
- PO5: ETHICS: Understand and implement Personal, Social, Cultural and National Values with a sense of responsibility.
- **PO6: GLOBAL UNDERSTANDING**: Identify global concerns over Environment, Scientific Temperament Coexistence, Sustainability, Water & Energy Crisis, and Extremism and act accordingly.
- **PO7: HUMAN RESOURCE**: Offer Services as a meaningful Human Resource through lifelong learning and cater to Women Empowerment.
- PO8: HAPPYNESS: Lead and Support Happy and Satisfied Life.

# PROGRAMME SPECIFIC OUTCOMES

### Students of undergraduate programme in Arts (B.A.) at the end of graduation would be able to:

- PSO1: Communicate effectively in Marathi/Hindi and English.
- PSO2: Appreciate literature.
- PSO3: Apply knowledge of History and Geography.
- PSO4: Understand principles and practices in politics and allied deviations of practice from theory.
- PSO5: Apply the principles of economics and comment on financial and economic policies.
- PSO6: Cope up with Home management through study of home economics.
- PSO7: Lead the society on social and political front.
- PSO8: Become a resource of our rich historical and economic heritage for the future generation.
- PSO9: Become a resource of our rich literature heritage for the future generation.
- PSO 10: Provide effective leadership in services

# Students of undergraduate programme in Commerce (B.Com.) at the end of graduation would be able to:

- PSO 1: Communicate effectively in Marathi/Hindi and English.
- PSO 2: Appreciate economics.
- PSO 3: Apply knowledge of Finance and Accounting.
- PSO 4: Understand principles and practices Income tax and allied deviations of practice from theory.
- PSO 5: Apply the principles of economics and finance in banking.
- PSO 6: Cope up with Finance Management.
- PSO 7: Provide Service in Banking and Finance.
- PSO 8: Exhibit and employ managerial skills.
- PSO 9: Become a resource of Business, Company Laws and Income tax knowledge.
- PSO 10: Provide oneself as a resource in the design and/or decoding of economic practices.

### Students of undergraduate programme in Science (B.Sc.) at the end of graduation would be able to:

- PSO 1: Communicate effectively in Marathi/Hindi and English.
- PSO 2: Appreciate the principles of Physical sciences, Biological sciences and mathematics.
- PSO 3: Apply knowledge of Biology in biodiversity conservation.
- PSO 4: Understand and educate people on energy & water crisis and population explosion.
- PSO 5: Apply the knowledge of physical sciences in understanding hazards to the environment.
- PSO 6: Cope up with experimental aspects.
- PSO 7: Provide Service in science teaching and propagation.
- PSO 8: Exhibit and employ computational skills.
- PSO 9: Become a resource of scientific knowledge.
- PSO 10: Provide oneself as a resource in the scientific development.

# **Course Outcomes**

# DEPARTMENT OF BOTANY

# SEMESTER I: Course on Viruses, Prokaryotes, Algae Fungi, Lichen, and Plant-Pathology, Bryophyta, Biofertilizer and Mushroom Cultivation.

- CO 1: The student should be able to understand the structure and life cycle of viruses as well as viral evolution.
- CO 2: know the mechanisms of host immune responses to viral infections.
- CO 3: understand the pathogenesis of viral infections.
- CO 4: Understand concepts of growth and reproduction of bacteria.
- CO 5: Understand the useful and harmful activities of Bacteria, Viruses and Algae.
- CO 6: Know anatomy of prokaryotic cell.
- CO 7: Learn about the structure, pigmentation, food reserves and methods of reproduction of Algae.
- CO 8: Learn about the structure, pigmentation, food reserves and methods of reproduction of Fungi.
- CO 9: Know about the Economic importance of algae, Fungi and lichen.
- CO10: Studied some plant diseases with special reference to the causative agents, symptoms, and etiology and control measures.
- CO 11: To know the Morphology, Anatomy and life cycle of different members of bryophytes.
- CO12: To know about the scope and Importance of Biofertilizer.
- CO13: To know about the various microbes used as a Biofertilizer.
- CO14: To know about the commercial production of Biofertilizers.
- CO15: Learn about Nutritional and medicinal value of edible mushroom.
- CO16: To know about the technology of Mushroom cultivation.

# SEMESTER II: Course on Pteridophyta & Gymnosperms, Palaeobotany, Morphology of Angiosperms, Soil analysis and floriculture

- CO 1: Understand the morphological diversity of Pteridophytes.
- CO 2: Understand the economic importance of Pteridophytes.
- CO 3: Know the evolution of Pteridophytes.
- CO 4: To gain knowledge about life cycles of gymnosperm plants.
- CO 5: To explain about fossils and fossilization.
- CO 6: To understand about geological time scale.
- CO 7: Understand the habit of the angiosperm plant body.
- CO 8: Know the vegetative characteristics of the plant.
- CO 9: Learn about the reproductive characteristics of the plant.
- CO10: Understand the plant morphology.
- CO11: Know the types of soil.
- CO12: Understand the physical and chemical properties of soil.
- CO13: To know the commercial aspect of Floriculture
- CO14: Understand the method of cultivation of flowers and diseases and control measures.

# SEMESTER III: Course on Angiosperm Systematics, Embryology, Indoor garding, Angiosperm Anatomy and Horticulture

- CO1: To know the origin of Angiosperms (Benettitalean theory)
- CO2: To gain proficiency in the use of keys and identification manuals for identifying any unknown plants to species level.
- CO3: To Know the fossil Angiosperm i. e Flower (Sahanianthus) and Fruit (Enigmocarpon).
- CO4: To understand Botanical Nomenclature.
- CO5: To explain Modern trends in Taxonomy.

- CO6: To understand the system of Classification along with merits and demerits.
- CO7: To describe Dicot and Monocot families.
- CO8: To have knowledge of Pollination types and Significance.
- CO9: To describe structure of Anther, Pollen grain and development of Gametophyte.
- CO10: To understand types of ovule, Megasporogenesis and development of female gametophyte.
- CO11: Familiarize about Double fertilization and triple fusion.
- CO12: Gain knowledge on structure of Dicot embryo and Monocot Embryo.
- CO13: Know in detail about landscaping and scope of Landscaping.
- CO14: Learn about the Indoor Gardening and factors required for growing house plant.
- CO15: To know about popular House plant in foliage, ferns, palms, Flowering plants and orchid category.
- CO16: To know the characteristics of meristematic tissue and classification based on meristem.
- CO17: To Understand about the simple permanent tissue and their functions.
- CO18: To Understand about the Complex permanent tissue and their functions.
- CO19: Learn about the different theory such as apical cell theory, Histogen theory, Tunica corpus Theory and Newman Theory associated with the apical meristem of root and stem.
- CO20: To understand the primary and secondary growth in stem and root.
- CO21: To learn about the anatomy of Dicot and Monocot Leaf.
- CO22: To Understand the scope and importance of horticulture and method of propagation of Horticultural crops.
- CO23: To gain knowledge about the Technique of Bonsai Preparation.

# SEMESTER IV: Course on Cell Biology, Evolution, Seed Technology, Genetics, Molecular Biology and Plant Nursery

- CO1: To gain knowledge of plant cells, tissues and their functions.
- CO2: To know about the structure and function of different cell organelles of cell,
- CO3: To know the molecular organization of chromosome.
- CO4: To understand cell division in somatic cell and germ cell.
- CO5: To know the method and techniques of plant breeding.
- CO6: Learn about the evolution in plants according to Neo- Darwinism and Millers theory.
- CO7: To Learn about the structure of seed.
- CO8: To describe the causes of seed dormancy and breaking of seed dormancy.
- CO9: To know the seed technology and Commercial types of seed.
- CO10: To have knowledge of the nature and function of genes, processes of inheritance.
- CO11: To describe linkage, crossing over and mutations.
- CO12: To Understand Structure and organization of gene, expression and regulation of gene (Lac operon concept), Genetic code; properties and evidences
- CO13: To Know DNA replication, different forms of RNA and their roles, concept of exons and introns, Transcription and Translation in Prokayotes
- CO14: To Understand Mutation: Point mutation-transition, transversion, frameshift mutation, molecular mechanism.
- CO15: To Understand role of Nursery and its infrastructure.
- CO16: To make planning and seasonal activities for preparing plant nursery.
- CO17: To gain knowledge about the Nursery Management.

# SEMESTER V: Course on Plant Physiology, Mineral nutrition, Hydroponics Plant Ecology and Organic farming.

- CO1: To know the concept and significance of Imbibition, Diffusion, Osmosis, Osmotic pressure and Plasmolysis.
- CO2: To Understand the mechanism of Ascent of sap.
- CO3: To learn about the mechanism of transpiration.
- CO4: Understand the process of Photosynthesis, Respiration and Nitrogen metabolism.
- CO5: To learn about the mechanism of Fermentation.
- CO 6: To understand the movement of plant
- CO7: To know photoperiodism, circadian rhythm and Biological Clock.
- CO8: To Understand the role and deficiency symptoms of Micro and Macronutrients.
- CO9: To learn about Hydroponics.
- CO10: Learn the Approaches to the study of Ecology (Autecology, Synecology and Genecology)
- CO11: Understand the population and Community Ecology
- CO12: To understand the relationship between plants, animals and human being.
- CO13: To learn advantage and disadvantage and Concept of organic farming.
- CO14: Learn about the method of recycling biodegradable kitchen, agriculture and industrial waste.
- CO15: To study the effect of organic manures on growth and yield productivity of various crop plant.
- CO16: To know the method of preparation of Bio compost and vermi-compost.

# SEMESTER VI: Course on Biochemistry, Biotechnology, Herbal technology, Phytogeography, Utilization of Plants, Techniques and pharmacognosy.

- CO1: Learn the properties, Enzyme catalysis and activation energy- Mechanism of enzyme action
- CO2: To know the properties and role of fatty acids, oils and waxes.
- CO3: Know about the morphogenesis and organogenesis in plants
- CO4: Learn the specific and non-specific methods of gene transfer Recombinant DNA technology
- CO5: Applications of Biotechnology in Plant, Animal and Human welfare.
- CO6: To know about the History and Importance of Herbal Technology.
- CO7: To understand the method of cultivation, harvesting, processing, storage and utilization of herbal plants.
- CO8: To know the dye yielding herbal plants.
- CO9: To know the herbs used in cosmetics.
- CO10: To know the causes and control measures of agriculture pollution and Noise pollution.
- CO11: To learn about the natural resources (Renewable and Non-renewable)
- CO12: To study Branches and importance of Ethnobotany.
- CO13: To understand the microscopy and techniques such as electrophoresis, Centrifugation, Spectroscopy and chromatography.
- CO14: To leran about the pharmacognosy.
- CO15: To Know the Biological source, staining, microchemical test, chemical constituents, preparation and uses of drug extracted from Pharmacological plants.

# DEPARTMENT OF COMPUTER SCIENCE

Outcomes (COs): COs are statements that describe what students should be able to do at the end of a course.

# Course – 1 [ Sem – 1 : Programming in C, Fundamenta of Informational Technology ]

### At the end of the course student should able to

- CO1: Describe the characteristics of the Algorithm, Flowcharts and Pseudocode.
- CO2: Formulate a complete logical plan to design small Algorithms and Flowcharts.
- CO3: Understand the basic structure of C programs.
- CO4: Describe the uses of Data types, Arrays, Structures, Pointers and Functions etc.
- CO5: Explain the working of Looping and branching statements in C Programming.
- CO3: Explain the concepts of file handling in C Programming.
- CO7: Identify and demonstrate the small applications on computer system.
- CO8: Understand the use of C language in new applications area.
- CO9: Design a small group of programs in 'C Language' and execute them on system.
- CO10: Understand the concept of Digital Computers, System, Translators and Memories.
- CO11: Explain the working of Storage Devices, Input Output Devices and Networking.
- CO12: Explain the concept of Protocols, Bluetooth and Infrared devices.

### Course – 2 [ Sem – 2 : Object Oriented programming using C++, System analysis and Design ]

# At the end of the course student should able to

- CO1: Understand the concept of Object Oriented Programming.
- CO2: Explain the working of Class, Objects, Constructors, Operator and Functional Overloading
- CO3: Understand the concepts of Inheritance, Virtual Functions and Exception Handling.
- CO4: To know the Structure of C++ Program.
- CO5: Learn about different section of C++ program to design a program.
- CO6: Design a small group of programs in 'C++ Language' and execute them on system.
- CO7: Identify key measurement problems involved in the design and evaluation of System.
- CO8: Assess the collecting, analyzing, Implementing and Testing data in System analysis and design.
- CO9: Design small independent system for business.
- CO10: Understand the concept of Scheduling and Software Reliability and Quality Management

### Course – 3 [ Sem – 3 : Data Structure, Operating Systems ]

### At the end of the course student should able to

- CO1: Understand the uses of Algorithm and their complexity.
- CO2: Describe the concept of Linked List, Stack, Queue, Tree and Graphs.
- CO3: Explain different Sorting and Searching methods.
- CO4: Design an algorithm for any software programs.
- CO5: Understand the concept of Operating System.
- CO6: They are capable to manage CPU Scheduling and memory management.
- CO7: Use different Protection Mechanism to secure our system.
- CO8: Explain the working of deadlock and starvation.
- CO9: Understanding the concept of File Management.

# Course – 4 [ Sem – 4 : Java Programming, LINUX Operating System ]

### At the end of the course student should able to

- CO1: Understand the concept of System Independences.
- CO2: Use of Java Programming in real life to design an windows application.
- CO3: Explain the working Graphical User Interface on web browsers.
- CO4: Understand the concept of Events, Layouts, Menus, Packages, Threads and Applets.
- CO5: Design a small group of programs in 'Java Programming' and execute them on system.
- CO6: Explain the working of LINUX Operating System.
- CO7: Understand Shell, Commands and file ownership to protect data.
- CO8: Demonstrate small Shell program on LINUX operating system.
- CO9: Understand the working with process.
- CO10: Sharing files with other users.

### Course – 5 [ Sem – 5 : Visual Basic Programming, Database Management System ]

#### At the end of the course student should able to

- CO1: Understand the working of Visual Basic Window Components.
- CO2: Describe the Basic Programming Fundamentals.
- CO3: Explain ADO, RDO and DAO Concepts in Visual Basic.
- CO4: Understand the concept of C programming with different Instruction
- CO5: Learn about different Forms, MDI Forms and Menus.
- CO6: To know the Structure of Visual Basic program with different modules.
- CO7: Design a small group of programs in 'Visual Basic Language' and Design Applications.
- CO8: Understand the concept of Database management system.
- CO9: Explain the working E-R Model and Relational Model.
- CO10: Describe the Concept of Functional Dependency.

# Course – 6 [ Sem – 6 : Compiler Construction, SQL and PL/SQL ]

### At the end of the course student should able to

- CO1: Explain Compiler, Interpreter and Translators.
- CO2: Learn about Phases of Compiler and their working.
- CO3: Explain the role of lexical analyzer and context free grammars.
- CO4: Analysis Parsers and DAG representations.
- CO5: To know about Machine model and their working.
- CO6: Understand the concept of SQL and PL/SQL.
- CO7: Design a small Query to access data from database.
- CO8: Design PL/SQL programs and execute on Oracle.
- CO9: Explain the working of Functions, Triggers, Views, etc.
- CO10: Use of DDL, DCL and DML commands in SQL.
- CO11: Explain the concept of Procedures.

# DEPARTMENT OF MATHEMATICS

### Course 1 (Sem I):- Matrix,

- CO1: Student should be able to solve system of linear equations.
- CO2: Student should find inverse of a matrix.
- CO3: Student should be able to find the inverse of a function using Cayley-Hamilton Theorem

#### **Theory of Equation**

- CO 4: Student should be able to find the relation between roots of an equation and the coefficients of the Equation.
- CO5: Student should be able to solve equation of degree 3 and 4.
- CO6: Student should be able to form an equation if the roots are give.

#### De Moivre's Theorem

- CO7: Student should be able to write the proof of De Moivre's Theorem using principal of Mathematical Induction
- CO8: Student should be able to find the n<sup>th</sup> roots of complex number.
- CO9: Student should be able to relation between circular and hyperbolic function

### **Group Theory**

- CO10: Student should be able to find given set is a group or not using definition of a group.
- CO11: Student should be able to apply Lagrange's Theorem to find a subgroup of a group.

### Limit, Continuity and Differentiability

- CO12: Student should be able to find the limit and continuity of a function
- CO13: Student should be able to find the n<sup>th</sup> derivative of function using Leibnitz's Theorem.

# Taylor's Theorem and other topics

- CO14: Student should be able to expand any function in the form of a series.
- CO15: Student should be able to Find Curvature and Asymptotes of a curve, and find limit of a function using L Hospital's rule.

#### Partial Differentiation

CO16: Student should be able to find partial derivatives and solve the examples using Euler's Theorem.

### Integration

CO17: Student should be able to find integration of irrational algebraic functions, solve reduction formula and Definite integrals.

### **Course 2 (Sem II):** Three dimensional geometry

- CO1: Student should be able to find equation of a sphere in various forms find the equation of a tangent plane to a sphere.
- CO2: Student should be able to find Equation of right circular cone and cylinder.

### **Differential Equation of First order**

CO3: Student should be able to solve the First order Differential Equation using various methods.

## **Differential Equation of Higher order**

CO4: Student should be able to solve the higher order Differential Equation using various methods and second order differential equation using variation of parameter and known solution.

### **Difference Equation**

- CO5: Student should be able to obtain the difference equation from the given relation.
- CO6: Student should be able to solve Difference equation.

### **Curl, Divergence and Gradient**

- CO7: Student should be able to find Curl, Divergence and Gradient of a function and their application to find solenoidal and irrotational vector fields.
- CO8: Student should be able to evaluate line integral and work done.

### **Double Integration**

- CO9: Student should be able to evaluate double and triple integrals.
- CO10: Student should be able to find area by double integrals.

## Surface and Volume integrals

- CO11: Student should be able to evaluate surface and volume integrals.
- CO12: Student should be able to apply Green's, stoke's and Gauss divergence thereom.

# Improper integrals

- CO13: Student should be able to verify whether the given integral is proper or improper using comparison tests.
- CO14: Student should be able to solve problems based on properties of Beta and Gamma functions.

# Course 3 (Sem III): Limit and Continuity of Function of two Variable

- CO1: Student should be able to apply various mean value theorems.
- CO2: Student should be able to find the limit and continuity of a function of two variables.
- CO3: Student should be able to expand a function of two variables in the form of a series.

# Envelops and Maxima and minima for function of two variables.

- CO4: Student should be able to find envelop of various families of curves.
- CO5: Student should be able to find maxima and minima for the function of two variables.

### Sequence and Series

CO6: Student should be able to define various sequence and series and also able to find the limit of sequence and series. Student should be able to test convergence of sequence and series.

# Bessel's and Legendre's Equation

CO7: Student should be able to solve special types of differential Equations using power series Solution and study of their solutions.

### Laplace Transform and solution of Ordinary Differential Equation

- CO8: Student should be able to find Laplace transform of various functions and inverse Laplace Transform.
- CO9: Solution of DE, partial DE, and Simultaneous DE, DE with variable coefficients using Laplace transform.

#### **Group Theory**

CO10: Student should be able to study special types of groups, group homomorphism and group isomorphism.

### Course 4 (Sem IV): Simultaneous DE in three variables

CO1: Student should be able to solve simultaneous DE in three variables, Total differential Equation. Student should be able to solve first order PDE.

#### Special Methods to solve PDE

CO2: Student should be able to solve PDE of first order by Charpit's method and Jacobi's method.

# PDE of higher order

CO3: Student should be able to solve higher order PDE using various methods.

# **Calculus of Variation**

CO4: Student should be able to find minimum and maximum function satisfying given condition.

### Virtual work, Catenary and coplanar forces

CO5: Student should be able to find resultant of coplanar forces, various examples of catenary in daily life.

## **Velocity and Acceleration and SHM**

CO6: Student should be able to find components of velocity and acceleration in radial and transverse direction and tangential and normal direction.

CO7: Student should be able to study SHM and its applications.

# Mechanics of a particle

CO7: Student should be able to find equation of a motion of a particle using Lagrange's theorem.

### **Central forced Motion**

CO8: Student should be able to study the planetary laws of motion.

#### Course 5 (Sem V): Fourier series

CO1: Student should be able to transform any function in the form of Trigonometric series.

### Riemann-Stieltjes integral

CO2: Student should be able to know the basic of development of calculus

### **Analytical Function**

CO3: Student should be able to apply Cauchy-Riemann theorem to complex function for Differentiation and its applications

### **Conformal Mapping**

CO4: Student should be able to find the image of a domain under bilinear transformation and fixed points of bilinear transformations.

### Countable and uncountable sets, Metric Space

CO5: Student should be able to study countable and uncountable sets. Student should be able to find whether the given space is Metric space or not.

# **Compactness, Completeness and Connectedness**

CO6: Student should be able to study metric space in more details in concern with above properties.

#### Ring Theory and Field

CO7: Student should be able to study Ring and Field which is advance study of Group theory

# **Complex Integration**

CO8: Student should be able to evaluate various complex integrals and apply Cauchy Integral theorem and Residue Theorem.

# Course 6 (Sem VI): Group Automorphism

CO1: Student should be able to study isomorphism from a group on to itself.

### Vector Space, Linear Transformation, Matrix and Inner product Space

CO2: These three topics are interlinked with each other. Student should be able to find whether the given space is vector space or not. Student should be able to find a matrix associated with a linear map.

### **Discrete Mathematics**

CO3: Student should be able to study equivalence relation its applications. Student should be able to study lattices, Boolean algebra and graph theory.

# **Number theory**

CO4: Student should be able to study divisibility, prime numbers, congruence relation and Chinese remainder theorem. Finally student should be able to solve Diophantine equation.

# DEPARTMENT OF PHYSICS

<u>Outcomes</u> : COs are statements that describe what students should be able to do at the end of a course.

(COs)

### SEMESTER I: Course on Material Properties, Mechanics, Electrostatics & Electrodynamics

- CO 1: The student should be able to understand elastic properties of solids and differentiation among various solids based on these properties.
- CO 2: The student should be able to appreciate application of beams, cantilever and torsion.
- CO 3: The student should be able to understand viscous nature of fluids and the Bernouli's principle along with dependence of viscosity on temperature and pressure.
- CO 3: The student should be able to appreciate dependence of surface tension in liquids on cohesive & adhesive forces and understand basic principle behind Capillarity.
- CO 4: The student should be able to understand Coriolis Forces and applications.
- CO 5: The student should be able to appreciate moment of inertia and principle behind single & multistage rockets.
- CO 6: The student should be able to understand Coulomb's law in electrostatics, field and potential due to point charges and dipoles.
- CO 7: The student should be able to differentiate between polar and non polar dielectrics.
- CO 8: The student should be able to describe basics of a parallel plate capacitor.
- CO 9: The student should be able to appreciate time varying electric and magnetic fields arising out of varying currents and associated laws.
- CO 9: The student should be able to deal with a.c. and d.c. circuits using passive components such as resistor, capacitor and inductor.
- CO 10: The student should be able to understand electromagnetic resonance in LCR circuit.
- CO 11: The student should be able to perform experiments on material properties.
- CO 12: The student should be able to perform experiments on LR, CR, LCR circuits and Transformer characteristics.

# SEMESTER II: Course on Oscillations, Kinetic theory of gases and Thermodynamics, Gravitation, Astrophysics, Magnetism and Magneto statics

- CO 1: The student should be able to appreciate Free, damped & Forced Oscillations and solve Differential Equations thereof.
- CO 2: The student should be able to understand respective phenomenon of resonance in forced oscillations.
- CO 3: The student should be able to recap and grasp kinetics involved in an ideal gas and correlate gaseous properties.
- CO 4: The student should be able to appreciate Transport phenomena in gases in respect of momentum, energy and mass.
- CO 5: The student should be able to correlate the transport phenomena with gaseous properties such as Viscosity, Thermal Conductivity and Self Diffusion.
- CO 6: The student should be able to appreciate basic thermodynamic properties of gases.
- CO 7: The student should be able to implement the thermodynamic principles to understand Heat Engine and Liquefaction of gases.
- CO 8: The student should be able to understand Newton's theory of gravitation, Kepler's laws of planetary motion and an introduction to Galaxy.
- CO 9: The student should be able to understand The constituents of universe, solar systems, To measure size of a planet, To measure distance of a planet, Mass of the sun and the planets, Structure of sun, Solar interior, surface temperature of sun, Solar luminosity, Stellar spectra, The Milky way (shape, size, clusters), Cosmological theories of the universe.
- CO 10: The student should be able to understand diamagnetism, paramagnetism and associated theories.
- CO 11: The student should be able to understand ferromagnetism and its theory and concepts of ferrimagnetisms and anti-ferromagnetism.
- CO 12: The student should be able to understand concepts in magneto-statics and related laws.
- CO 13: The student should be able to perform experiments on Oscillations, Heat and Thermodynamics, radiation and magnetism.

# SEMESTER III: Course on Sound waves, Applied acoustic, Ultrasonic and Power supply Physical optics and Electromagnetic waves

- CO 1: The student should be able to appreciate basics of sound and Human ear.
- CO 2: The student should be able to grasp basic concepts and applications in applied acoustics such as Transducers (Crystal microphone, Moving coil loud speaker), Recording and reproduction of sound (Magnetic tape, Cine film, Compact disc), Acoustics of building
- CO 3: The student should be able to grasp ultrasonic waves, its production and applications.
- CO 4: The student should be able to grasp and apply rectification using p-n junction, Zener diode and IC based voltage and current regulation.
- CO 5: The student should be able to grasp concepts and applications of thin film interference, Newton's Rings and interferometers.
- CO 6: The student should be able to have a comprehensive knowledge of Fresnel's and Fraunhoffer's diffraction.

- CO 7: The student should be able to have a comprehensive knowledge of Brewster's law, Polarization by scattering (concept only), Blue of the sky(only idea), Uniaxial and biaxial crystal, positive and negative crystal, ordinary and extraordinary rays, Nicol prism, its application as an analyzer and polarizer, Double refraction in uniaxial crystal letc.
- CO 8: The student should be able to have a comprehensive knowledge of Maxwell's Theory electromagnetism.
- CO 9: The student should be able to perform experiments on Sound, Ultrasound, Interference, Diffraction and Polarization.

### **SEMESTER IV**: Solid state physics, X-ray and Laser, Solid State Electronics and molecular Physics

- CO 1: The student should be able to appreciate introductory knowledge of Crystal structure.
- CO 2: The student should be able to grasp basic concepts of Bravais Lattices, Unit cell, primitive cell, translation vectors, symmetry elements etc.
- CO 3: The student should be able to understand continuous and characteristic X-ray spectra.
- CO 4: The student should be able to grasp correlation of X-ray spectra to periodic table and X-ray applications, reciprocal lattice.
- CO 5: The student should be able to grasp Einstein relations of spontaneous emission, stimulate emission and absorption.
- CO 6: The student should be able to grasp two level and three level laser systems.
- CO 7: The student should be able to grasp construction and working of LED, Solar Cell, Photovoltaic cell and Bipolar Junction Transistor.
- CO 8: The student should be able to grasp construction and working of JFET and MOSFET and amplifier applications.
- CO 9: The student should be able to understand pure rotational and rotation-vibrational spectra of diatomic molecules and application value of these spectra as a material characterization tool.
- CO 10: The student should be able to grasp Raman spectra and spectroscopy and concepts of NMR and ESR spectra.
- CO 11: The student should be able to perform experiments on LASER and Crystallography.
- CO 12: The student should be able to perform experiments on solid state electronic devices such as p-n junction diode, LED, solar cell, Bipolar Junction Transistor and Field Effect Transistor.

# <u>SEMESTER V</u>: Atomic physics, free electron theory and Statistical physics, Quantum Mechanics, Nano-Materials and Nano-Technology

- CO 1: The student should be able to understand Vector model of atomic structure and its experimental verification along with the knowledge of L-S and j-j Coupling schemes, Zeeman Effect and Stark effect.
- CO 2: The student should be able to understand classical free electron theory and quantum mechanical Band theory of solids and be able to differentiate among conductors, semiconductors and insulators.
- CO 3: The student should be able to understand basic concepts of statistical mechanics, probability and Maxwell Boltzmann distribution for an ideal gas.
- CO 4: The student should be able to understand quantum mechanical statistical distribution laws such as B-E and F-D to analyze behavior in Black body radiation and Thermionic emission of electrons.
- CO 5: The student should be able to differentiate among M-B, B-E and F-D distribution functions.
- CO 6: The student should be able to understand basics of quantum mechanics such as Plank's energy equation, wave particle duality, de'Broglie's Hypothesis, Heisenberg's Uncertainty Principle, Group and Phase Velocity, Compton's Effect etc.
- CO 7: The student should be able to understand Schrodinger's Time Dependent and Independent Wave Equations and its one dimensional applications to a free and bound particle along with the knowledge of operators and expectation values.
- CO 8: The student should be have an introduction to nanomaterials (0D, 1D, 2D and 3D), Bottom up and Top Down approaches in preparation of nano-materials and size dependent material properties
- CO 9: The student should be able to understand synthesis and characterization techniques of nano-materials.
- CO 10: The student should be able to perform experiments in modern and quantum physics, probability, CRO and photo-voltaics.

# SEMESTER VI: Relativity, Nuclear physics and Bio-Physics, Electronics, Fiber optics, Communication and Digital electronics

- CO 1: The student should be able to understand basic postulates of Einstein's Special Theory of relativity, its impact on measurement of space and time intervals and Mass-Energy Equivalence.
- CO 2: The student should be able to understand basics of nuclear physics, Nuclear Fission and Fusion, Nuclear Models and methods to detect and accelerate charged nuclear particles.
- CO 3: The student should be able to appreciate nuclear radioactivity such as alpha, beta and gamma decay and artificial nuclear reactions.
- CO 4: The student should be able to understand basic concepts in Biophysics ECG, EEG, EMG and ERG.
- CO 5: The student should understand basic principles, construction and working of biophysical instruments such as colorimeters, Spectrophotometer, PH-Meter and centrifuge.
- CO 6: The student should understand basic construction and working of operational amplifiers (IC 741) and its computing applications.

- CO 7: The student should understand the construction and working of solid state electronic oscillators and concept of tuning circuits.
- CO 8: The student should gain introductory ideas of Fiber optics and its application in communications.
- CO 9: The student should understand basics of Amplitude modulation and Frequency modulation and its use in communication technology.
- CO 10: The student should be able to use Binary, Decimal, Octal and Hexadecimal number systems and appreciate inter-conversions.
- CO 11: The student should be able to design and work upon Logic Gates such as AND, OR, NOT, NAND, NOR, EX-OR and be able to verify Boolean Laws and identities.
- CO 12: The student should perform experiments on Bio-Instruments, Operational Amplifier Applications, Oscillators, Detectors and Modulators.

# DEPARTMENT OF ZOOLOGY

# <u>Course Outcomes</u>: COs are statements that describe what students should be able to understand at the end of course <u>SEMISTER</u>-I: Course on Life and diversity of Animals- Nonchordates (Protozoa to Annelida) And Environmental Biology.

At the end of course student should able to

- CO1: The students able to explain classification of protozoa and diseases caused by Protozon.
- CO2: To classify Phylum Porifera with taxonomic key
- CO3: Describe phylum Coelenterata and coral reef formation
- CO4: Describe Phylum Helminth and parasitic adaptation
- CO5: Describe life Cycle of Ascaris
- CO6: Identify the Characters of Phylum Annelida with its classification
- CO7: Describe the systems of Leech and Vermiculture and its Importance
- CO8: Understand Atmosphere Hydrosphere and Lithosphere
- CO9: Understand renewable and non renewable energy sources
- CO10: Describe the types of Ecosystem
- CO11: Explain food chain, food web and Energy flow in ecosystem.
- CO12: Understand Biodiversity, Wild life, National park, sanctuaries and importance of conservation of Biodiversity
- CO13: Understand effect and control measure of Air pollution, water pollution and Noise pollution
- CO14: Describe toxic effect of heavy metals.

# **SEMISTER-II:** Course on Life and diversity of Animals- Nonchordates (Arthropoda to Hemichordata) and Cell Biology.

At the end of course student should able to

- CO1: Write down the Classification and characteristics of Phylum Arthropoda
- CO2: Describe mouth parts and Reproductive system of Cockroach
- CO3: Describe Insect Vectors and Crustacean larvae
- CO4: Identify the characters of Phylum Mollusca with its classification
- CO5: Describe pearl formation and Molluscan larvae
- CO6: Write down the classification and characteristics of Phylum Echinodermata and Phylum Hemichordata
- CO7: Describe Digestive system and water vascular system of Asterias.
- CO8: Describe the Digestive system, reproduction and Tornaria larva of Balanoglossus.
- CO9: Describe morphology and affinities of Balanoglossus.
- CO10: To study and understand whole cell organelles with their ultra structure and function.
- CO11: Differentiate Prokaryotic and Eukaryotic cell.
- CO12: Describe cell cycle, cellular ageing and elementary idea of cancer.
- CO13: Describe types and structure of chromosome.
- CO14: Describe the structure of giant chromosomes.

### **SEMISTER-III:** Course on Life and diversity of Animals- Chordates (Protochordata to Amphibia) and Genetics.

At the end of course student should able to

- CO1: Write down the Classification and characteristics of Protohordata, Agnatha, Pisces and Amphibia.
- CO2: Describe the morphology and anatomy of Herdmania and Amphioxus.
- CO3: Understand the Ascidian tadpole and retrogressive metamorphosis.
- CO4: Describe the migration in fishes.
- CO5: Explain Parental care and Neotony in Amphibia.
- CO6: Describe gametogenesis and fertilization.
- CO7: Explain post fertilization development of Fish and Types and development of Fish scales.
- CO8: Describe Frog Embryology up to gastrulation
- CO9: Understand detail account of respiratory organs and aortic arches of Frog.
- CO10: To understand basic principles of Mendelian Inheritance
- CO11: To explain polygenic trait, inbreeding, out breeding and hybrid vigor.
- CO12: To Explain the types of chromosomal aberration and gene mutation.
- CO13: To learn the concepts of gene, lethal gene, linkage, crossing over and sex determination

- CO14: Describe Disorder related to chromosomal number.
- CO15: Describe extra cellular genome and cytoplasmic Inheritance.
- CO16: Explain genetic disorder.
- CO17: Understand genetic counselling and basic concepts in population genetics.
- CO18: Understand use of DNA finger printing, sperm bank and karyotyping.

# SEMISTER IV: Course on Life and diversity of Animals- Chordates (Reptilia Aves and Mammals) and Molecular biology and Immunology.

At the end of course student should able to

- CO1: Describe general characters and classification of Reptilia and Mammalia.
- CO2: Explain modern theories of Evolution, Genetic basis of evolutionand races of man.
- CO3: To Explain comparative account of aortic arches and Heart of Reptiles Aves and Mammals.
- CO4: Describe the structure of hen's egg, development of chick and extra embryonic membrane.
- CO5: Describe implantation in mammals and structure of placenta.
- CO6: Describe sources, type and use of stem cell.
- CO7: Explain biological clock in birds and mammals.
- CO8: Explain concept of immune system, Autoimmunity and immunodeficiency, response of T and B cell
- CO9: Understand Structure and function of Antigen –Antibody and their interaction.
- CO10: Understand structure and functions of DNA and RNA.
- CO11: Explain genetic code and Process of protein synthesis.
- CO12: Explain complement system in immune defence.
- CO13: Explain cytokines and its related diseases.
- CO14: Describe autoimmune diseases and their treatment.

# **SEMISTER-V:** Course on General Mammalian Physiology and Aquaculture and Economic Entomology.

At the end of course student should able to

- CO1: Describe the classification, distribution and properties of enzymes.
- CO2: Describe the factors affecting enzyme activity.
- CO3: Explain structure and function of digestive glands.
- CO4: Describe process of digestion and absorption.
- CO5: Describe types and functions of gastrointestinal hormones and vitamins.
- CO6: Explain mechanism of respiration
- CO7: Describe respiratory pigment and respiratory disorder.
- CO8: Explain working of Heart, blood composition, blood function, blood clotting, blood pressure and ECG
- CO9: The Student should gain the knowledge about construction of fresh water aquaculture pond.
- CO10: The Student should gain the knowledge about fish preservation and fish product and by-product.
- CO11: Identify the fish diseases caused by fungi, bacteria, protozoa and helminth.
- CO12: The Student should gain the knowledge about Fabrication, setting, and maintenance of aquarium.
- CO13: Understand the Methods of pest control.
- CO14: The Student should able Identify crop pest and Animal pest
- CO15: The Student should able to control crop pest and animal pest
- CO16: The Student should gain knowledge about Sericulture, Apiculture and Lac culture.

# **SEMISTER-VI:** Course on General Mammalian Physiology and Applide zoology (Biotechniques, Microtechnique, Biotechnology, Bioinformatics and Biostatistic)

At the end of course student should able to

- CO1: Describe types and E. M. Structure of Nerve.
- CO2: Describe conduction of nerve impulse.
- CO3: Explain ultra structure of striated muscle, Properties of muscle and Contraction of muscle.
- CO4: Describe structure of uriniferous tubule and mechanism of urine formation.
- CO5: Write normal and abnormal constituent of urine and process of dialysis.
- CO6: Describe structure and functions of pituitary, thyroid, parathyroid, adrenal and pineal gland.
- CO7: Describe Oestrous and Menstrual cycle.
- CO8: Explain male and femail sex hormones.
- CO9: Explain contraceptives and causes of Infertility in male and female.
- CO10: Understand the concepts and use of autoclave, centrifugation, electrophoresis and principles of calorimeter and ectrophotometer.
- CO11: The student should able to understand process of Microtechnique.
- CO12: The student should able to **understand** process of double staining and histochemical staining.
- CO13: Describe basic concept in recombinant DNA technology, cloning vectors and splicing, isolation of gene.
- CO14: Describe application of biotechnology in Insulin and vaccine production.
- CO15: The student should able to understand basic concept s in Bioinformatics and role of Bioinformatics in life science.
- CO16: Use of biostatistics in life science.

# DEPARTMENT OF CHEMISTRY

**Outcomes (COs):** 

COs are statements that describe what students should be able to do at the end of a course.

SEMESTER I:

Course on Atomic structure Periodic Properties ,Covalent Bond, Ionic solids, s-block elements, Chemistry of Noble Gases, p-block elements, Hydrides, Definitions of some common thermodynamic terms, Statements of first law of thermodynamics, Thermo chemistry, Ideal gas and real gases, Liquid State, Properties of liquid, Surface Chemistry and Catalysis.

- CO1: The student should be able to understand the concept of structure of atom presented by various investigators. The periodic properties of the elements tabulated in the periodic table and there trends should also be understood thoroughly.
- CO2: The student should be able to understand the bonding concept wrt Covalent Bond and Ionic bond.
- CO3: The student should be able to understand the classification of elements such as s- block elements, Chemistry of Noble Gases, p-block elements.
- CO4: The student should be able to understand the idea of various thermodynamics terms, laws of thermodynamics including thermo chemistry.
- CO5: The student should be able to understand important physic chemical properties exhibited by liquids.
- CO6: The student should be able to understand forces acting at the surface of the matter and related catalytic activities.
- CO7: The student should be able to understand the elaborative knowledge of detection of important cations and anions from the inorganic mixture.
- CO8: The student should be able to implement the technique of analysis at industrial RND level.
- CO9: The student should be able to learn the practical aspects of colorimetric studies.
- CO10: The student should be able to determine properties of liquids like S. T. Viscosity in the laboratory. Which vary from one liquid to another?
- CO11: The student should be able to find out the optical properties of the matter.

# <u>SEMESTER II:</u> Course on Structure and Bonding, Mechanism of Organic Reactions, Stereochemistry, Alkanes, Alkenes, Aromatic compounds and Aromaticity. Thermodynamics, Phase Equilibrium, Liquid-Liquid mixtures, nuclear chemistry and molecular structure, Chemical Kinetics

- CO1: The student should be able to understand the bonding concept and related structures associated with bondings.
- CO2: The student should be able to understand mechanistic aspect of various organic reactions.
- CO3: The student should be able understand steriochemical concepts inclusive of separation of recemic mixtures.
- CO4: The student should be able to learn the formation, properties, structure of hydrocarbon wrt alkane, alkene, diene.
- CO5: The student should be familier with the concept of aromaticity and properties of aromatic compounds.
- CO6: The student should be able understand the thermodynamic concept.
- CO7: The student should be able to understand the different phases of matter and liquid liquid interaction.
- CO8: The student should be able to understand the idea of nuclear structure, reaction, stability.
- CO9: The student should be able to understand the kinetics involved during chemical transformation.
- CO10: The student should be able to perform the practicals based on elemental analysis, functional group detection and M.pt.B.pt determination.
- CO11: The student should be able to implement the knowdge of hydrolysis oxidation bromination practically.
- CO12: The student should be able to find out heat of solution, ionization practically.
- CO13: The student should be able to construct phase diagram of three component system (Acetic acid-chloroform-water) from laboratory data.
- CO14: The student should be able to prove the order of the reaction.

# <u>SEMESTER III:</u> Course on Valence Shell Electron pair repulsion (VSEPR), MO theory, Chemistry of transition elements, Errors in Chemical Analysis, Non-aqueous solvents, Chemistry of Lanthanides, Actinides, Orientation, Alcohols, Aldehydes and ketones, Carboxylic Acids.

- CO1: The student should be able to study the ESPER concept.
- CO2: The student should be able to study the different type of d-orbitals wrt 3d, 4d, 5d series element.
- CO3: The student should be able to learn the analytical aspects like mean median etc.
- CO4: The student should be able to learn the mineral acid and bases in non aq.solvent.
- CO5: The student should be able to study the behavior of F-block element.
- CO6: The student should be able to learn the concept o0f orientation and its application.
- CO7: The student should be able to learn the physic chemical properties of hydroxyl compounds.
- CO8: The student should be able to study the behavior of the carbonyl, carboxyl compounds.
- CO9: The student should be able to analyse the component applying volumetric method.
- CO10: The student should be able to analyse the compound systematically.

# <u>SEMESTER IV</u>: Course on Coordination compounds, Isomerism in coordination compounds, Oxidation and reduction, Colorimetery and Spectrophotometery, Separation Techniques, Inorganic Polymers, Solid State, Electrochemistry, Spectroscopy, Quantum Chemistry.

- CO1: The student should be able to study the bonding in coordinate compound, there stability and stereochemistry.
- CO2: The student should be able to learn the concept of redox reaction, involved in inorganic chemistry.

- CO3: The student should be able to understand the various inorganic polymers and there application.
- CO4: The student should be able to understand refractometric studies of the solids.
- CO5: The student should be able to learn the electrolytic concept, interconversion of chemical and electrical energy and its practical application.
- CO6: The student should be able to understand the therotical concept of rotational, Raman spectroscopy and there application.
- CO7: The student should be able study the concept quitisation.
- CO8: The student should be able to prepare actual complexes in the laboratories.
- CO9: The student should be able to separate the different type of ions from mixture.
- CO10: The student should be able to determine lattice, activation energy by performing experiment.

# <u>SEMESTER V</u>: Course on Organic compounds of Nitrogen, heterocyclic compounds\_Quantitative Analysis, Organometallic compounds, spectroscopy, Electrochemistry, Quantum Chemistry and Molecular Orbital Theory, Photochemistry and Raman Spectroscopy, Colligative properties and Macromolecules.

- CO1: The student should be able to understand the physical, chemical properties of nitrogen compound.
- CO2: The student should be able to study the application on heterocyclic compound.
- CO3: The student should be able to understand the detailed study on electrochemical reaction.
- CO4: The student should be able to understand quantum mechanical statistical study and moleculer orbital study.
- CO5: The student should be able to study the photochemical reaction and Raman spectra.
- CO6: The student should be able to understand the different type of physical parameter like freezing point, elevation of B.pt.
- CO7: The student should be able to estimate the different organic compounds.
- CO8: The student should be able to determine the ionic concentration by potential mesurment.
- CO9: The student should be perform acid catalysed iodination of acetone practically.

# <u>SEMESTER VI:</u> Course on Metal ligand bonding in Transition Metal Complexes, Magnetic Properties of Transition Metal Complexes, Organometallic Chemistry, Bioinorganic Chemistry, NMR Spectroscopy, organic synthesis via enolates, carbohydrates, amino acids, peptides, proteins, nucleic acids, synthetic dyes.

- CO1: The student should be able to understand the formation of metal ligand bond and to mesure the magnetic properties of different complexes.
- CO2: The student should be able to understand the role of bioinorganic compounds in human life.
- CO3: The student should be able to understand principal, instrumentation, analytical application of nmr spectroscopy.
- CO4: The student should be able to study role of reactive methylene compounds in synthesis of important organic compounds.
- CO5: The student should understand preparation and physic chemical properties of a variety of organic compounds such as carbohydrates, amino acids, peptides, proteins, nucleic acids.
- CO6: The student should understand the synthetic aspect of a few organic dyes and theire application.
- CO7: The student should understand the importance of gravimetric analysis.
- CO8: The student should be able to colorimetry, spectrophotometric instrumentation
- CO9: The student should able to learn the technique of separation of organic mixture, identification of organic compounds including derivative preparation.

#### DEPARTMENT OF MARATHI

# Course outcomes (BA)

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठाने कला, वाणिज्य, विज्ञान शाखेच्या विद्याध्यर्शकरीता लावलेला सेमिस्टर पॅटर्नचा फायदा विद्यार्थ्यांना नक्कीच झाला. त्यांच्या गुणवत्ता क्षमतेत वाढ झाली.सहाही सेमिस्टरमध्ये उत्तीर्ण होणाऱ्या विद्यार्थ्यांच्या निकालाची टक्केवारी वाढली. त्याचा निकष खालीलप्रमाणे

### अभ्यासक्रम 1 गद्य-पद्य-व्याकरण

- CO1: तेराव्या शतकातील महानुभाव पंथाचे प्रवर्तक श्री चकुधरांच्या लिळेचा अभ्यास
- CO2: छत्रपती संभाजी आणि राजाराम महाराज यांचे स्वराज्य रक्षण कार्य
- CO3: महात्मा ज्योतिराव फूले यांनी शेतकऱ्यांसाठी मांडलेली व्यथा आणि उन्नतीसाठी केलेले मार्गदर्शन
- CO4: सानेगुरुजींच्या "संस्कृती व साहित्य" मधून सुंदर साहित्य व संस्कृतीचा संबंध
- CO5: लक्ष्मीबाई टिळकांच्या रम्तीचित्रे या प्रसिद्ध आत्मचरित्राची ओळख
- CO6: संत ज्ञानेश्वरांच्या अभंगातून नामरमरणांचे महत्व
- CO7: कवी रघुनाथ पंडित, होनाजी बाळा, केशवसूत, कालकवी यांच्या रसपूर्ण काव्याचा अभ्यास
- CO8: व्यावहारीक मराठीचा अभ्यास
- CO9: भाषिक संवादव्यवहाराची मूलतत्वे

### अभ्यासक्रम 2 :- गद्य-पद्य-व्याकरण

- CO1: प्रसिद्ध लेखिका इरावतीबाई कर्वे यांच्या व्यक्तिमत्वाचा अभ्यास
- CO2: वामन कृष्ण चोरघडे यांच्या "संस्कार" कथेचा अभ्यास कवी ग्रेस यांच्या व्यक्तिमत्वातील विविध पैलूंचा अभ्यास
- CO3: दलित साहित्यातील प्रसिद्ध विज्ञानवादी विचार देणाऱ्या बासूरा बागूलांचा लेखन परिचय
- CO4: कवी माधव जूलियन, बहिनाबाई चौधर आणि राष्ट्रसंत तुकडोजी महाराज यांच्या वास्तव कवींचा अभ्यास

CO5: बा.सी. मर्ढेकर या कविंचा "भंगू दे काठिण्य माझे" या बेगळया कवितेचा अभ्यास कवीवर्य कूसुमाग्रज यांचेही काव्यदर्शन

CO6: पत्रलेखन, पत्रलेखनाचे प्रकार, पत्रलेखनाचे घटक

CO7: सारांश लेखन, सारांश लेखन म्हणजले काय, सारांश लेखनाचे महत्व

### अभ्यासक्रम 3:- गद्य-पद्य-व्याकरण

CO1: ताराबाई शिंदे यांच्या स्त्रीपुरुषतुलना या निबंधाचे विचार चिंतन

CO2: उत्कृष्टवक्ता आचार्य अत्रे यांचा अभ्यास

CO3: राष्ट्रसंत तुकडोजी महाराज यांच्या शिक्षक हाच राष्ट्राचा भाग्यविधाता हा वैचारीक लेख

CO4: संत नामदेवांची अभंगवाणी CO5: मोरोपंताची केकावली - रससंग्रह

CO6: राम जोशी, कवी यशवंत, कवी अनिल यांच्या कवितांचा परामर्श

CO7: इतिवृत्त लेखनाची पद्धत CO8: प्रसारमाध्यमासाठी वृत्तलेखन

### अभ्यासक्रम 4:- गद्य-पद्य-व्याकरण

CO1: स्प्रिसिद्ध व्यासंगी लेखिका दुर्गा भागवंताचा लेख "मायावी वाघ"

CO2: पु.भा. भावे यांच्या तपस्वी कथेचा अभ्यास

CO3: निर्मलकुमार फडकुले, जयंत नारळीकर यांच्या वैचारीक लेखनाचा परामर्श

CO4: अस्पृश्य समाजाच्या क्रांतीच तुफान हा वैचारीक लेख

CO5: नारायण सुर्वे, सुरेश भट, ना.धो. महानोर यांच्या सामाजिक प्रबोधनपर कवितांचा अभ्यास

CO6: भाऊ पंचमाई, कुसुम अलाम यांच्या उद्बोधनपर कवितांचा अभ्यास

CO7: भाषांतर विद्या म्हणजे काय ? भाषांतर स्वरुप व प्रकार CO8: मुलाखत लेखन कसे करावे, मुलाखत कशी घ्यावी

### अभ्यासक्रम 5:- गद्य-पद्य-व्याकरण

CO1: गो.ग. आगरकर यांच्या सुधारक काढयाचा हेतू या पाठाचा परामर्श

CO2: विनोबा भावे, इरावती कर्वे यांच्या चिंतनात्मक लेखांचा अभ्यास

CO3: गंगाधर गाडगीळांच्या किडलेली माणसे या कथेतून घडलेले कनिष्ठ मध्यमवर्गीय समाजदर्शन

CO4: संत तुकारामांची अभंगवाणी

CO5: कवी बी आणि भा.रा. तांबे यांच्या भावपूर्ण संवेदनातील कवितांचा परामर्श

CO6: संपादन प्रक्रिया प्रेरणा व स्वरुप

CO7: स्मरिणक संपादन

CO8: कार्यालयीन लेखनव्यवहार

### अभ्यासक्रम 6:-

CO1: चक्र या महाभारतातील अद्भूत कथेचा अभ्यास

CO2: मारुती चितमपल्ली आणि मधुकर वाकोडे यांच्या वन्यजीवनावर आधारीत लेखांचा अभ्यास

CO3: अंधश्रद्धा निर्मूलन चळवळीची वाटचाल - एक अभ्यास

CO4: चंद्रकांत वानखेडे यांनी ग्रामपंचायत निवडणुकितमहिलांना स्थान देण्यात मांडलेली महत्वाची भूमिका

CO5: कवियत्री इंदिरा संत आणि शरदचंद्र मुक्तिबोध यांच्या रससंग्रहणात्मक कवितांचा अभ्यास

CO6: कवी ग्रेस, नामदेव ढसाळ, दशरथ मडावी यांच्या उदास क्रांतीकारक कवितांचा विचार

CO7: ग्रंथ परिक्षण, ग्रंथवाचनाचे घटक

CO8: इंटरनेट आणि मराठी भाषा व साहित्य यांचा महत्वपूर्ण आढावा

## **COURSE OUTCOMES (B.Com.)**

### अभ्यासक्रम 1:-

CO1: लोकशाहीचे भवितव्य हयाबद्दल डॉ.आंबेडकरांचे विचार

CO2: प्.भा. भावे यांच्या नौका कथेतून घडलेले निर्वासितांच्या दारुण व्यवस्थेचे बोलके चित्रण

CO3: शिवाजी सावंत आणि योगीराज वाघमारे यांच्या वैचारीक लेखांचा अभ्यास

CO4: वि.स. जोगांची संयत प्रमाचे दर्शन घडविणारी उमा ही कथा

CO5: संत ज्ञानेश्वरांच्या विराण्या - सौंदर्यात्मक विवेचन

CO6: बहिनाबाई चौधरी, बा.सी. मर्ढेकर, नारायण सुर्वे सुधाकर गायधनी यांच्या वास्तव चित्रण करणात्या कवितांचा अभ्यास

CO7: पत्रलेखन, पत्र लेखनाचे घटक, पत्रलेखनाचे प्रकार

CO8: इतिवृत्त लेखन - एक अभ्यास

CO9: भाषिक संवादव्यवहाराची मूलतत्वे

#### अभ्यासक्रम 2:-

CO1: जेट युगातील मराठी माणूस आणि नवसमाजनिर्मीतीचे प्रणेते या निबंधाचा अभ्यास

CO2: विठ्ठल तो आला आला या प्.ल.देशपांडे यांच्या एकांकीकेचा अभ्यास

CO3: भरती (वसंत वऱ्हाडपांडे) महालूट (संदानंद देशमुख) यांच्या वास्तव कथांचा अभ्यास

CO4: संत तुकाराम यांच्या अभंगातून नामस्मरण, नाममहिमा यांचे महत्व

CO5: केशवकुमार, कुसुमाग्रज या कविंच्या कवितांचा परामर्श CO6: स्वप्न दोन कामगारांच्या गोष्टि या कवितांचे वास्तवदर्शन

CO7: मूलाखत तंत्र - एक अभ्यास

CO8: म्हणी व वाक्प्रचार यांचा व्यवहारात उपयोग

### अभ्यासक्रम 3:-

CO1: आद्य महानुभावीय चरित्रकार म्हाईभट संच्या लेखन शैलीचा परिचय, चक्रधर स्वामीच्या लीळेचा अभ्यास

CO2: सांगावा ऑणि शेवटी माती या हृदयस्पर्शी कथांचा विवेचनात्मक अभ्यास

CO3: जनसामान्यांच्या प्रबोधनाचं प्रतिकं हा अभ्यासपूर्ण निबंध

CO4: चोखामेळा, सेना न्हावी, नरहरी सोनार यांच्या संमवाणीचा अभ्यास

CO5: कवी बी, वसंत बापट, यशवंत मनोहर, ज्ञानेश वाकुडकर यांच्या वास्तवपूर्ण कवितांचा परामर्श

CO6: प्रसामाध्यमांसाठी वृत्त - लेखन

CO7: वाक्प्रचार आणि त्यांचे मराठी भाषेतील योगदान

### अभ्यासक्रम 4:-

CO1: श्री.म. माटे, ना.सी. पुडके, दुर्गा भागवत या महान साहित्यिकांच्या कलाकृतीचा अभ्यास

CO2: विज्ञानयुगात भारत या वैचारीक लेखाचा आढावा CO3: कवी यशवंत यांच्या आई कवितेचे वास्तवदर्शन

CO4: कवी केशवसूत, वसंत आबाजी डाहाके, वैभव सोनारकर यांच्या वास्तवपूर्ण कवितांचा अभ्यास

CO5: स्मरनिका संपादन

CO6: कल्पना विस्तार उपयोग आणि महत्व

नागपूर विद्यापीठाद्वारे नेमलेल्या कला, वाणिज्य आणि विज्ञान या तिन्हि शाखेच्या अभ्यासकृम १ ते ६ विभागणीद्वारे महाविद्यालयीन विद्यार्थ्याना खूप फायदा झाला आहे. विद्यार्थ्याच्या गुणवत्तेत कौतुकास्पद वाढ झालेली आहे. प्राविण्याप्राप्त विद्यार्थ्याची संख्या वाढत आहे. मराठी भाषा समृद्ध होण्यास वरील प्रकारचा अभ्यासकृम उपयुक्त ठरला आहे.

# DEPARTMENT OF HINDI

#### **Course Outcomes (B.Com)**

राष्ट्रसंत तुकडोजी महाराज विश्वविद्यालय नागपुर के आदेशानुसार (बी. कॉम.—प्रथम ,द्वितीय,सत्र(2020—21) के अभ्यासकम में व्याकरण खंड ,कविता खंड एवं गद्य खंड इत्यादि महाविद्यालय मे पाठयकम के अनुसार पढ़ाया जाता है। निष्कर्श रूप मे विश्वविद्यालय का पाठ्यकम सरल और रूचिकर तथा गुणवत्तापूर्ण विद्यार्थियों को शिक्षा देने में सफल रहा है।

### Semester :- I

CO1 अभाव व बडे भाई साहाब कहानी में कहानीकार ने जीवन कें प्रमुख उद्देश्यों को बताने की कोशिश की है ।

CO2 कक्षा में पढ़ने का अवसर प्रदान करना ।

CO3 व्याकरण के माध्यम से मात्राओं को शुद्ध् लिखना ।

CO4 कबीर के दोहे तथा जिवन का झरना कविता कें माध्यम से सज्जन व्यक्ती के गुणो को बताया गया है।

#### Semester :- II

CO1 विद्यार्थियों को वर्णों की पहचान करवाना ।

CO2 कक्षा में पढ़ने का अवसर प्रदान करना ।

CO3 व्याकरण के माध्यम से मात्राओं को शुद्ध लिखना ।

CO4 कलम और तलवार कविता में तलवार की अपेक्षा कलम की उपयोगिता ज्यादा बताई गयी !

CO5 विज्ञापन तथा मुहावरे को परिभाषित किया गया है!

### **Course Outcomes (B.Sc.)**

राष्ट्रसंत तुकडोजी महाराज विश्वविद्यालय नागपुर के आदेशानुसार (बी. एस.सी.. – प्रथम एवं द्वितीय,सत्र (2020-2021) के अभ्यासकम में व्याकरण खंड ,कविता खंड एवं गद्य खंड इत्यादि महाविद्यालय मे पाठ्यकम के अनुसार पढ़ाया जाता है। निष्कर्श रूप मे विश्वविद्यालय का पाठ्यकम सरल आर रूचिकर तथा गुणवत्तापूर्ण विद्यार्थियों को शिक्षा देने में सफल रहा है।

### Semester :- I

CO1 जिंदगी की सीख कविता में जिवन का चारीत्रिक वर्णन किया गया है।

CO2 कक्षा में पढने का अवसर प्रदान करना ।

- CO3 व्याकरण के माध्यम से मात्राओं को शुद्ध् लिखना । CO4 शब्दो का वर्गीकरण किया गया ।
- CO5 कबीर के दोहे तथा मनुष्यता कविता में जिवन के मार्मिक एवं स्वामाविक प्रसंगो का वर्णन किया गया है ।

#### Semester :- II

- CO1 पारिभाषिक शब्दावली को पारिभाषित कर मुख्य विशेषताये बताई गयी ।
- CO2 कक्षा में पढ़ने का अवसर प्रदान करना ।
- CO3 व्याकरण के माध्यम से मात्राओं को शुद्ध लिखना ।
- CO4 शब्दा का संक्षिप्तीकरण एवं शुद्धिकरण।
- CO5 कविता पुष्प की अभिलाषा तथा कर्मवीर कविता में आजादी कें अनेक प्रसंगों का उल्लेख किया गया है।

### DEPARTMENT OF ENGLISH

# Course Outcomes (B.Sc.) Compulsory English

# SEMESTER I: Course on – Prose, Poems, Grammar, Composition, Comprehension and Vocabulary.

- CO1. The student should be able to understand how to face financial problems in life courageously and adjust with the situations by keeping aside the emotional attachments.
- CO2. The student should be able to understand that how rumour-mongering leads to the collapse any business.
- CO3. The student should be able to understand the courage of women who stands herself after being deserted by her husband.
- CO4. The student should be able to understand that young children are the children of god and one should be liberal with them.
- CO5. The student should be able to understand the acute awareness and social obligation towards the problem of our society.
- CO6. The student should be able to understand that how we express our sorrow, love and respect for the dead person.
- CO7. The student should be able to understand that an old age is not an obstacle while getting knowledge about anything, to strive to seek and not to yield.
- CO8. The student should be able to understand the importance of trees in human life. The student should get lesson on, "save tree, save nation".
- CO9. The student should be able to understand the precise use of Tenses, Voice and Prepositions so as to facilitate day-to-day conversation.
- CO10. The student should be able to understand Composition, Comprehension and vocabulary i.e. letter writing, skimming and scanning unseen passages and increasing word power with the help of synonyms and Antonyms.

### SEMESTER II: Course on - Prose, Poems, Grammar and Comprehension and Composition.

- CO1. The student should be able to understand several means to protect and safeguard our democracy.
- CO2. The student should be able to understand illiteracy is not an obstacle while undertaking any business and to flourish in it.
- CO3. The student should be able to understand how their Sacrifice, Sincerity and devotion to any cause give a new hope for humanity.
- CO4. The student should be able to understand significance of love in human life that knows no age, religion and man-made national boundaries.
- CO5. The student should be able to understand importance of prayer to God that awakens countrymen from darkness and slavery into a state of ideal freedom.
- CO6. The student should be able to understand the character of Duke and Duchess. The students should be able to know about cruelty of Duke which is a common character in human nature.
- CO7. The student should be able to understand about depression and dissatisfaction among human beings due to trials and tribulations in their lives.
- CO8. The student should be able to understand power of the village schoolmaster and to know about the views of children as well as that of the villagers about the schoolmasters.
- CO9. The student should be able to understand subject verb Agreement, Transformation of sentences and Exercises on Common Errors.
- CO10. The student should be able to understand Comprehension and Composition on CV preparation.

### Course Outcomes (B.Com.) Compulsory English

The 21<sup>st</sup> century has opened up new horizons, and with the advance of globalization the importance of English has grown exponentially. Undergraduate students need to be geared up to negotiate the various challenges they will face in this fast-paced technological world as they pursue their hopes and dreams. English language now plays a significant role in moulding students into global citizens. As a result, the texts in the course book of Commerce Stream have been chosen with meticulous care to help students develop their interpretive and critical-thinking skills.

SEMESTER I: Course on - Great personalities, Short Stories, Poems, Writing skills and Language study.

- CO1. Through the study of some eminent personalities, students should be able to learn how to nurture creativity at any stage of life as there is no limit to anyone's innovations.
- CO2. Students should also be able to maintain consistency in the pursuit of success while being tested by destiny or hardships in life. Through the lives and struggle of great personalities, students are expected to know the noble values like perseverance, charity, sacrifice and goodness of human nature.
- CO3. The students should be aware of their contribution in any field of their interest so as to share their own relevance in the particular field.
- CO4. Students should be able to understand the struggles and difficulties faced by the great people while achieving success.
- CO5. Students should also understand the importance of entrepreneurship and Start- up programmes to become financially self dependant in today's scenario and help thereby in the development nation's economy.
- CO6. Students must strive for making their own identity even through participation in sports events as they are taught how man can achieve success in the extracurricular activities and prove their individuality.
- CO7. Through the study poems and prose, students must develop a broader point of view about human life, nature and qualities.
- CO8. Students should be able to improve their skills in reading, writing and speaking with the help of proper attention paid to the grammatical part. They are supposed to be efficient in formulating their own opinions on specific issues and should learn to develop their personality.

# SEMESTER II: Course on – International Figures, Short Stories, Poems, Writing skills and Grammar.

- **CO1**. Students are made aware of the herculean tasks undertaken by the great personalities at International level to achieve success at any cost and inspire them to do the same.
- CO2. Students should know how technology has improved and is widely used in every sphere of life in the form of social media. Along with communication skills, social media have become the strongest instrument of awareness, study and information.
- CO3. The students should realize the importance of success because it is the result of tremendous efforts undertaken, hardships gone through and untiring hard work. They should also be aware of the personal relationships that are making the bond of togetherness stronger.
- CO4. The students should learn the skills of public speaking through proper training, practice and various techniques to become an effective debater.
- CO5. The students must follow the way of virtues in individual life as nothing is greater than virtues. They should always keep in mind that mere survival like other living beings without virtues can never be helpful.
- CO6. The Students should be able to know the difference between modernism and the subsequent changes it has brought against the so called tradition.
- CO7. The Students must be able to know that the pursuit of knowledge without wisdom is futile. They must understand as well the growth in knowledge is of no use without skills and hence it becomes necessary to improve skills such as expanding ideas, preparation of interviews and narrating experiences with wisdom.
- CO8. It is necessary for the students to understand that the present education system must teach them to act and think independently and also enable them to be aware of basic human problems and overcome them with the help of community services.
- CO9. The students should learn to be updated with the technical requirement such as corresponding skills in the form of writing letters, application, mails etc.
- CO10. The Students should use Proper grammar while expressing their views on various aspects of life through the prescribed course contents.

#### **Course Outcomes (B.A.) English Literature**

# Semester I - Course on poetry, Prose, Forms of Drama, Literary terms and Drama.

- CO1: The student should be able to understand about uncertainty of the relationship that tortures him when he attempts to mock it.
- CO2: The student should be able to understand how science reflects curiosity without compassion and blind to all things in nature.
- CO3: The student should be able to understand the importance of love in human life.
- CO4: The student should be able to understand the contrast between joy and beauty
- CO5: The student be able to understand about faith on god.
- CO6: The student should be able to understand how the poet laments on the lost time, youth and opportunity.
- CO7: The students should be able to understand about poetry, types of poetry, poetical types and characteristics of poetical types.
- CO8: The student should be able to understand about practical criticism(Introduction).
- CO9: The student should be able to understand about literary terms used in poetical forms.

# Semester II - Course on poetry, stanza forms, schools and movements, practical criticism and literary terms.

- CO1: The student should be able to understand how old & dying man should fight against death.
- CO2: The student should be able to understand that men should try very hard to achieve success in their lives by their works andwords.
- CO3: The student should be able to understand that how it is difficult to find out a woman who has both qualities faithful and beautiful.
- CO4: The student should be able to understand the importance of virtue in human life.
- CO5: The student should be able to get an idea of Indian goods and Indian markets.
- CO6: The student should be able to understand how poetess struggle for quest of her identity and fulfillment.
- CO7: The student should be able to understand stanza forms.

CO8: The student should be able to understand various schools and movements.

CO9: The student should be able to understand practical criticism:-

- 1. Analysis: poetry
- 2. Exercise :poetry

CO10: The student should be able to understand literary terms used in poetical forms.

The undergraduate students of first semester commerce stream are made familiar with the wide spectrum of literary world of English language. English, being the learner's language is treated as the target language wherein they would achieve sufficient competence as far as the usage and significance of the language in modern scenario is concerned in commerce course work.

# DEPARTMENT OF COMMERCE

<u>COs are statements that describe what students should be able to do at the end of a course.</u>

They can be 6±2 for courses with 2 to 4 credits, and 8±2 for courses with 5 to 6 credits.

SEMESTER - I: - Course on Financial Accounting, Business Organization, Company Law and Business Economics.

- CO1: The student should be able to understand meaning, objectives, principles, concepts & conventions of financial Accounting, Final accounts of sole traders.
- CO2: The student should be able to understand Hire-purchase meaning, features, merits -demerits and system.
- CO3: The student should be able to understand Final accounts of Co-Operative societies Introduction, Types and preparation of trading, profit and loss A/C and balance sheet.
- CO4: The student should be able to understand Meaning, Methods of joint venture accounting.
- CO5: The student should be able to appreciate meaning, objectives, classification for business, and Social responsibility of business towards different groups.
- CO6: The student should be able to appreciate meaning, characteristics, advantages and disadvantages sole trader, partnership, one person company, private company, joint stock company, service sector business.
- CO7: The student should be able to appreciate meaning, definition, concept, functions, principles, formal and informal organization and advantages-disadvantages.
- CO8: The student should be able to appreciate meaning of KMP, chairman of qualities, powers, responsibilities and CEO role, E-commerce, e-business, e-banking.
- CO9: The student should be able to grasp meaning, definition, concept of Corporate Personality, kinds of company, promotion and incorporation of company.
- CO10: The student should be able to grasp meaning, definition, concept of Memorandum of Association, Articles of association, Private Placement and prospectus, Misrepresentation in prospectus.
- CO11: The student should be able to grasp meaning, definition, concept of Share and share capital, Debt capital, Depositories and dematerialization.
- CO12: The student should be able to grasp meaning, definition, concept of Membership in a company, Directors.
- CO13: The student should be able to understand meaning, objectives, principles, concepts of Business Economics and Micro-Macro Economics.
- CO14: The student should be able to understand meaning, objectives, and concepts of Theory of Consumption.
- CO15: The student should be able to understand meaning, objectives, and concepts of Theory of Production.
- CO16: The student should be able to understand meaning, objectives, concepts of Theory of Cost and Revenue.

# <u>SEMESTER – II</u>: - Course on Statistics and Business Mathematics, Business Management, Secretarial Practice, Business Economics.

- CO1: The student should be able to analysis Mean, Median, Mode, Geometric Mean and Harmonic Mean.
- CO2: The student should be able to analysis Mean Deviation, Standard Deviation, Quartile Deviation, Co-efficient of variation.
- CO3: The student should be able to analysis Skewness Type of Karl-Pearson and Bowley Method.
- CO4: The student should be able to analysis Business Mathematics Type of Ratio, Proportion, percentages, Interest, profit/loss.
- CO5: The student should be able to understand meaning, objectives, principles, concepts, Scope, Type of Business Management.
- CO6: The student should be able to understand meaning, objectives, concepts and type of Planning and Denison making.
- CO7: The student should be able to understand meaning, objectives, concepts of Delegation of Authority and Co-ordination & Controlling.
- CO8: The student should be able to understand meaning, concepts of Management of change, Total quality, Stress and International Management.
- CO5: The student should be able to appreciate meaning, objectives, classification of Public limited to Private limited, Company Secretary, Director.
- CO6: The student should be able to appreciate meaning, characteristics, company meeting, Voting and resolution and Circular-Ordinary.
- CO7: The student should be able to appreciate meaning, definition, and concept, Report Writing, Audit, E-Governance and E-Filling.
- CO8: The student should be able to appreciate meaning of Key managerial personnel Type of Directors, Managerial Remuneration.

- CO13: The student should be able to understand meaning, objectives, concepts, Type of Market Structure and Pricing of Products-Types.
- CO14: The student should be able to understand meaning, objectives, concepts of Perfect & Imperfect competition markets and Monopolistic competition.
- CO15: The student should be able to understand meaning, objectives, and concepts of Theory Theories for Distribution.
- CO16: The student should be able to understand meaning, objectives, concepts of Business Cycles and National Income.

# <u>SEMESTER - III</u>:- Course on Financial Accounting, Business Communication and Management, Business Law, Monetary Economics.

- CO1: The student should be able to understand meaning, objectives, concepts accounting procedure of Consignment, Valuation of Consignment stock.
- CO2: The student should be able to understand meaning, Objectives Branch Accounting, Transactions relating and procedure of Branch Accounting.
- CO3: The student should be able to understand Types of shares, Method of issue of shares, Accounting for issue, Forfeiture of shares & reissue of forfeited shares.
- CO4: The student should be able to understand Meaning, Final Accounts of Joint stock companies, statutory provisions, provision for interest on debentures, proposed dividends, interim dividend.
- CO5: The student should be able to appreciate meaning, Definition, objectives, concept Functions, written, oral, visual, audiovisual, interpersonal, supervisory, grapevine and barrier communication.
- CO6: The student should be able to appreciate meaning, concept, objective, purpose, importance, salient feature, principles of effective business commutations and customer care communication in business.
- CO7: The student should be able to appreciate meaning, Technology and business commutation- Use of internet, website and electronic media in business commutation. Social media as a mean of communication.
- CO8: The student should be able to appreciate meaning Role of MS-Word, MS-Excel, MS=Power point Commutation skill, financial presentation, tools of effective commutation.
- CO9: The student should be able to meaning, evolution and significance of business law, law relating to contract (Indian contract act-1872), void agreement, contingent ad quasi contract, contract of indemnity and guarantee, law of agency.
- CO10: The student should be able to grasp concept of Sale of goods act-1930, The Indian partnership act-1932, Registration, deed, admitted partners, dissolution of partnership.
- CO11: The student should be able to grasp concept, objectives, definitions of Negotiable instrument act-1881, Endorsements, parties to a negotiable instruments, prevention of money laundering act 2002.
- CO12: The student should be able to grasp meaning, definition, concept of Consumer protection act-1986, Law relating to Information Technology, Cyber law.
- CO13: The student should be able to understand meaning, objectives, concepts, Functions of Money-Quantity theory of money and criticisms, Paper currency and Method of note issue.
- CO14: The student should be able to understand meaning, objectives, concepts of Inflation and deflation, Role of monetary policy and fiscal policy in controlling Inflation and deflation.
- CO15: The student should be able to understand meaning, objectives, and concepts of Money market, monetary policy and Fiscal policy concept.
- CO16: The student should be able to understand meaning, objectives, Importance, concepts of Public Finance and Taxation Direct and Indirect Taxes Merits and demerits.

# SEMESTER - IV:- Course on Financial Accounting, Skill Development, Income tax, Monetary Economics.

- CO1: The student should be able to analysis Meaning of Final Accounts of Banking companies-Restrictions and Annual accounts,.
- CO2: The student should be able to analysis Introduction, Type, Important terms of Final accounts of General Insurance Companies.
- CO3: The student should be able to analysis Meaning, characteristics of goodwill, Valuation of goodwill Average, Super, Capitalization Profit method.
- CO4: The student should be able to analysis Meaning. Type, Steps, Factions, Liquidators and Final Statement of account.
- CO5: The student should be able to understand Meaning, Types, human skill and behavior, Motivation and morality, skill development and employment.
- CO6: The student should be able to understand Meaning, Communication skill and Personality development, body language, relationships, Leadership Skill and Good Public speaker.
- CO7: The student should be able to understand meaning, Techniques in personality development and goal setting, Time, stress Management and effective planning, Meditation and concentration techniques.
- CO8: The student should be able to understand meaning, concepts Entrepreneurial skill development- small scale, agro based industries, rural artisans, Types skill required for entrepreneurship.
- CO9: The student should be able to appreciate meaning, definition of Income tax and residential status.
- CO10: The student should be able to appreciate Income from salary Definition and analysis allowances, perquisites, P.F. and E.P.F.
- CO11: The student should be able to appreciate meaning, definition, Income from House Property, unreleased rent, computation of income from house property.

- CO12: The student should be able to appreciate meaning and analysis Income tax slab rates, rebates, Income which do not form part of total income and other sources.
- CO13: The student should be able to understand meaning, Evolution Functions of commercial Banks,
- CO14: The student should be able to understand meaning, features, advantages and disadvantages E- Banking and core banking-ATM. EFT and ECS.
- CO15: The student should be able to understand meaning, Introduction of Bank and customer's relationship and services and Dement Account.
- CO16: The student should be able to understand meaning, objectives, concepts, Functions, Role of central Bank, Credit Control, Bank Rate,

# <u>SEMESTER - V</u>:- Course on Financial Accounting, Cost Accounting, Management Process, Indian Economies, Computerizes Accounting, Business Finance.

- CO1: The student should be able to understand Meaning, objectives, Characteristics, method of Amalgamation and absorption of Companies.
- CO2: The student should be able to understand Meaning, objectives, Characteristics, Difference and Accounting procedure of Reconstruction and Reorganization.
- CO3: The student should be able to understand Final accounts of Public Utility companies (Electricity, Gas and water supply) of trading, profit and loss A/C and balance sheet.
- CO4: The student should be able to appreciate meaning, Need of valuation of shares and Method Net assets, Intrinsic and Yield.
- CO5: The student should be able to appreciate meaning, Importance, Allocation of Overheads and Methods of costing and Tender and Quotations.
- CO6: The student should be able to appreciate meaning, concept, Reconciliation of Profit/loss shown by cost and financial accounts.
- CO7: The student should be able to appreciate meaning of Process cost Accounting and Normal Loss, Abnormal Loss and abnormal effectives.
- CO8: The student should be able to grasp meaning, Futures of contract costing, Type of contracts and completed-incompletes contract.
- CO9: The student should be able to grasp meaning, definition, concept, Functions of Management and administration.
- CO10: The student should be able to grasp meaning, definition, concept, Type of Managerial development and Group dynamics.
- CO11: The student should be able to understand meaning, Type of managerial styles X and Y Theory and organization conflict.
- CO12: The student should be able to understand meaning, objectives, concept, Kinds of Motivation, Theories of Motivation-Maslow's and Herzber'g.
- CO13: The student should be able to understand meaning, objectives, concepts, Features of Indian Economy and Planning, Objective and Evaluation of 11 and 12 <sup>th</sup> Plan.
- CO14: The student should be a ble to understand meaning, objectives, concepts of Economic Growth and development, Natural resources-Infrastructure and transport system in India.
- CO15: The student should be able to understand meaning India's population and causes of Population explosion, Nature & Estimates of Urban & Rural Unemployment.
- CO16: The student should be able to understand meaning of India's Public Finance, Public Revenue and Public Debt.
- CO17: The student should be able to understand meaning, concepts, Advantages, Need of Computerized Accounting.
- CO18: The student should be able to appreciate meaning Introduction Accounting software's of tally, works on tally and configuration.
- CO19: The student should be able to appreciate Accounts Info Menu, Account Groups- News Groups, Ledger Accounts and Voucher.
- CO20: The student should be able to appreciate Inventory info, features of inventory Info, configure- Data Maintenance and security.
- CO21: The student should be able to appreciate meaning nature, significance, objects and scope, Long- Medium and short, term sources of business finance.
- CO22: The student should be able to understand meaning, Steps, need, concept of Protect financing, Inventory Management and leverages.
- CO23: The student should be able to understand meaning, Steps, need, concept, object types of management of working capital.
- CO24: The student should be able to understand meaning, Method of Debtors, creditor's management and venture capital financing.

# <u>SEMESTER - VI: -</u> Course on Financial Accounting, Management Accounting, Advanced statistics, Indian Economics, Human Resource Management, Business Finance.

- CO1: The student should be able to understand meaning, Introduction of Holding Company Accounts- Consolidated balance sheet and Profit and loss Account.
- CO2: The student should be able to understand Introduction, loss of stock Average clause on Insurance claims.
- CO3: The student should be able to understand Meaning, need, utility and adjectives, sales and purchase of different types of securities of Investment Accounts.
- CO4: The student should be able to understand Meaning, Methods of Profit prior of incorporation and Redemption out of profit.

- CO5: The student should be able to appreciate meaning, Scope, Importance and limitations of management Accounting, Role of Management accounting, Break- Even- Point Analysis.
- CO6: The student should be able to appreciate meaning, characteristics, Objectives, advantages, limitations classification & Types of Business Budget & Budgetary Control- Cash and flexible Budget.
- CO7: The student should be able to appreciate meaning, Importance of Ratio Analysis-current, acid test, Inventory turnover, Debtors and creditors, debt-equity Ratio.
- CO8: The student should be able to appreciate meaning, Sources, Uses of fund, changes in working capital and Fund flow Statement.
- CO9: The student should be able to analysis of Correlation- Types- Karl Pearson's co- efficient, probable error and 'r' Rank correlation method.
- CO10: The student should be able to regression Analysis- Line of regression Equation and cp-efficient of regression.
- CO11: The student should be able to Analysis Index Number- Uses, Type and method of unit test time reversed test, factor cost of living index no.
- CO12: The student should be able to Analysis Time series –Trend, Short, Irregular Measurement of trend and graphic, curve method.
- CO13: The student should be able to understand meaning, Role of Agriculture in Indian Economy, NABARD and Crop & Live Stock insurance.
- CO14: The student should be able to understand meaning, Role of industrial Policy 1991- Small and cottage Industries and Indian trade union Movement.
- CO15: The student should be able to understand meaning, Nature, Scope, Trends & Importance of Growth of services sector in India and Banking Insurance Sector.
- CO16: The student should be able to understand meaning, concepts, Advantages, Disadvantages Composition and direction of India's Exports & Imports, MNCs, LPG and WTO.
- CO17: The student should be able to understand meaning, definition, objectives, functions, scope, and importance of Human Resource Management.
- CO18: The student should be able to appreciate meaning, source, Method of Recruitment selection and training.
- CO19: The student should be able to appreciate meaning, definition of Labor welfare and collective bargaining.
- CO20: The student should be able to appreciate meaning, definition, Importance of Human resource planning and accounting.
- CO21: The student should be able to appreciate meaning, nature, significance, objects, scope, Type of Financial market in India, money market and Capital Market and SEBI.
- CO22: The student should be able to understand meaning, Functions, Scopes & Significance of Primary Market, Secondary Market, and Capital Budgeting.
- CO23: The student should be able to understand meaning, Types and regulation of NBFC'S, Credit rating and dividend Policies.
- CO24: The student should be able to understand meaning, Benefits and uses of Cash flow statement, significance, limitations and format as per AS-3.

# DEPARTMENT OF ECONOMICS

# अभ्यासकुम 1 :- अर्थशास्त्राचे सिद्धांत भाग १

- C01: अर्थशास्त्र विषयाची ओळख, स्वरुप, व्याप्ती, अभ्यास पद्धती आर्थिक प्रश्नांची उत्पत्ती कशी होते व त्यांची सोडवणूक कशी करता येईल या संबंधी माहिती प्राप्त होईल.
- C02: मागणी व पुरवठा संकल्पना कशा पद्धतीने कार्य करते व त्यासंबंधीत माहिती नियमातून प्राप्त होते.
- C03: उपभोक्ता महत्तम समाधान प्राप्त करण्याच्या हेतूने कशाप्रकारचे वर्तन करते म्हणजेचे उपभोक्त्याचे वत्रवणूकीचा अभ्यास करता येईल.
- CO4: वस्तेचे उत्पादन कशाप्रकारे घेण्यात येते त्यासंबंधी उत्पादक घटकांची कशी जूळवाजूळव करतो यासंबंधीत माहिती प्राप्त होते.

# अभ्यासक्रम 2 :- सक्ष्म अर्थशास्त्राचे सिद्धांत भाग २

- C01: उत्पादनाच्या अंतर्गत उत्पादन खर्च व प्राप्तीचे विश्लेषण कशाप्रकारे करण्यात येते. समविच्छेद बिंदुची प्राप्ती कशी होते व पेठीचे संतुलन कशाप्रकारे प्राप्त करता येते याविषयी माहिती प्राप्त होते.
- C02: बाजारपेठेची संकल्पना कशी असते, बाजारपेठेचे विविध प्रकार, किंमत निश्चिती कशी असते यासंबंधीची माहिती प्राप्त होईल.
- C03: उत्पादक घटक म्हणजे काय ? उत्पादक घटकाचा मोबदला कसा निश्चित होतो यासंबंधी जाणीव होईल.
- C04: उत्पादक घटकाचे वितरण कसे होते, नफा, व्याज, खंड, मजूरी यासंबंधीचे सिंद्धांताची माहिती, पाप्त होईल.
- C05: संख्याशास्त्र म्हणजे काय, संख्याशास्त्राचे स्वरुप कसे आहे, संख्याशास्त्राची माध्य कोणती आहेत यासंबंधी माहिती प्राप्त होते.

# अभ्यासक्रम 3:- स्थल अर्थशास्त्र भाग १

- C01: स्थुल अर्थशास्त्राची संकल्पना, व्याप्ती, गुण-दोष, सुक्ष्म अर्थशास्त्राकडुन स्थुल अर्थशास्त्राकडे कसे होते, आर्थिक क्रियांचा चक्राकार प्रवाह कसा असतो याविषयी माहिती प्राप्त होते.
- CO2: राष्ट्रिय उत्पन्न म्हणजे काय, राष्ट्रिय उत्पन्नाची संरचना राष्ट्रिय उत्पन्नाची मोजणी कशी करतात याविषयी जाणीव निर्माण होते.
- C03: मूद्रा म्हणजे काय ? मूद्रेचे मूल्य निश्चिती कशी होते, मूद्रा कशी कार्ये कशी करते याविषयी माहिती प्राप्त होते.
- C04: स्फीती व अपस्फीतींची संकल्पना स्पष्ट होते. स्फीती व अपस्फीतींचे कार्य व्यवस्थेवर पडणारे प्रभाव मौद्रिक व राजकोषीय धोरणच्या माध्यमातून नियंत्रण कशाप्रकारे मिळविता येते याविषयी माहिती प्राप्त होते.

# अभ्यासक्रम 4:- स्थुल अर्थशास्त्र भाग २

- C01: अधिकोष म्हणजे काय, अधिकोषाची उत्क्रांती, इतिहास याबददल माहिती प्राप्त होते.
- C02: बँकांचे राष्ट्रियकरण कशाप्रकारे करण्यात आले, राष्ट्रिय करणानंतर बँकांची प्राप्ती कशी झाली, राष्ट्रिय अधिकोष प्रत्यय निर्मिती, केंद्रिय बँकांची निर्मिती याबददल माहिती प्राप्त होते.

- C03: भारतातील रिजर्व्ह बँकेचा इतिहास, निर्मिती, उद्दिष्ये व कार्य, मौद्रिक धोरण आधुनिक अधि पद्धती कशी आहे याविषयी प्राप्त होते.
- C04: भारतातील मूद्राबाजार संरचना कशी आहे, वित्तिय बाजारपेठाची संरचना, कार्य करण्याची पद्धती, भांउवल बाजार कर याविषयी माहिती प्राप्त होते
- C05: स्वास्थ अर्थशास्त्राची व्याप्ती, स्त्रोत आरो ची कारणे व उपाय योजना याविषयी प्राप्त होते.

# अभ्यासक्रम 5:- भारतीय अर्थव्यवस्था भाग १

- C01: अर्थव्यवस्थेचे अर्थ स्वरुप् कसे असते, भांउवलशाही, समाजवादी, मिश्र अर्थव्यवस्था याविषयी माहिती प्राप्त होते.
- C02: भारतीय अर्थव्यवस्थेचे स्वरुप लोकसंख्या नागरीकरण भारताचे राष्ट्रिय उत्पन्नाची वाटचाल स्वरुप तसेच महाराष्ट्राची अर्थव्यवस्था याविषयी माहिती प्राप्त होते.
- C03: भारतीय कृषीचे अर्थव्यवस्थेतील स्थान, महत्व भारतीय शेतीच्या संबंधीत विविध पैलू याविषयी माहिती प्राप्त होते.
- C04: भारतातील औद्योगीक क्षेत्राची कामगीरी भारतीय अर्थव्यवस्थेतील स्थान, लघु व कुटीर उद्योग भारतातील गुंतवणूक, खाजगीकरण, जागतीकरण, उदारीकरण इत्यादीभारतीय अर्थ व्यवस्थेवर पडणारे प्रभावासंबंधची माहिती प्राप्त होते.
- C05: भारतातील बेकारीची समस्या, दारिद्रयाची समस्या, संघटीत व असंघटीत क्षेत्रउची भूमिका, बाल कामगार यांच्या समस्या, दारीद्रया, बेकारी दूर करण्यासाठी सरकाने केलेल्या विविध योजनांचा अभ्यास करण्याची संधी उपलब्ध होते.

# अभ्यासकृम 6:- भारतीय अर्थव्यवस्था भाग २

- C01: आर्थिक विकासाची संकल्पना आर्थिक विकासासाठी आवश्यक विभिन्न कसोटया, मानव विकास निर्देशांक शाश्वत विकास यासंबंधीची माहिती प्राप्त होते.
- C02: आर्थिक नियोजनाची संकल्पना भारतातील आर्थिक नियोजनासंबंधची माहिती, निती, आयोग सेझ, संझचा भारतीय अर्थव्यवस्थेवर झालेल्या परिणामाची माहिती प्राप्त होते.
- C03: भारतीय राजस्वाची माहिती, सरकारे उत्पन्नाची स्त्रोत, खर्च, कर संरचना, GST, अंदाजपत्रक केंद्र व राज्य सरकारचे संबंधाविषयी माहिती प्राप्त होते.
- C04: आंतरराष्ट्रिय व्यापाराची संकल्पना, भारताच्या आंतरराष्ट्रिय व्यापाराची संरचनाचे भारतीय अर्थव्यवस्थेवर परिणाम WTO विदेशी प्रत्यक्ष गुंतवणुक शोधन शेष व्यापार शेष, बहुराष्ट्रिय निगम याविषयी माहिती प्राप्त होते.

# DEPARTMENT OF HISTORY

भवभूती महाविद्यालयात इतिहास या विषयाच्या अभ्यासक्रमाच्या अनुषंगाने शिकविण्यामागचा उद्देश व महत्व म्हणजे आपली भारतीय संस्कृती जाणून घेणे जी प्राचीन काळापासून आज पर्यंत विध्यमान आहे. ती आपल्या देशाने आत्मसात केली व संपूर्ण विश्वाला व्यापले आहे हे विध्यार्थ्यांना समजावून सांगणे.

# प्रथम सेमिस्टर : भारताचा इतिहास प्राचीन काळ इ.स. १५२५

- CO1: हडप्पा संस्कृती म्हणजेच सिंधू संस्कृतीने भारताला भातुप्रधान संस्कृतीची देणगी भारताला दिली याचे महत्व व उद्देश विध्यार्थ्यांना समजाविणे.
- CO2: वैदिक कालेखंड:- वैदिक संस्कृतींने भारताला पुरुष प्रधान संस्कृतीची देणगी भारताला दिली याचे महत्व व उद्देश विध्यार्थ्यांना समजाविणे. या दोन्ही संस्कृती जी स्त्री पुरुष प्रधान संस्कृती भारताला लाभलेली आहे.
- CO3: १६ महाजनपद, जैन धर्म, बौध्द धर्म यांनी सुद्धा भारताला अनुक्रमे राज्यशाही, लोकशाही जैन धर्म पंच महावृत व बुद्ध धर्मातील पंचशील अष्टांग मार्ग याने भारत देशात प्रेम, करुणा, द्या, शांती इत्यादि चांगल्या गुणांनी युक्त याचे महत्व व उद्देशसमजून घेणे.
- **CO4:** मोर्य साम्राज्य:-मोर्यसम्राज्यामुळे भारतात केंदीय शासनाची पाहिल्यादा निर्मिती व मोर्यशासनात भारताचा सुवर्ण युगाचा पायवा घातला.
- cos: गुप्त साम्राज्य:- गुप्त साम्राज्यात चंद्रगुप्त विक्रमदित्य व त्यांचा विशयाना भारतीय साम्राज्यात घातलेला सुवर्ण युगाच्या पायव्यात भर घातली व विज्ञान व तंत्रज्ञान यात विकसित पावली.
- CO6: भारतातील आक्रमण:-गुप्त साम्राज्याने सुवर्ण भारताला विकसीत केले त्यामुळे अरबांना आकर्षण निर्माण झाले व त्यात महमद गझनी, महमदघोरीचे आक्रमण झाले व भारतीय संपती व संस्कृती, धार्मिक ते फार नुकसान झाले. व त्याच्या भारतावर पडलेला परिणाम.
- **CO7:** अल्तमश ब बल्बन:-भारतात सुलतान शाहीला सुरवात झाली व दिल्लीवर सुलतान शाहीच्या रूपाने मुसलमानी शासन सुरु झाले व त्यांच्या शासन व्यवस्थेची माहिती
- **CO8:** अल्लाउद्दीन खिलजी:-सुलतान शाहीच्या रूपाने दिल्लीत अल्लाउद्दीन खिलजी व त्याची राजवट सुरु झाली व त्याच्या आक्रमक प्रवृत्तीने हिंदू धर्माचे व भातीयांचे अध:पतन सुरु झाले.
- **CO9:** महंमद तुघलक:- या सुलतानाने आपल्या ध्येय धोरणात बदल करून देविगरीला राजधानीत परिवर्तन करून चलन व्यवस्थेत सुधारणा केली.
- CO10: भक्ती चळवळ:-सर्व ऑक्रमण व सुलतानाच्या शासन व्यवस्थेमुळे भारतात निर्माण झालेल्या परिस्थितीमुळे भक्ती आंदोलन निर्माण झाले.
- CO11: सुफी संत:-मुस्लीम समाजात सुद्धा भक्तीची कृल्पना निर्माण होवून समाजात जागृती निर्माण करण्यासाठी मुस्लीम संत निर्माण झाले.
- co12: सुल्तान शाहौतील स्थापत्य कला:-सुल्तान शाहीने भारतात स्थापत्य कलेत केलेली उन्नती.

# दूसरे सेमिस्टर :- भारताचा इतिहास इ.स.१५२६ ते १७६१

- CO1: मोगल सत्तेची स्थापना:-सुलतानशाहीची समाप्ती होवून दिलीत बाबरने मोगल सत्तेची स्थापना केलील व बादशहा बनला व भारतातील राजपूत लोकावर होत असलेला परिणाम.
- co2: शेरशाह सुरी:-शेरशाह सुरीने हुमायुचा पराभव व आपली शाशन व्यवस्था भारतात निर्माण केली.
- co3: अकबर:-बादशाह अकबराने पुन्हाँ दिलीत बादशाह बनून मोगल शासनाला धार्मिक धोरणात सिहष्णुता निर्माण केली व हिंदू व मुसलमान यांच्यांत धार्मिक भावनेविरूढ एकता निर्माण झाली.
- **CO4:** शाहजहान:-शाहजहानने अकबराचेच सहिष्णुतेचे धोरण कायम ठेवून स्थापत्य कला निर्माण केली.

- cos: औरंगजेब:-औरंगजेबाला धार्मिक सिहष्णुतेचे धोरण पसंत नसल्याने वारसायुद्ध केले व त्याला यश प्राप्त झाले. आपले शासन दिल्लीत निर्माण करून कट्टर धार्मिकतेचे धोरण स्वीकारले व राजपूत शक्ती मुगलांच्या व औरंगजेबाच्या विरुद्ध झाली.
- **CO6:** मोगल कालीन कला:-मोगल शासन काळात भारतात निर्माण झालेली कला त्यात संगीत चित्रकला विशेष म्हणजे दिल्लीत असलेला प्रसिद्ध लाल किला अजमेरची जामा मश्जीद इत्यादि.
- **CO7:** छत्रपती शिवाजी:-मोगल सत्तेने त्रस्त झालेले म्हणजेच औरंगजेबाच्या धार्मिक धोरणामुळे त्रस्त झालेल्या प्रजेला महाराष्ट्रात छत्रपती शिवाजीचे राज्य निर्माण झाले त्यांनी प्रजेला छत्र दिले व त्यांचे संरक्षण करून अभय दिले.
- CO8: छत्रपती शिवाजी राज्याभिषेक:-छत्र धारण करणारा व जनतेचे संरक्षण करणारा शिवाजीचा राज्याभिषेक भारतीय जनतेसाठी आवश्यक होते. व औरंगजेबाच्या कट्टर धार्मिकतेला विरोध करणारा प्रजेला छत्रपती शिवाजी मिळाला.
- co9: संभाजी:-शिवाजींचा मुलगा संभाजी छत्रपती पदावर विराजमान झाले त्यांनी सुद्धा जनतेची संरक्षण करून राज्य सांभाळले व औरंगजेबाच्या कट्टर धार्मिकतेला विरोध केला पण अशा धर्मरक्षक व प्रजाहित दक्ष राजाची औरंगजेबाने क्रूरपणे हत्या केली.
- CO10: मराठ्याचे स्वात्यंत्र:-छत्रपती संभाजीची क्रूरपणे हत्या झाल्या नंतर राजाराम छत्रपती बनले पण त्यांचाहि अकाली मृत्यू नंतर मराठ्यांनी औरंगजेबाबरोबर स्वात्यंत्र युध्द केले. या युद्धाणे संताजी व धनाजी दोन तारे निर्माण होवून मराठे सावरले व औरंगजेबाच्या मृत्युनंतर मराठ्यांचे स्वात्यंत्र युद्ध संपले.
- CO11: पानिपतचे तिसरे युद्ध:-पानिपतचे तिसरे युद्ध घडून आले हे युद्ध भयानक झाले. या युद्धात माराठ्यांची एक पीडी अहमद सहा अब्दालीणे नष्ट केली व मराठे पराजित झाले.
- CO12: युरोपियन व्यापारी:-युरोपियन व्यापारी म्हणून इंग्रज भारतात आले व त्यांनी पानिपतवरील मराठ्यांचा पराभवाचा फायदा घेवून इंग्रजांनी आपली सत्ता मजबूत करण्याला सुरवात केली.

# तिसरे सेमिस्टर

- **CO1:** बक्सारची लढाई:-इंग्रजांनी प्लासीच्या युद्धाने आपल्या सत्तेचा पायवा घातला व बक्सारच्या युद्धाने घातलेला पायवा मजबूत केला.
- co2: लार्ड क्लाईव ची दुहेरी राज्यव्यवस्था:- लार्ड क्लाईव्ह ने दुहेरी राज्यव्यवस्थानिर्माण करून भारतीय शासकांना नामधारी बनविले.
- **CO3:** लार्ड कार्णवालीस कायमधारा पद्धती:-लार्ड कार्णवालीसने शासन व्यवस्थेत कायम धारा पद्धती लागू केली. इंग्रजी सत्तेला फायदा करवून दिला.
- CO4: लार्ड वेल्स्की ची तैनाती फौज पद्धती:-लार्ड वेल्स्की ची तैनाती फौज पद्धती लागू करून इंग्रजांनी आपली फौज भारतीय शासकांना स्वीकारावी लागली व भारतीय सत्ताधीश पूर्णपणे नामधारी राहिले व वास्तविक सत्ताधीश इंग्रज बनले.
- **cos**: लार्ड विलियम बेन्टीकच्या अंतर्गत सुधारणा:-लार्ड विलियम बेन्टीकच्या अंतर्गत सुधारणाकरीत असताना भारतात सुरु असलेली कु प्रथा जी सती प्रथा, बालहत्या, बाल विवाह बंद केली व भारतीय संस्कृतीत निर्माण झालेला कलंक काही अंशी दूर करण्याचा प्रयत्न केला.
- co6: लार्ड डलहौसीचे विलीनकरण तत्व:-इंग्रजांनी आपली सत्ता निर्माण करीत असताना वेगवेगळ्या कारणाने विलीनीकरण केले त्यात दत्तक विधान नामंजूर करून भारतीय संस्कृतीत चालत असलेल्या या प्रथेला बंद करण्याचा प्रयत्न केला त्यामुळे झाशीची राणी लक्ष्मीबाईला आपला वारस दामोदर ला नामंजूर केल्यामुळे १८५७ चे युद्ध करावे लागले.
- CO7: 1857 चा उठाव:-भारतात विविध कारणामुळे निर्माण झालेला असंतोष ज्यात राणी लक्ष्मीबाई, तात्या टोपे, नाना साहेब, बहादूर सहा, जाफर, इत्यादि नेत्यांनी भाग घेवून भारताला गुलामगिरीतून मुक्त करण्याचा प्रयत्न केला हा इंग्रजाबरोबर झालेला पहिला प्रयत्न होय.
- CO8: ब्राम्हो समाज, प्रार्थना समाज, आर्य समाज:-१८५७ च्या उठावात भारतीय क्रांतिकारी पराजित झाले त्यामुळे भारतीयांनी ब्राम्हो समाज, प्रार्थना समाज, आर्य समाज या संघटना निर्माण करून प्राचीन वैदिक संस्कृती, सिंध संस्कृती, व संस्कृतीची चेतना भारतीय लोकासमोर ठेवली व भारतीय माणसामध्ये नवचैतन्य निर्माण करून भारतीय माणूस संघटीत झाला.
- co9: सत्यसोधक समाज, दलित वर्ग:-महात्मा ज्योतिबा फुले यांनी सुद्धा भारतात इंग्रजांची निर्माण झालेली गुलाम गिरीच्या माध्यमातून सत्यसोधक समाज समाजाची स्थापना करून दलित वर्गाला जागृत केले.
- **co10:** लार्ड लीटन ची शासनव्यवस्था:-लार्ड लीटनने शाँसनव्यवस्था निर्माण करून अंतर्गत सुधारणा केली त्यामुळे भारतीय माणूस इंग्रजांच्या शासनव्यवस्थेत भाग घेऊ लागला.
- **CO11:** लार्ड रिपन ची अंतर्गत सुधारणा:-लार्ड रिपनने अंतर्गत सुधारणा करून सिहष्णुतेचे धोरण ठेवून सुधारणा केल्या व भारतीय माणूस खऱ्या अर्थाने इंग्रजांच्या प्रशासन व्यवस्थेत सक्रीय भाग घेऊ लागला.
- CO12: भारतीय राष्ट्रवादाचा उदय, भारतीय राष्ट्रीय कांग्रेस ची स्थापना:-इंग्रजांच्या नीतीमुळे व गुलामगिरीमुळे भारतात राष्ट्रवाद निर्माण होवून भारतीय राष्ट्रीय कांग्रेस ची स्थापना झाली. व कांग्रेसने भारतीय जनतेचे नेतृत्व स्वीकारले.

# चतुर्थ सेमिस्टर : भारतीय स्वात्यंत्र चळवळीचा कालखंड इ.स.१८८६ ते १९४७

- co1: मवाळ राजकारण:-भारतात राष्ट्रीय कांग्रेस ची स्थापना होवून मवाळ वादि धोरण स्वीकारून दादा भाई नौरोजी इत्यादी नेत्यांनी नेतृत्व दिले. त्यात व्योमेश चंद्र बनर्जी व ह्यूम यांनी मवाळवादि धोरण ठेवून भारतीय नेत्यांना मदत केली.
- co2: जहाल वादाचा उदय:-भारतात राष्ट्रीय कांग्रेस ची स्थापना होवून लोकमान्य बाल गंगाधर टिळक यांनी जहाल वाद स्वीकारून संपूर्ण भारतीय जनतेचे नेतृत्व स्वीकारले जनतेत चेतना निर्माण करून आंदोलन निर्माण केले.
- co3: होमरूल अंदोलन:-होमरूल आंदोलन निर्माण होवून अनी बेझंट व लोकमान्य टिळकांनी भारतीय जनतेला राष्ट्रीयत्व निर्माण केले.
- co4: असहकार आंदोलन:-भारतीय राष्ट्रीयत्व निर्माण होऊन मा. गांधी युगाचा प्रारंभझाला व गांधीच्या रूपाने जैनतेला नेता मिळून इंग्रजाविरुद्ध असहकार आंदोलन केले.
- **cos**: सविनय कायदेभंग आंदोलन:-सविनय कायदे भंगाचे आंदोलन करून मा. गांधींनी मिठाचा सत्याग्रह केला.
- co6: भारत छोडो आंदोलन:-भारत छोडो आंदोलन निर्माण करून १९४२ च्या आंदोलनात मा. गांधीनी इंग्रजांना "चले जाव" चा संदेश दिला.
- **CO7:** जातीय राजकारणाचा उदय:-इंग्रजांनी भारतात आपल्या नीतीचा उपयोग करून जातीय वादाला प्रोत्साहन दिले.

**CO8:** क्रिप्स योजना:-इंग्रजांनी भारतीय जनतेला व नेत्यांना समजावण्याचा प्रयत्न केला त्यातूनच क्रिप्स योजना अस्थित्वात आली.

**CO9:** त्रिमंत्री योजना:-योजनेचा एक भाग म्हणजे इंग्रजानी त्रिमंत्री योजनेच्या माध्यमातुन भारतीय जनता व नेत्यांना समजावण्याचा प्रयत्न केला.

CO10: सुभाषचंद्र बोसे व आझाद हिंद सेना:-राष्ट्रीयत्व ठेवून भारताला गुलामगीरीतूनमुक्त करण्यासाठी सुभाषचंद्र बोस यांचे मोलाचे स्थान आहे व त्यांनी आझाद हिंद सेनेच्या माध्यमातुनभारत मातेला मुक्त करण्याचा प्रयत्न केला हे प्रत्येक भारतीय माणूस विसरू शकत नाही.

**CO11:** उंट बटन योजना:-भारतात माउंट बटन हे इंग्रज अधिकारी आल्या नंतर भारत विभाजनाची तयारी केली

व त्यंची माउंट बटन योजना ठरली जि भारत व पाकीस्तान विभाजित होऊन भारत देशाचे कायमचे नुकसान करणारी ठरली.

CO12: भारतीय स्वातंत्र्याचा कायदा:-भारत स्वतंत्र झाल्या नंतर भारतासाठी संविधान लागू होऊन राज्यघटनाअस्थित्वात आली व कायदा लागू झाला.

# पाचवे सेमिस्टर:- अर्वाचीन जगाचा इतिहास

co1: फ्रेंच राज्यक्रांती:-अर्वाचीन जगाच्या इतिहासात फ्रेंच क्रांती महत्वाची आहे. या क्रांतीने जगाला स्वातंत्र्य, समता व बंधुत्व याचा संदेश दिला.

co2: युरोपचा आशियात वसाहतवाद:-युरोपियन लोकांनाभारतीय संस्कृतीचे आकर्षण झाले व त्यांनी आशियात प्रवेश करून इंग्रजांनी भारतात वसाहत निर्माण केली.

co3 युरोपचा आफ्रिकेत वसाहतवाद:-युरोपियन लोकांना आफ्रिकेची माहिती होऊन आफ्रिकेतील साधन संपत्तीची लुट केली.

**CO4:** चीन जपान युद्ध:-चीन जपान युद्धामुळे युरोप व आशिया खंडात प्रादेशिक बदल घडून आले.

cos: रिशया जपान युद्ध १९०४-०५:- रिशया जपान युद्ध होऊन लहानशा जपान या राष्ट्राने आशियासारख्या राष्ट्राचा पराभव केला याचा परिणाम आशिया खंडावर झाला.

co6: चीन मधील क्रांती १९११:- १९११ मध्ये चीन क्रांती घडून आली व त्याचे परिणाम भारतावर सुद्धा झाला व भारतीय संस्कृतीत क्रांती होण्याला सुरुवात झाली.

co7: पूर्वेकडील प्रश्न:-युरोपीय देशात साम्राज्यवाद निर्माण झाल्याने पूर्वीय देशांमध्ये आपल्या देशाला वाचविण्यासाठी निर्माण झालेले प्रश्न.

CO8: पहिल्या महायुद्धांची करणे:-आंतरराष्ट्रीय जगात साम्राज्यवाद व वसाहतवाद निर्माण होऊन पहिले महायुद्ध घडून आले.

**CO9:** व्हर्सायचा तह:-पहिला महायुद्ध झाल्या नंतर जर्मनीवर अपमान जनक व्हर्सायचा तह लादल्या गेला.

CO10: राष्ट्रसंघाची स्थापना:-पहिल्या महायुद्धासारखा युद्ध होऊ नये म्हणून राष्ट्र संघाची निर्मिती झाली.

co11: राष्ट्रसंघाची कामगिरी व अपयश:-जगात शांततेसाठी राष्ट्र संघाची निर्मिती झाली पण, राष्ट्रसंघाला अपयश स्वीकारावे लागले.

co12: रिशयन क्रांती:-जगाच्या पाठीवर रिशया या देशात क्रांती होऊन लेनिनची आर्थिक नीती निर्माण झाली व आर्थिक नीतीने देश समृद्ध होतो हे जगाला पटवून देण्यात आले.

# सहावे सेमीस्टर : आधुनिक जगाचा इतिहास इ.स. १९२० ते १९७०

co1: रिशया पंचवार्षिक योजना:- रिशयन क्रांती होवून लेनिन ची आर्थिक नीती निर्माण होवून जगात रिशया दुसरी महाशक्ती निर्माण झाला.

co2: हिटलर:-व्हर्सायच्या तहामुळे जर्मनीचा अपमान झाल्यामुळे हिटलर सारख्या हुकुमशाहाचा उदय झाला.

co3: मुसोलिनी:- इटलीत सुधा मुसोलिनी सारखा हुकुमशहा निर्माण झाला व दुसरे महायुद्ध घडून आला.

co4: चीन-जपान युद्ध:-साम्राज्य वादामुळे चीन जपान मध्ये युद्ध घडून आले चीन मध्ये नविनिर्मिती घडून आली.

cos: द्वितीय महायुद्ध:-जगात दुसरे महायुद्ध घडून आले व या युद्धाने अमेरिकेचामहाशक्ती म्हणून उदय झाला.

co6: संयुंक्त राष्ट्रसंघ:- दुसऱ्या महायुधासारखा पुन्हा युद्ध होवू नये व जगात शांतता टिकवून राहण्यासाठी संयुंक्त राष्ट्र संघाची निर्मिती झाली.

co7: शींत युद्धः- जगातील सर्व देशामध्ये आपआपले वर्चस्व निर्माण झाले त्याला शीत युद्धे असे म्हणतात यात रशियाँ व अमेरिका असे दोन गट निर्माण झाले.

cos: नाटो, सीटो, वारसा करार:- नाटो, सीटो, वारसा करार म्हणजे जगाच्या देशमध्ये निर्माण झालेल्या शीत युद्धाचा एक भाग होय.

co9: आशियाचे निर्वासाह्तीकरण:-जगात निर्माण झालेल्या देशामध्येवसाहतीच्या माध्यमातून निर्माण झालेल्या निर्वासाह्तीचा प्रश्न व उपाय.

co10: इसाईल ची स्थापना:- पहिल्या महायुद्धामुळे व दुसऱ्या महायुद्धामुळे इस्राईल या देशाची निर्मिती झाली.

CO11: अलिप्ततेचे धोरण:- अलिप्ततेच्या धोरणात शीत युद्धाचा परिणाम म्हणजे भारताने अलिप्तता स्वीकारली व आपल्या देशात शांतता टिकवून ठेवली देशाला आर्थिक संपन्न बनविले.

CO12: सुवेझ कालवा:- आफ्रिकेत साम्राज्यवादाचा उदय झाला त्यातून सुवेझ कालव्याची निर्मिती झाली व सुवेझ कालवा आफ्रिकेसाठी महत्वपूर्ण ठरला.

भवभूती महाविद्यालयात इतिहास या विषयाच्या अनुसंगाने प्राचीन भारताचा इतिहास यातून भारताला लाभलेली प्राचीन संस्कृती जी आजही त्याचे महत्व आहे व संपूर्ण भारत देश स्त्री प्रधान संस्कृती व पुरुष प्रधान संस्कृतीचे पालन करतो व त्याचे अनन्यमहत्व भारताला आहे. अशा या सर्वांगीण उन्नती असलेला देश ज्यात भारत सुजलाम सुफलाम सुवर्ण समजल्या जाणाऱ्या भारत देशावर पाश्चात्यांनी आक्रमण केले त्यात इंग्रज हे सरस ठरले. भारतात ब्रिटिशानी भारतीय प्रगतीशील संस्कृतीवर गुलामिगरी निर्माण केली व भारतीयांनी आपल्या मातृभूमीला मुक्त करण्यासाठी आपल्या जीवाचे बिलदान दिले. त्यांच्या या बिलदानाचे मोल संपूर्ण भारतवाशियानी समजावे तसेच आजच्या युगानुसार आपल्या संस्कृतीचे महत्व व ते समजून घेणे जेवढे जाक्रीचे आहे तेवढेच मोल पाश्चात्य संस्कृतीचे आहे ते सुधा समजून घेणे आवश्यक आहे व त्यांचे विध्यार्थ्यांना नाही तर समाजाला व देशातील प्रत्येक नागरिकाला प्राचीन संस्कृतीचे मोल ब्रिटीश कालीन भारत व देशात निर्माण झालेली गुलामिगरी तसेच जगाचा इतिहास समजून घेणे आवश्यक व इतिहास समजण्याची गरज आहे या साठी इतिहासाचे अन्यन महत्व व ध्येय आहे.

# DEPARTMENT OF HOME ECONOMICS

### प्रथम सत्र अभ्यासक्रम

- C01 :- या अभ्यासक्रमातून गृह अर्थशास्त्रविषया संबंधीची जाणीव व्यापक होईल. गृहअर्थ शास्त्राचे क्षेत्र, प्रत्यक्ष जीवणात त्याची गरज, आवश्यकता व महत्व प्रकर्षाने जाणवेल.
- C02 :- कौटुंबिक साधन संपत्तीचे व्यवस्थापन कसे करावे यासंबंधी माहिती मिळेल.
- C03 :- कौटुंबिक साधन संपत्तीचे (मानवीय व अमानवीय) प्रकाराबद्दल माहिती होते.
- C04 :- कौटुंबिक अंदाज पत्रक सहजपणे तयार करता येईल.
- C05 :- कुठुंबांच्या ध्येय प्राप्तीसाठी योग्य निर्णय घेण्याची क्षमता अंगी बाणेल.
- C06 :- या अभ्यासक्रमात पुष्परचना, बांधणीकाम व भरतकाम यांचा समावेश असल्याने स्वयंरोजगार निर्माण करण्यास चालना मिळेल.

# व्दितीय सत्र अभ्यासक्रम

- C01 :- रोजगारांच्या संधी व स्वयंरोजगार निर्माण कसे करता येईल यासंबंधीची माहिती प्राप्त होते.
- C02 :- कुटुंब निवासाबद्दलच्या माहितीने गृहरचना करतांना योग्य निर्णय घेण्यास मदत होईल.
- C03 :- ग्राहकांच्या जवाबदाऱ्या व हक्कयाबद्दल ची विस्तृत माहिती मिळते.
- C04 :- रंग, रंगयोजना व रंगाचा मानवीमनावर होणाऱ्या परिणामाची माहिती मिळत असल्याने गृह योजनेसाठी रंग योजना करतांना योग्य व अचूक माहिती मिळेल.
- C05 :- विणकाम, पेंटिंगमुळे गृह सजावटीसाठी फायदा होतो.

# तृतीय सत्र अभ्यासक्रम

- Co1 :- आरोग्य व पोषण म्हणजे काय ? तसेच उत्तम आरोग्यासाठी पोषक घटक कोणते? या संबंधी माहिती मिळते.
- C02 :- अन्न म्हणजे काय ? अन्नाची शारीरिक, मानसिक, सामाजिक व सांस्कृतिक कार्ययासंबंधी माहिती प्राप्त होते.
- C03:- मुख्य पोषक घटक, खनिजे आणि जीवनसत्वे प्राप्तीच्या साधनां बद्दल माहिती मिळते.
- C04:- मुलभुत अन्न गटाबद्दल माहिती होईल.
- C05:- अन्न शिजविण्याच्या वेगवेगळ्या पद्धतीबद्दल माहिती मिळेल.
- C06:- कॅलरी / ऊर्जा म्हणजे काय? याबदल माहिती मिळेल.

# चतुर्थ सत्र अभ्यासक्रम

- CO1 :- समतोल आहार आयोजन करून वेगवेगळ्या वयोगटासाठी समतोल आहार तयार करता येईल.
- C02 :- पोषण शिक्षण म्हणजे काय ? पोषण शिक्षण ग्रामीण भागापर्यंत कसे पोहचवता येईल या संदर्भाची माहिती होते.
- C03 :- अन्नदूषितीकरण, अन्नविषबाधाची कारणे माहिती होतील तसेच अन्न संरक्षण कसे करावे याबद्दल माहिती होईल.
- C04 :- अन्नात भेसळ कशी होते ? तसेच अन्नभेसळीची कारणे, शरिरावर होणारे दुष्परिणाम याबद्दल माहिती होते.
- 205 :- अन्नाचा पोषण दर्जा कसे सुधारता येईल याबद्दल माहिती होते.
- C06 :- भारतातील कुपोषण, कुपोषणाची कारणे, कुपोषण दूर करण्यासाठी उपाययोजनांची माहिती मिळते.

# पाचवे सत्र अभ्यासक्रम

- C01:- बालविकासाचा अर्थ, व्याप्तीबद्दल माहिती होते.
- C02 :- जन्म पूर्व विकास कसा होतो ? गर्भवतीचा आहार व काळजी याबद्दल माहिती होते.
- C03:- जन्मानंतरच्या विकासाबद्दल व अवस्थांबद्दल माहिती होते.
- C04 :- नवजात अवस्था, शैशवास्थेतील वाढ आणि विकासाबद्दल ज्ञान प्राप्त होते.
- C05:- लसीकरण व त्याचे महत्व पटवून दिले जाते.
- C06:- गर्भावस्था आणि दुग्धसर्जन काळातील आहार आयोजन याबद्दल माहिती होईल.

# सहावे सत्र अभ्यासक्रम

- C01 :- या अभ्यासक्रमातील माहितीमुळे २ ते ६ वर्षेवयोगटातील बालकांच्या विकास प्रक्रियेत कोणत्या अडचणी येतात याची जाणीव होते.
- C02 :- बालकाचा भाषिक विकास, क्रियात्मक, सामाजीक, नैतिक विकास योग्य दिशेने घडवून आणण्यास मदत होईल.
- C03 :- बाल्यावस्थेतील वर्तन समस्या कोणत्या, त्यांची कारणे व उपाय याबद्दल माहिती होईल.
- C04:- पूर्वशालेय बालकांसाठी आहार आयोजनाबद्दल योग्य ज्ञान मिळेल ज्यामुळे कुपोषण टाळता येईल.
- C05 :- २ ते ६ वर्षे वयोगटातील बालकांसाठी आहार आयोजन व खाद्यपदार्थ तयार करण्याच्या पद्धतीचे ज्ञान मिळेल.

# DEPARTMENT OF POLITICAL SCIENCE

### अभ्यासक्रम 1:-

- CO1: राज्यशास्त्रातील राजकीय सिद्धांताचा अर्थ माहित होईल वेगवेगळया सिद्धांताची माहिती प्राप्त होईल.
- CO2: राज्यसंस्थेची उद्दीष्टये कार्यपद्धती याविषयीची माहिती राजकीय सिद्धांतातून होते.
- CO3: राजकीय व्यवस्थांचा अभ्यास राजकीय सिद्धांताच्या व्याप्तीमधून प्राप्त होतो.
- CO4: राजकीय विचारवंतानी सांगीतलेल्या व्याख्येतून अर्थ माहित होईल.
- CO5: राज्याचे घटक प्रमुख चार आहेत त्यामध्ये लोकसंख्या, भूप्रदेश, शासन, सार्वभौमत्व याविषयीची माहिती प्राप्त होईल.
- CO6: अधिकाराचा अभ्यास केल्यानंतर व्यक्तिला आपल्याला असलेल्या अधिकाराची जाणीव होईल.

### अभ्यासक्रम 2:-

- CO1: प्लेटो या राजकीय विचारवंताने सांगीतलेल्या न्यायसिद्धांताची माहिती प्राप्त होईल.
- CO2: ॲिरस्टॉटल हा राज्यशास्त्राचा जनक असल्यामूळे राज्यशास्त्र विषयीचे ज्ञान प्राप्त होते.
- CO3: मिल या विचारवंताने स्वाक्तंयासंबंधी जाणीव होते.
- CO4: कार्ल मार्क्सने आपल्या विचारातून जगाला साम्यवादी विचार सांगीतले

### अभ्यासक्रम 3:-

- CO1: भारतीय संविधानाची निर्मिती कशी झाली याविषयी माहितीचे ज्ञान प्राप्त होईल.
- CO2: नागरीकांना मिळालेल्या सहा मूलभूत अधिकारातून सर्वागीण विकास घडून येतो.
- CO3: मार्गदर्शक तत्वांमधून नागरीक व राज्यांना सेवा पूरविण्याची कार्य करण्यांची माहिती प्राप्त होईल.
- CO4: भारतात संसदीय शासनपद्धतीचा स्विकार केल्यामूळे संसदीय रचनेची माहिती होईल.
- CO5: कायदा तयार करण्याच्या प्रक्रियेविषयीचे ज्ञान मिळेल.
- CO6: कायदेमंडळ, कार्यकारी मंडळ, न्यायमंडळ या तिनही स्वतंत्र मंडळाविषयीची माहिती प्राप्त होईल.

# अभ्यासक्रम 4:-

- CO1: केंद्रसरकार व राज्यसरकार यांच्यातील संबंधाविषयी माहिती प्राप्त होईल.
- CO2: घटक राज्याचे राज्यपाल त्यांच्या अधिकार व कार्यविषयीची माहिती प्राप्त होईल.
- CO3: विधिमंडळाची दोन सभागृहे विधानसभा, विधानपरिषद याविषयीची माहिती प्राप्त होते.
- CO4: घटकराज्यातील वास्तविक प्रमुख म्हणून राज्याचा मुख्यमंत्री व त्यांची कार्ये व अधिकार याविषयीची माहिती प्राप्त होईल.
- CO5: राज्यातील न्यायालयाची रचना व नागरीकांना न्याय कसा दिला जातो याविषयीची माहिती प्राप्त होईल.
- CO6: नागरीकांना माहितींचा अधिकार प्राप्त झाल्यामूळे कोणत्याही कार्यालयातून माहिती मिळ् शकते.

# अभ्यासक्रम 5:-

- CO1: दोन देशांतील राजकीय व्यवस्थेची तुलना करुन त्या देशातील तुलनात्मक शासनाचा अभ्यास माहित होईल.
- CO2: अमेरीकेच्या राजकीय व्यवस्थेचा अभ्यास करुन तेथील राज्यघटनेची वैशिष्ट्ये यांचा अभ्यास माहित होईल.
- CO3: इंग्लंड या देशाच्या अभ्यास करुन वैशिष्टयांची माहिती प्राप्त होईल.
- CO4: अमेरीका या देशाचे न्यायमंडळ कशा प्रकारचे कार्य करते याविषयीची माहिती प्राप्त होईल.
- CO4: इंग्लंड व अमेरीका या दोन्ही विकसित देशातील कायदेमंडळाची रचना कशी आहे याविषयी माहिती प्राप्त होईल.

### अभ्यासक्रम 6:-

- CO1: एका राष्ट्राचे दुसऱ्या राष्ट्राशी जेव्हा संबंध प्रस्थापित होतात तेव्हा आंतरराष्ट्रिय संबंध निर्माण होतात याविषयीची माहिती प्राप्त होईल.
- CO2: एका देशांचे दुसऱ्या देशाशी जो व्यवहार केला जातो तेव्हा परराष्ट्र धोरण व्यवहार स्थापन होतो या धोरणाविषयीचे ज्ञान मिळते.
- CO3: आंतरराष्ट्रिय संबंधांमध्ये विविध देशांच्या अभ्यासाची माहिती प्राप्त होते.
- CO4: आंतरराष्ट्रिय राजकाणाचा प्रभाव देशाच्या राजकीय व्यवस्थेवर होत असतो या परिणामांचा उपयोग राजकारणात केल्या जातो याविषयीची
  - माहिती प्राप्त होते.