2.6.1

B.Sc. CHEMISTRY

PROGRAMME OUTCOME:

The students perusing this course can have ability to:

- Demonstrate an understanding of major concepts in all disciplines of chemistry.
- Employ critical thinking and the scientific method to design, carry out, record and analyze the results of chemical experiments.
- Get an awareness of the impact of chemistry on the environment, society, and other cultures outside the scientific community.
- Explain chemical nomenclature, structure, reactivity, and functions in their specific field of chemistry.
- Design and execution of the experiments should demonstrate the understanding of good laboratory and the proper handling of chemicals
- Explain how the applications of Chemistry related to the real world

B Sc Part One-Code-004

COURSE OUTCOME-- CHEMISTRY [code-06 & 26]

Inorganic

After successfully completing this course students will be able to:

- Predict the shape and also the angles between the bonds of a molecule with the knowledge of the hybridisation used by the central atom of the molecule
- Understand the shapes of different orbitals.
- Understand different principles for filling electrons. Understand how to draw energy diagrams, how to calculate bond order, how to calculate lattice energy through Born Haber Cycle.
- Write electronic configuration of given atomic number and calculate effective nuclear charge using Slaters Rule
- Tell the the name of orbitals by recognizing shapes of orbitals.
- Draw MO diagrams of different molecules, calculate bond order of different molecules, structures of different ionic solids.
- Describe the periodic table as a list of elements arranged so as to demonstrate trends in their physical and chemical properties.
- State the principle resemblances of elements within each main group in particular alkali metals, alkaline earth metals, halogens and noble gases

Organic

After successfully completing this course students will be able to:

- Understand the core concepts of organic chemistry i.e. resonance, hyperconjugation, inductive effect etc. and their application
- Study about the isomerism and types of isomerism.
- Understand optical isomerism, geometric isomerism and conformational isomerism.

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- Acquire basic knowledge of reactive intermediates and mechanism of organic reactions.
- Study about nomenclature. synthesis, isomerism and physical properties of alkanes and cycloalkanes.
- Recognize and draw constitutional isomers. stereoisomers, including enantiomers and diastereomers. racemic mixture and meso compounds.
- Know the fundamental principles of organic chemistry and predict outcomes and derive mechanism of various types of organic reactions.
- Understand various types of reactive intermediates and factors affecting their stability.
- Understand the nomenclature, synthesis, isomerism and Physical properties of alkanes and cycloalkanes

Physical

After successfully completing this course students will know to

- Describe the concept of pressure from a macroscopic and microscopic perspective.
- Explain the quantitative relationship between T,V, n & P as described by kinetic molecular theory.
- Compare and contrast the chemical behaviour and physical properties of common substances.
- Classify matter by its state and bonding behaviour using the periodic table as a reference.
- Describe a reaction rate in terms of a change in concentration divided by a change in time (at constant volume) and a general form of a (differential) rate law.
- Write a general form of the rate law for any chemical reaction and define the order of achemical reaction.
- Determine integrated rate expression for zero order, first order, second and third order reaction and their respective half-life period expressions.
- Study the various factors which affect the rate of a chemical reaction such as concentration temperature, solvent, catalyst etc. And theories of chemical kinetics.

Practical

After successfully completing this course students will able to:

- Gain hands on experience in identification of organic compounds
- To study Qualitative analysis of mixture containing 4 Principals with removal of interfering radicals
- Use double burette method and burette -pipette methods for titration Prepare standard solutions
- Know handling of glassware's and care to be taken, handling of organic flammable as well as toxic solvents in laboratory
- Know use of safety goggles, shoes and gloves, fire extinguisher and its use and action to be taken in accidental cases
- Get awareness of safety techniques and handling of chemicals..

B Sc Part Two-Code-005

COURSE OUTCOME-- CHEMISTRY [code-06 & 26

Inorganic

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After successfully completing this course students wi be able to:

- Understand general trends in the chemistry behind p block elements.
- The students will be able to know the important compounds and important applications of compounds of boron and carbon.
- The students will understand the biological significance of sodium, potassium, magnesium and calcium.
- The students will be able to explain large scale eparation and properties of industrially viz., cement, paris, sodium hydroxide, sodium carbonate and bicarbonate etc.
- The students will be able to describe the salient featu of alkali and alkaline earth metals.
- Study transition metals To understand the trends properties and reactivity of he d-block,elements.
- Explain the typical physical and chemical properties the transition metals.
- Identify simple compound classes for transition me and describe their chemical properties.

Organic

After successfully completing this course students will be able to

- Develop green methodologies for the synthesis of nitrogen containing heterocyclic.
- Aware about most of drugs in the present market are the compounds containing various heterocyclic moieties.
- Understand the reaction mechanism of carbonyl compound, alcohol, phenol and carboxylic acid

Physical

After successfully completing this course students will be able to:

- Acquire basic knowledge of electrode conduction.
- Determine the solubility of sparingly soluble salts.
- Explain the various methods for the determination of transport number
- State the basic principles electrochemistry
- Mention and explain various methods for the determination of transport number
- Explain the concepts of electrolytic conduction and dilution
- Understand thermodynamic terms: system, surrounding systems, intensive and extensive etc.
- Understand Heat capacity, heat capacities at constant volume and pressure and their relationship. Joule's law
- Understand the concept of equilibrium constant, free energy, chemical potential
- Understand of the laws of thermodynamics and their applications
- know the phase diagram of single component systems and binary mixtures

Understand thermodynamics

Practical

After successfully completing this course students will able to:

- Ability to use instruments for chemical analysis and separation. Follow reaction by using thin layer chromatography

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- Ability to perform experiments, analyse data and interpret results and observe scientific conduct.
- Ability to identify presence or absence of number of Canions in scition, using tests based on acid -base and solubility.
- Ability to work effectively in diverse teams in laboratory

B Sc Part Three-Code-006

COURSE OUTCOME-- CHEMISTRY [code-06 & 26]

Inorganic

After successfully completing this course students will know,

- Understand the role of metal ions in biological system.
- Understand the role of metal ions in oxygen transport.
- Understand the concept of acid and bases.
- Understand the uses of inorganic polymers.
- Understand the nature of bonding of different metals with carbon atom.
- Describe role of different metal ions in biological system.
- Recognize role of porphyrin ring in haemoglobin. Count total of electrons in organometallic compound

Organic

After successfully completing this course students will be able to:

- Study the NMR spectroscopy to understand the important role of nuclear magnetic resonance spectroscopy in the study of the structures of organic compounds.
- Develop an understanding of the significance of the number. harge colege intensities and splitting of signals in nuclear magnetic resonance spectra.
- Assign structures to simple molecules on the basis of nuclear magnetic resonance spectra.
- Study carbohydrates will develop the skills to recognize and draw particular carbohydrate structures.
- Know general structural elements of cyclic monosaccharide and disaccharides and their implications for structure and function.
- Ability to identify organic compounts by analysis and interpretation of spectral data.
- Ability to explain common terms in NMR spectroscopy such as chemical shift ,coupling constant and anisotropy and describe how they are affected by molecular structure.
- Perform the most commonly used NMR experiments and to interpret and document their results.

- **Physical**

After successfully completing this course students will be able to:

- Recognize the basic rules of electronic spectroscopy. Predict the term symbols of diatomic molecules Understand different properties of molecular structure
- Understand the concept of black body radiations.
- Understand the concept of wave functions.
- Understand the basic features of spectroscopy
- Understand the Harmonic Oscillator.

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- Recognize different regions for different spectroscopy.
- Explain the concept of Electromagnetic Waves.
- Explain the concept use in Black Body Radiation

Practical

After successfully completing this course students will know,

- Understand the principle and working of different instruments like colourimeter, spectrophotometer, etc. conductometer,
- How to synthesize organic molecules
- How to maintain reaction conditions.
- Arrangement of assembly

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Botany

Programme outcomes for B.Sc.

NOTE- For all B.Sc. (Undergraduate) programme the Programme outcomes are exactly as the general higher education programmes because the syllabus is unified. We follow them. These are:-

PO1-Critical Thinking- Take informed actions after identifying the assumptions and checking our degree to which these assumptions are accurate and valid and looking to our ideas and decisions.

PO2- Effective Communication

PO3- Social Interaction

PO4- Effective Citizen ship

PO5- Ethics

PO6- Environment and Sustainability

PO7- Self directed and lifelong learning

PSOs FOR B.Sc. Botany

This is the specific outcome of the B.Sc. 3 Year programme. This is included in plant Ecology and Utilisation of plants.

PSO1- To know the diversity of the prokaryotes and microbes like Algae & Fungi.

PSO2- To understand the structure and function of early vascular plants and higher tracheophytes like Pteridophytes and Gymnosperms.

PSO3- To know the Diversity and Systematics of Angiosperms.

PSO4- To understand the structure and complexity and also the reproduction of flowering plants.

PSO5- The acquaint the students with functional aspects of plant life i.e plant physiology and the basics of Biochemistry.

PSO6- How the ecosystem works and what are the relationships of plants, environment and society?

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Course outcomes B.Sc. – I [BOTANY]

PAPER-I BACTERIA, VIRUSES, FUNGI, LICHENS AND ALGAE

CO1 – To learn about General characteristics, types of viruses , Multiplication of viruses and Cyanophages Mycorrhiza Types and Significance.

CO2 – To learn about General characteristics and classification bacteria fine structure of bacterial cell asexual and recombination (Conjugation, transformation and transduction), Economic importance. Microbial Biotechnology, Rhizobium, Azatobactor, Anabena.

CO3 - To learn about General account of habit and habitat, structure Heterothallism and Parasexuality.Outlines of classification of fungi.Economic importance of fungi. Life cycles of Saprolegnia, Albugo, Aspergillus,Peziza, Agaricus, Ustilago, Puccinia, Alternaria and Cercospora. VAM Fungi.

CO4 – To learn about characters, range of thallus organization reproduction, life cycle patterns and economic importance.Classification, Systematic position, occurrence, structure and life cycle of following genera: Nostoc, Gloeocaspsa, Volvox, Oedogonium, Vaucheria, Chara, Ectocarpus, Polysiphonia.

CO5 - To learn about Lichens- General account, types, structure, nutrition, reproduction and economic importance.Mycoplasma: Structure and importance. Mushroom Biotechnology.

PAPER –II (BRYOPHYTES, PTERIDOPHYTES, GYMNOSPERMS AND PALAEOBOTANY)

CO1 - To learn about General characteristics Bryophyta Systematic position, occurrence, morphology anatomy and reproductive structure in Riccia, Marchantia, Pellia, Anthoceros, Funaria. Vegetative reproduction in Bryophytes, Evolution of sporophytes.

CO2 – To learn about Pteridophytes General characteristics economic importance and classification,Heterospory and seed habit, stellar system in Pteridophytes, Aposory and apogamy, Telome theory, Azolla as Biofertilizer.

CO3 - To learn about Systematic position, occurrence.Morphology, anatomy and reproductive structure of Psilotum, Lycopodium, selaginella, Equisetum, Marsilea.

CO4 - To learn about Gymnosperm: General characteristics, Cycas, Pinus and Ephedra.

CO5 - To learn about Palaeobotany Geological time scale, fossilization, Rhynia, study of some fossil gymnosperms. Lygenopteris

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Course outcomes B Sc II [BOTANY]

BOTANY

PAPER1-Diversity of seed plant & their systematic-PAPER CODE-0861

CO1 – To know about the characters of seed plant and their diversity.

CO2- To know about the morphology and vegetative parts and life cycles of cycaspinus and Ephedra. CO3-To learn about the origin and evolution of Angiosperms, Primitive Angiosperms

CO4-To Know about Classification of Angiosperms: Salient features of Bentham& Hooker;Engler and Prantl.

CO5-To know about the modern trends of taxonomy:contribution of cytology, phytochemistry and taximetrix to taxonomy. CO6 -To Know about General account of family ranunculaceae, apiaceae, brasicaceae, malvaceae, utaceae, fabaceae, acanthaceae, lamiaceae, chenopodiaceae, solanaceae. liliaceaeandpoaceae.

PAPER 2-

Structure and reproduction of Flowering Plants- PAPER CODE 0862

CO1- To know about the basic body plan of a flowering plants and modular type of growth.

CO2-To Know about Diversity of plant forms, convergence and evolution of tree habit in Gymnosperms, Monocots and Dicots.

CO3-To know about the Largest and longest lived organisms

CO4- To learn about the theories of shoot apical meristem. Vascularisation of ofpri. Shoot in monocotyledons and dicotyledons. CO5-To Know about Canopy Architecture and branching pattern. CO6-To Know about Secondary growth in dicots and wood structure.

CO7-To Know about Orin and development of leaf and its diverse forms; Its role in photo synthesis, Senesence and abscission.

CO8-To Know about Root apical meristem :theories to explain it and modification of roots.Differentiation of primary and secondary tissues and their roles.Root Microbe interactions.

C09-To Know about Flowers as a modified shoot, Embryology of flowering plants. Pollination, Pollen – pistil interaction andself-incompatibility.

C0 10-To Know about Fruit development and maturation; Significance of seed :Suspended Animation, Seed as a unit of genetic recombination and replenishment, Dispersal strategies and Vegetative Reproduction.

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Course outcomes B.Sc. – III (Botany)

PAPER - I PHYSIOLOGY, BIOCHEMISTRY AND BIOTECHNOLOGY

Co1 – To Know about the Plant water relations, Physical properties of water diffusion and osmosis,Transport of water and transpiration and physiology of stomata.

Co2 – Students will get to know about phloem transport, factors affecting translocation. Basic of enzymology, Characteristics and basic concepts of holoenzyme, coenzyme and regulation of enzyme activity, Photosynthesis.

Co3 – To Know about Respiration, ATP, aerobic and anaerobic respiration cycle Kerb's cycle Chemi-osmotic theory, pentose phosphate pathway. Nitrogen and lipid metabolism, importance of nitrate reductase and its regulation, structure and functions of lipids fatty acid biosynthesis saturated and unsaturated fatty acids and storage and mobilization of fatty acids.

Co4 – To learn about the Growth and development, Various phases of growth and development, seed dormancy, germination and factors of regulation. Plants movements, Concept of Photoperiodism, florigen concept, physiology of flowering. Biologicals Clocks, fruit ripening, Plants harmones like auxin, cytokinins, gibberellins their history of discovery biosynthesis and mechanism of action. Phytochromes and Cryptochromes their discovery, physiological and mechanism of action.

Co5 - To learn about Genetic engineering, techniques of DNA recombinant technology, cloning vectors, transposable elements, techniques of gene mapping and chromosome mapping. Biotechnology functions basic of plant tissue culture .Cellular totipotency, differentiation and morphogenesis, vectors for gene delivery and marker genes and achievements in crop biotechnology.

PAPER – II ECOLOGY AND UTILIZATION OF PLANTS

CO1 – To learn about plants and environment, atmosphere, Water, light, temperature, Soil and Biota. Morphological, anatomical response of water, temperature, light and Salinity.

CO2 - To know about Community ecology, characteristics, frequency, cover biological spectrum and ecological succession, ecosystem, biogeochemical cycles.

CO3 - To know about population ecology, biogeographical and Vegetation types of India.

Co4 - To know about utilization of plants, food plants, fibres, Vegetable oils and general account of sources of firewood and bamboos.

CO5 - To know about general account, medicinal plants, beverges and rubber.

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Zoology Program Outcomes.

Zoology Program Outcomes:

1. PO1 - Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms
2. PO2-Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment
3. PO3-Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organs.
4. PO4-Understands the complex evolutionary processes and behaviour of animals
5. POS-Correlates the physiological processes of animals and relationship of organ systems
6. PO6-Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species
7. PO7-Gain knowledge of Agro based Small Scale industries like sericulture, fish farming. butterfly farming and vermicompost preparation.
8. PO8 -Understands about various concepts of genetics and its importance in human health
9. PO9-Apply ethical principles and commit to professional ethics and responsibilities in delivering his duties

10. PO10-Apply the knowledge and understanding of Zoology to one's own life and work
11. PO11-Develops empathy and love towards the animals

Program Specific Outcomes:

1. PSO1. Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology
2. PSO2. Analyse the relationships among animals, plants and microbes
3. PSO3. Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Clinical science, tools and techniques of Zoology, Toxicology, Entomology,Nematology Sericulture, Biochemistry, Fish biology, Animal biotechnology, Immunology and research methodology
4. PSO4. Understand the applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine
5. PSOS. Gains knowledge about research methodologies, effective communication and skills of problem solving methods
6. PSO6. Contributes the knowledge for Nation building.

Course Outcomes:

Animal Diversity-Invertebrates

CO1 Describe general taxonomic rules on animal classification:
CO2 Classify Protista up to phylum using examples from parasitic adaptation
CO3 Classify Phylum Porifera to Echinodermata with taxonomic keys
CO4 Describe Phylum Nematoda and give examples of pathogenic Nematodes

Ecology. Zoogeography and Animal Behaviour:

CO1 Distribution of fauna in different realms interaction
CO2 Understand Animal behaviour and response of animals to different instincts
CO3 Interaction of biota abiota
CO4 Various kinds of Animal adaptations

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Animal Diversity-Vertebrates & Developmental Biology:

CO1 Imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment
CO2 Classify phylum Protochordates to Mammalia
CO3 Complex Vertebrate interactions
CO4 Basic concepts of developmental biology

Cell Biology, Genetics and Evolution:

CO1 Structural and functional aspects of basic unit of life i.e. cell concepts
CO2 Mendelian and non mendielian inheritance
CO3 Concept behind genetic disorder, gene mutations- various causes associated with inborn errors ofmetabolism
CO4 Theories of Evolution
CO5 Knowledge of eras and evolution of species

Physiology and Biochemistry:

CO1 Seeks to understand the mechanisms that work to keep the human body alive and functioning
CO2 Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physical, and biochemical functions of humans, their organs, and the cells of which they are composed
CO3 Interactions and interdependence of physiological and biochemical processes

ANIMAL PHYSIOLOGY

CO1 Students are taught the detailed concepts of digestion respiration excretion the functioning of nerves and muscles
CO2 Students gain fundamental knowledge of animal physiology
CO3 Students will gain skill to execute the roles of a biology teacher or medical lab technicians with training as they have basic fundamentals

Animal physiology genetics and evolution

CO1 Students learn the concepts of endocrine systems and homeostasis a brief account organic evolution.
CO2 This course helps students to gain fundamental knowledge in these topics of genetics and
CO3 Students gain fundamental knowledge of physiology and endocrine systems
CO4 Students gain fundamental knowledge ofphysiology of homeostasis
CO5 Understanding of basic concepts of genetics, laws of inheritance and central dogma of biology
CO6 Understanding of genetic basis of evolution, human karyotyping and speciation

Applied Zoology

CO1 Understands concepts of fisheries, fishing tools and site selection
CO2 Aqua culture systems, induced breeding techniques, post harvesting tecniques
CO3 Understands about composition of blood, blood born diseases, autopsy and biopsyny
CO4 Types of immunity, antigens-antibodies and their properties

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Entomology:

CO1 Imparts knowledge of beneficial and non-beneficial insects
CO2 Knowledge of how they interact with their environment, other species and humans
CO3 Classification of Insects
CO4 Role of insects in spread of diseases

Sericulture:

COI Gives knowledge of silk worm rearing
CO2 Mulberry cultivation
CO3 Pests and diseases associated with silk worm and mulberry
CO4 Various process involved in silk production

Research Methodology:
CO1 Understanding of scientific method, concepts and steps in research
CO2: Differentiate between the Quantitative and Qualitative Research and understand different ty of Research Design
CO3: Understand the various techniques of Data Collection- Observation, Questionnaire, Intervie Schedule; Case Study, Social Survey, Content Analysis
CO4: Describing various types of Sampling COS: Elaborate on Data Processing and Data Analysis

Immunology:

CO1Imparts in depth knowledge of tissues, cells and molecules involved in host defense mechanis:
CO2 Understanding of types of immunity
CO3 Interactions of antigens, antibodies, complements and other immune components
CO4 Understanding of immune mechanisms in disease control, vaccination, process of immune interactions

Clinical science:

CO1 Gives knowledge related to the techniques involved in detection of various diseases
CO2 Pathology associated with various diseases
CO3 Practical skills of conducting basic clinical lab experiments
CO4 Application of knowledge of clinical science and pathology to one's own life

Animal biotechnology:

CO1 Imparts the Knowledge to culture animal cells in artificial media.
CO2 Knowledge of animal cells in culture, growth of cell lines
C03 Use in recombinant DNA technology, genetic manipulations and in a variety of industrial processes.

Aquarium fish management

COI Provides knowledge of ornamental fish breeding which is highly professional and attractive avenue for youth

Clinical Science and pathology:

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CO1 Understands about composition of blood, blood born diseases, autopsy and biopsy
CO2 Techniques of microscopy, microtomy, biopsy, autopsy and immunological techniques
CO3 Types of immunity, antigens-antibodies and their properties
CG4 Understanding of pathology of diseases caused by various microorganisms such as bacteria, virus, parasites and fungus

Structural Blology ISBI

CO1 Allows the students to gain basic knowledge about various bio molecules and their role in metabolism
CO2 Classification of enzymes, enzyme kinetics
CO3 Metabolism of carbohydrates, nucleic acids and metabolic disorders.
CO4 Gains understanding of cellular organization and functional biology nucleic acids

Environmental and Conservation Biology IECBI

CO1 Imparts knowledge to the student regarding environment and conservation biology.
CO2 Gains knowledge in the areas of responses to Laws of limiting factor, Laws of minimum, Laws of Tolerance and Tragedy of commons
CO3 Types of ecosystem- freshwater, marine and terrestrial,
CO4 Population characteristics and dynamics-conceptual approach
CD5 Growth curves and pyramids; sigmoid curve, J curve and hyperbols; logistic equation and concepts relating to growth
CO6 The students will be well equipped to become very competent in research or teaching fields after completion of this course

Immunology (IMMI)

CO1 Provides basics knowledge about immune system and allows the student to create insight as how to improve their immune system and good health.
CO2 Types of immunity, antigens-antibodies and their properties
CO3 Complement system, MHC's and immune responses
CO4 Understanding of types of hypersensitivity reactions and auto immune diseases
CO5 Ability to understand concepts of tumor immunology and transplantation immunology

Taxonomy. Systematics and Functional Anatomy of Invertebrates ITSEAIL

CO1 Imparts knowledge regarding the various Invertebrates species and the regulatory processes to safeguard them
CO2 With the study of this paper students gain knowledge in the areas of responses to Systematic doposition, general organization and affinities of Ctenophora and Nemertea
CO3 Rhynchoceola; Systematic position, general organization and affinities of Rotifers,
CO4 Systematic position, general organization and affinities of Hemichordata
CO5 The students will be well equipped to become very competent in research or teaching fields after completion of this course Tools.

Techniques and Biostatistics ITTBI

CO1 Students gain knowledge about various tools & techniques used in biological systems and givesthem insight about their usein research.
CO2 Biostatistics teaches them to use the best data analysis methods in their research projects
CO3 Students gains knowledge about statistical methods like measures of central tendencies, Probability

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CO4 Learns about hypothesis testing and inferential statistics
CO5 Learns the problem-solving methods

Animal Physiology (API)

CO1 Imparts knowledge about various metabolic and physiological mechanisms of the human body.
CO2 Understands about neurophysiology and receptors
CO3 Gain knowledge about hormones and bioluminescence
CO4 Understanding of stress physiology and endocrine mechanisms will allow them to control their stress and emotions there by diverting their energy towards the positive nation building activities

Molecular Genetics and Developmental Biology IMGDBI

CO1 Knowledge about genetics, developmental biology and organogenesis
CO2 Application of DNA technology and molecular biology for research
CO3 Gains knowledge about gametogenesis, cleavage mechanisms, gastrulation and role of hormones in metamorphosis and regeneration
CO4 Provides students insight into maintaining healthy relationships with their opposite gender and allows them to make right choice about their life partner thus preventing congenital/consanguial diseases.

Evolution and Functional Anatomy of Vertebrates [EFAVI

COI Imparts knowledge regarding the various theories of evolution, evolutionary process such as variation, speciation, natural selection, origin of primates and man
CO2 Understanding of origin and salient features of Ostracoderms to Actinopterygii, adaptive radiation of Amphibians, Reptiles, birds and Mammals
CO3 Gains knowledge of functional anatomy of vertebrates from fishes to mammals
CO4 Understanding of evolutionary significance of internal fertilization, neoteny and paedogenesis
CO5 Identifies the significance of amniotic egg its structure and evolutionary significance of skeletal system

Systems BiologyISBI

CO1 Imparts knowledge regarding the various concepts of systems biology, systems approach and its application in biological systems
CO2 The structural biology paper is physiological chemistry of all the bio molecules.
CO3 The paper imparts trough knowledge in the fundamentals of biochemistry of all the biomolecules like the carbohydrates ,proteins,lipids,nucleic acids,their classification structure and metabolism.
C04 Understanding of Mammalian biological clocks, Sustainable pest and disease management and bioremediation
CO5 Develops skills of Insect outbreak models Data formats, simulation techniques, modeling tools
C06 Application, characterization and interactions ofnanoparticles in biological systems

Research Methodology IRMI

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CO1 The course provides wide knowledge about research, experimental & sampling design,
CO2 Data collection, analysis & interpretation of data and allows student to present the research data in scientific method
CO3 Gains skill to solve problems using inferential statistical tools
CO4 Learns to collect literature collection, literature citation, and components of research report Text, tables, figures, bibliography.
CO5 Writing of dissertations, project proposals, project reports, research papers.

C06 Intellectual Property Rights - Biopiracy, copyrights, patent and traditional knowledge and plagiarism.
CO7 Understanding of Laboratory safety measures, laboratory good practices, animal model systems,animal ethics-animal welfare guidelines for care and use of animals.

Comparative Animal Physiology I

CO1 Comparative animal physiology is a comprehensive subject that gives in depth knowledge of various physiological processes in the animal kingdom
CO2 students gain knowledge about the comparative physiological concepts of nutrition digestion respiration excretion metabolism and osmoregulation.
CO3 Course provides students comprehensive understanding about neurobiology, neurophysiology, molecular neurobiology
CO4 Understanding of cognitive/behavior neurobiology, thus allowing then to correlate the human behaviour under given situation.
CO5It gives comprehensive understanding regarding inborn disorders and deranged metabolisms.
CO6 Students feel confident in teaching physiology as well as executing research projects

Comparative animal physiology-II
Col With the study of this paper students gain knowledge in the areas of responses to environment with study of receptors CNS integration of behavior
CO2 Understanding of the functions of effectors in all aspects as well as the circulatory reproduction and adaptations by animals to environment
CO3 The students will be well equipped to become very competent in research.
CO4 The course provides employability in teaching fields

Applied Toxicology

CO1 It is a discipline overlapping with biology, chemistry, medicine that involves the study of toxic ants, their mechanism of action.
CO2 It involves the study of the adverse effects of chemical substances on living organisms.
CO3 Skill development in environmental and occupational Toxicology
CO4 It provides opportunities for students research projects, internships in assessing the effects of toxic pollutants on the environment and in the food chain

Medical Entomology I & II

Col Medical Entomology is an integral part of applied ecology involving the study of diverse ecto and endoparasites
CO2 Understanding of fundamental complement of numerous diseases which have significant impact on human health
CO3 Understanding offnsect vector host interactions of many important diseaseslike Malaria, Filaria, Dengue etc.

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CO4 Understanding of denudation of forests its results in increased human vector contact which have become almost irreversible.

CO5 Course gives insight into physiology, biochemistry and reproduction of insect vectors and their control measures.
CO6 Students gain knowledge about the concepts of overview of Entomology
CO7 Source reduction and environmental methods for vector control, biological control and other Insect bites
CO8 Knowledge of hormonesand Insects
CO9 Students gets good insight into how Medical Entomology is acting as a promising factor for entomologist vacancies in both public and private sectors
CO10 Student gains knowledge regarding vector born diseases their pathology, control measures, thus aiming at 'Swach and Swasth Bharat
CO11 Students feel confident in teaching Medical Entomology as well as executing research projects

Sericulture

CO1 Gives knowledge of silk worm rearing, mulberry cultivation, pests and diseases associated with silk worm, mulberry and various process involved in silk production.
CO2 It is an agro based cottage industry in India that enables them to get self-employment
CO3 Sericulture is a comprehensive subject that gives in depth knowledge of the study of silkworms both physiological as well as commercial purposes including the various processes involved in the formation of silk.
CO4 Students gain knowledge about various systems study of silkworms and cocoons, other defective cocoons
COS Reeling and significant diseases seen in the silkworms
CO6 Students feel confident in teaching Sericulture as well as executing research projects

Animal Biotechnology IABI
CO1 It gives insight into various cell/tissues culture techniques
CO2 Understanding of in vio culturing of organisms and production of transgenic animals.
CO3 Understanding of cloning of mammals, large scale culture and production from recombinant microorganisms
C04 Gains skills in medical, environmental biotechnology, biopesticides, Biotechnology of aquaculture and use of animals as bioreactors
CO5 This insight allows students to take into consideration about ethical issues involved in production transgenic animals and BT products.

Fish Biology IFBI

CO1 Course provides them comprehensive understanding about aquatic ecosystem and various economical important fishes.
CO2 Students gain knowledge in the areas of responses characterization and classification of Ostracoderms, placoderms, acanthodians, holocephali, elasmobranchs
CO3 Students gain knowledge of integumentary system - basic structure of skin, dermal and epidermalniements, fins, and scales.
CO4 Understanding of embryogenesis - Early development and post embryonic development
CO5 Understanding of fishes habits and habitats and their functional anatomy
CO6 The students will be well equipped to become very competent in research or teaching fields
CO7 It is one of the small scale industry which can provide the student employment opportunity.

Instrumentation and computer applications in biology

CO1 Understanding of basisconcepts of instrumentation such as cell fractactionation, homogenation and centrifugation
CO2 Students gain skills in techniques of chromatography, electrophoresis, spectroscopy and radioisotopes
CO3 Students gain skills in histological, immunological and electrophysiological techniques
CO4 Students gain skills in basics of computers, operating systems, overview of programming languages
COS Application of internet and statistical bioinformatics in research

Agricultural Nervatology
CO1 Students gain knowledge of nematodes, their taxonomic importance, collection and fixation
CO2 Understanding of morphology of nematodes, life cycles, pathogenic and predatory nematodes
CO3 Understanding of feeding mechanisms of nematodes and nematode associations
CO4 Students gain skills of various kinds of nematode control measures

Biodiversity and Conservation

CO1 Biodiversity and conservation explore natural landscapes, species and ecosystems and acquires theories and practical methods in preserving environments and organisms.
CO2 Biodiversity refers not only to endangered species but also to every organism, including microbes and fungi.
CO3 Biodiversity and Conservation increase awareness and understanding of how human life depends on preserving animal species and natural ecosystems.
CO4 Biodiversity and conservation is connected to similar disciplines like environmental science, natural resources management and animal sciences.
COS Conserving biodiversity in the face of pressures such as land clearing, pest plants and animals and climate change is a challenge facing land managers and policy-makers globally.
CO6 Key threats to biodiversity, including habitat modification and loss, unsustainable resource use, introduced species and climate change.
CO7 Management actions that are used to mitigate threats to biodiversity, including selecting nature reserves, connectivity and wildlife corridors, ecosystem restoration and control of pest plants and animals
CO8 Policies to conserve biodiversity including financial incentives, market-based instruments (e.g. biodiversity offsetting), ecological triage and adaptive management.

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Project

CO1: Make research proposal
CO2:Construct tool of collection
CO3: Learn fieldwork modalities
CO4: Understand the process of data analysis
CO5: Writing research report

BACHELOR OF ARTS (GEOGRAPHY)

PROGRAMME OUTCOMES

Upon completion of the Bachelors of Arts in Geography students will be able to demonstrate the following:

PO1: Understand the unifying themes of both human and physical geography.

PO2: Have a working knowledge of the discipline's diverse conceptual and methodological approaches.
PO3: Identify characterize and explain spatial pattern and structures the interrelationship between people and places and the interactions between nature and society.

BACHELOR OF ARTS (GEOGRAPHY) PROGRAMME SPECIFICS OUTCOMES

PSO1:Acquireing Knowledge of Physical Geography: Student will gain the knowledge of physical geography. Student will have a general understanding about the geomorphological and geotechnical process and formation. They will be able to correlate the knowledge of physical geography with the human geography.

PSO2:Acquireing Knowledge of Human Geography: They will be able to acquire the knowledge of Human Geography and will correlate it with their practical life.

PSO3: Ability of Problem Analysis: Student will be able to analyse the problems of physical as well as cultural environments of both rural and urban areas. Moreover they will try to find out the possible measures to solve those problems.

PSO4:Conduct Social Survey Project: They will be eligible for conducting social survey project which is needed for measuring the status of development of a particular group or section of the society.

PSO5: Application of modern instruments: Students will be able to learn the application of various modern instruments and by these they will be able to collect primary data.

PSO6: Application of GIS and modern Geographical Map Making Techniques: They will learn how to prepare map based on GIS by using the modern geographical map making techniques.

PSO7: Development of Observation Power: As a student of Geography Honours Course they will be capable to develop their observation power through field experience and in future they will be able to identify the socioenvironmental problems of a locality.

PSO8: Development of Communication Skill and Interaction Power: After the completion of the project they will be efficient in their communication skill as well as power of social interaction. Some of the students are being able to understand and write effective reports and design credentials, make effective demonstrations, and give and receive clear instructions.

PSO9: Enhancement of the ability of Management: Demonstrate knowledge and understanding of the management principles and apply these to theirs own work, as a member and leader in a team, to

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manage projects. They will perform effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. PSO10: Understand Environmental Ethics and Sustainability: Understand the impact of the acquired knowledge in societal and environmental contexts, and demonstrate the knowledge of need for sustainable development.

PSO11:Life-long learning: Identify the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of societal and environmental change.

B.A-1 ST year Geography

PAPER-I (PHYSICAL GEOGRAPHY)

CO1: Understand the effect of rotation of revolution the Earth.

CO2: Know the internal and interior structure of the earth.

CO3: Study the formation of Rocks.

CO4: Understand the work of internal and external forces and their associated landforms.

CO5: Understand the types of winds and composition of atmosphere. Atmospheric pressure of pressure of belts.

PAPER –II (HUMAN GEOGRAPHY)

CO1: Studies of races of man kinds.

CO2: Understand the relationship of man and environment.

PAPER-III (PRACTICAL GEOGRAPHY)

CO1: Develop an idea about scale and draw different types of scale like linear, diagonal and vernier.
CO2: Learn to use tabulation of data.

CO3: Gain knowledge about association and correlation.

B.A-2 nd Year Geography

PAPER-I (ECONOMICS AND RESOURCE GEOGRAPHY)

CO1: Study the Human Economic Activities.

CO2: Explain the webs theory Roster model.

CO3: Understand the mineral and power resources.

CO4: Study of the location of industries is on steel, cotton, textile and sugar.

CO5: Study of world transportation and trade patterns and transport.

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PAPER-II (GOGRAPHY OF INDIA)

CO1: They can know about their own countries land formation, climate and natural vegetation.

CO2: They understand the economic resources of India.

CO3: They understand the social distribution of population of their country.

CO4: Develop an idea about regionalisation of India.

PAPER-III (PRACTICAL GEOGRAPHY)

CO1: Acquire knowledge different types of map projection.

CO2: Know about diagrammatic data presentation like line, bar and circle.

CO3: Develop an idea about different types of thematic mapping techniques.

B.A-3 rd year Geography

PAPER-I (RESOURSES AND ENVIORNMENT)

CO1: Develop an idea about resource.

CO2: Understand the concept of different types of resources.

CO3: Acquire knowledge about different types of power resources.

CO4: Explain population - resource relationship and different types of population resources

PAPER-II (GEOGRAPHY OF INDIA)

CO1: They can know about their own countries land formation, climate and natural vegetation.

CO2: They understand the population problems in India. Access the population policies and reaction the countries.

CO3: They understand globalization and Indian economy. And also understand the regional distribution of resource.

PAPER-III (PRACTICAL GEOGRAPHY)

CO1: Gain knowledge about topographical maps and apply this knowledge in ground surface.

CO2: Identification of different types of rock and mine

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Political Science LEARNING OUTCOME

B.A. PROGRAMME

PO : Political Science and International relation as a subject provide immense knowledge of world in current scenario.All are power seeker in this era and nothing can be more interesting and best source other than Political science to understand all.

PSO : With the growing world Political science as a subject is also developing day by day. Various new sub parts are also emerging from it and it is very necessary to teach every aspect of the subject, with all development limitations and even growing challenges. As like the Indian Constitution on total 104 Constitutional Amendment has been done by Jan 2020 on various laws so students must be aware of it while learning Political science.In Indian content if one desires to hold bureaucrat position it is very necessary to have deep knowledge of the subject .It will further help them in policy making for the betterment of nation. In the ocean knowledge political science as a Dicipline also plays a major role It teaches people how to form society and live rationally within it, helps in making decisions.The word political science was first termed by William Godwin and Mary Wallestonecraft. Not just political science but it also give brief ideas of sociology international dimension

POLITICAL SCIENCE Course Outcome

BA PART – 1

PAPER - 1 POLITICAL THEORY

CO - 1 To Learn about fundamentals of political theory, Specific human behavior Power authority and influence ,features and kinds and methods to study Political kind.

CO - 2 To learn about state and its essential elements, theories of the origin of states, Marxist and Organism Theory.

CO - 3 Students will get to Know about Sovereignty and pluralistic criticism. Rights, Equality its meaning kinds and relations about Democracy meaning, Challenges merits and demerits.

CO - 4 To learn about various kind of government, Organs of governments, Executive and Judiciary, Separation of Powers and Checks and Balances. Constitution and theories of representation.

CO - 5 To learn about Public Welfare state, Party system, Pressure groups and Social change its meaning characteristics, theories. Feminism Nationalism.

PAPER - 2 INDIAN GOVERNMENT AND POLITICS

CO - 1 Students will get to about Indian national movement, Non-cooperation, civil Disobedience movement and constitutional Development of India.

CO - 2 To learn about Constitution of India its characteristics, Preamble, Sources. Federal system, Rights and duties and Constitution Amendment Process.

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CO - 3 To learn about Union Executive President, Vice President, Council of ministers and Prime ministers, Union legislature, Parliament, Loksabha and Rajyasabha, Parliamentary Procedure.

CO - 4 To Learn about Union Judiciary Supreme Court, State Executive, Governor, Council of Ministers and Chief Ministers.

CO - 5 To learn about State Legislature, Election Commission, Election reforms, National and regional parties and issues of Indian Politics like caste, Religion, language and Panchyati Raj System.

BA PART - 2

PAPER - 1 WESTERN POLITICAL THOUGHT

CO - 1 To learn about depth of Knowledge of theory of education, justice, Basis of western political thought and functions of state.

CO - 2 To learn about Machiavelli, Religion and Morality, Duties and Conduct of King, Social Contract Theory and Rousseau.

CO -3 To learn about Bentham, Utilitarianism Mill, Liberty and Representative, Green Political Thoughts and about Marx Political Thoughts.

CO - 4 Students will get to Know about Idealism, Liberalism, Socialism and Fascism.

CO - 5 Students will get to know about Manu and Kautilya, Gandhi Truth Non violence , Satyagrah and Political thoughts, Political and Social thoughts of Ambedkar.

PAPER - 2 COMPARATIVE,GOVERNMENT AND POLITICS

CO - 1 To learn about Evolution, Features, Legislature and Judiciary of British Constitution.

CO - 2 To learn about Features, Executive, Legislature and Judiciary of U.S.A and heory of Separation of Powers.

CO - 3 To learn about t Features, Executive, Legislature and Judiciary system of Constitution of Switzerland.

CO - 4 To learn about Features, Executive, Legislature and Judiciary System of China.

CO - 5 T o learn about meaning, Definition of Comparative Politics, Structural -functional Approach of Almond Political and Socialization, Political Culture

BA PART 3

PAPER - 1 INTERNATIONAL POLITICS

CO - 1 To learn about Nature, Scope, meaning of International Politics.

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CO - 2 Students will get to know about goal of international politics, its organizations and Functions.

CO - 3 To learn about Basic concept of power Balance and about the theory of collective security.

CO - 4 To learn about types, functions, of Diplomacy. Meaning of disarmament and development.

CO - 5 To learn about models of International Politics, Environmentalism and Human rights.

PAPER - 2 PUBLIC ADMINISTRATION

CO - 1 To learn about meaning, Scope, and Nature of Public administrations and Personal.

CO - 2 Students will get to know about approaches and different methods of public administration.

CO - 3 To learn about leadership, Politics and Public Administration.

CO - 4 To learn about Bureaucracy and Budget Process.

CO - 4 To learn about Legislative control on administration, Judiciary control on administration.

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B.A 1st YEAR HISTORY

PAPER -1 HISTORY OF INDIA FROM BIGNING TO 1206 AD

OUT COMES :-

CO:- 1. Students have understood the basics of CHHATTISGARH research, do's and don'ts and its culture . CO:- 2. Students have understood the difference between Primary Sources and Secondary sources and importance of Chhattisgarh history

paper – 02 History of second world -1453 AD From 1890 AD

OUT COMES:-

PO :-1. Students have understood concept of Historiography and its different perspectives

PO:- 2. Students have understood the basics of research, do's and don'ts and its methodology.

PO:- 3. Students have understood the difference between Primary Sources and Secondary sources and importance of Sources

CO OUT COMES :-

They can achieve knowledge how to develop Indian feudalism and evolution of the political structures of early-medieval north and south India. They can learn how the conquering of Islam had initiated in India and had transformed of Indian culture, society, religion and agrarian structures under the Islam power of medieval India. They will achieve knowledge about the religious and cultural changing scenarios after the advent of the Islam in India. They will gather knowledge how the Sultanate of Delhi had established in 1206. C

B. A. 2 ND YEAR HISTORY

paper -1 History of India from 1206 AD till 1761 AD

OUT COMES :-

1.Students understood the Socioeconomic, cultural and Political background of Modern India

2. Students have understood process of rise of Modern India.

3.Students have understood the process of healthy Nationalism and Secularism by studying work of social reformer and freedom fighters

4. Students became familiar with makers of Modern India

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paper -02 History of Second /World History in 1890 AD From 1964 AD

UNIT-1 1. William II's World Political

2. Partition of Africa:

3. Modernization of Japan - Meiji Restoration and Modernization of Japan

4. Russia - Japan War: Causes and Consequences

Unit-2

5. China Opium War and China's Revolution, Communism

6. Eastern Problem –Berlin Congress, Young Turk Movement

7. Balkan War Causes and Consequences

8. World War I: Causes and Consequences Treaty of

Unit-3

9. Treaty of Varsoy

10. Revolution of Russia 1917 AD

11 Fascism – Mussolini

12. Nazism – Hitler Unit-4

13. Japan's militarism

14. League of Nations: Establishment and Wilson's 14 Sources

15. World War II: Causes and Consequences

16. United Nations - Establishment and Organization, Achievements

Unit-5 17. Cold War

18. Non-Aligned Movement and Panchsheel Principle

19. Challenge of World Peace - Korea and Palestine Problem

20. A Polar World

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B.A. 3rd YEAR HISTORY Question

paper -01 History of India from 1761 AD till 1950 AD (Paper Code-0240)

UNIT-1

1 Expansion and Strengthening of British Empire - War and Diplomacy - Karnataka War

2. The expansion and century of the British general - Plassey and Buxar

3. Subsidiary treaty and usurpation policy (principle of lapse)

4. British Administration and Reforms - Batting, Litton, Ripon, Curzon

Unit-2

1. Commercialism - The Fall of Industries

2. Commercialism - The Fall of Business

3. Farming and Farmer's Movement

4. Geopolitical arrangements - Permanent Settlement, Ryotwadi, Mahalwadi

Unit-3

1. Indian Renaissance - Brahmo Samaj, Arya Samaj, Praya Samaj,

2. Ramakrishna Mission, Theosophical Society, Aligarh Movement

3. Development and Western Press

4. Different social classes - farmers, laborers, middle classes and women

Unit – 4

1. The rise of nationalism and the revolution of 1857

2. Indian National Congress - Liberal, Extremist

3. Revolutionary movement

4. Gandhian Movement

Unit-5

1. Communalism: rise and development 2. Subhash Chandra Bose and Azad Hind Army

3. Constitutional Development of India: 1919 AD, - Diarchy, 1935 - Provincial Autonomy

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4. Characteristics of India's independence and Indian Constitution.

OUT COMES:-

CO:- 1.They take interest to read historical maps, biographies, and novel related to Ancient period.

CO:-2.They take interest to visit historical place and understand ancient India through caves, Temple, Art Architecture.

B.A -3 rd YEAR HISTORY

Paper II World History - 1871 AD to 1945 AD (Paper code-0241)

Unit-1

1. Third Republic of France

2. Bismarck: Co and Foreign Policy

3. William II's Foreign Policy

4. Africa Partition

Unit-2

1. Modernization of Japan

2. Russia-Japan War: Causes and Consequences

3. Revolution of China - Causes and Consequences

4. Dr. Sun - Yat-sen

Unit-3

1. Eastern Problem - Berlin Congress, Young Turk Movement

2. Balkan War: Causes and Consequences

3. First World War: Causes and Consequences

4. Revolution of Russia 1917

Unit-4

1. Treaty of Versailles

2. Fascism – Mussolini

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3. Nazism Hitler

4. Militarism of Japan - Tojo

Unit-5

1. League of Nations: 14 sources of establishment and Wilson

2. Second world war - causes and consequences

3. United Nations Organization - Establishment and Organization

4. United Nations - Achievements

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DEPARTMENT OF COMMERCE

B.COM

PROGRAMME OUTCOME

PO1: Acquire a systematic conceptual understanding of the academic field of commerce; He/she will be able to know the different learning areas of commerce and application in accounting and managerial system.

PO2: Able to obtain professional competencies in the subject area of commerce leading to a career in research ,teaching and government service.

PO3: Able to acquire specialized skill in the emerging areas of commerce.

PO4: Able to know theoretical skill for solving problems in commercial fields.

PO5: Able to execute his knowledge in the different fields of commerce.

PO6: Able to gaining expertise in the commercial communication skills.

PO7: Able to work in group to carry out and completing a specific task releted to commercial fields.
PO8: Students who opt B.Com Tax procedure & Practice (TPP) studied two another subject each year instead of two subject of regular course programme of B.Com. Student passes out B.com degree with T.P.P able to filling and filing of income tax return. They becomes competent to calculate computation of tax & tax payable to individual, firms,society,club HUF,and for salaried person also Statements of

Programme Specific Outcomes (PSOs)

PSO1: Understand the basic concepts of the commerce, management, accounting & economics.

PSO2: Analyse relationship among commerce, trade, industry, services, management and administration.

PSO3: Perform all accounting activities and can handle different type of business very well.

PSO4: Understand application of knowledge of commerce in business service sector industry, marketing, finance entrepreneurship development etc.

PSO5: Develop communication skills and computer awareness and rules of income tax act.

PSO6:Think about commercial and professional way or point of view.

PSO7: Able to develop self employment.

PSO8: Understanding legal issue relating to banking business and insurance sector.

COURSE OUTCOME:

COURSE: FINANCIAL ACCOUNTING.

CO1: To understand the principles of accounting and its concepts.

CO2: Compare between higher purchase and instalment system and prepare their account.

CO3: Describe the types of cooperative societies and prepare trading and provident laws account and balance sheets.

CO4: Explain the meaning joint venture accounts and right methods of the joint venture accounting.
CO5: Design the numerical on centralise and decentralised method.

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COURSE: BUSINESS ECONOMICS

CO1: Understand the nature and scope of the business economics and their responsibilities.

CO2: Describe the law of the demand and Giffen's paradox and methods of demands for costing.

CO3: Evaluate the concept of production function and law of variable proportions and isoquant curves.
CO4: Design the theory of the population and the criticise it.

CO5: Describe law of the supply and its criticism and evaluate concept of cost

CO6: Write down the theory of the revenue.

COURSE: BUSINESS MATHEMETICS

CO1: Write the meaning, scope, function and limitation of statistics.

CO2: Calculate mean, median, and mode and geometric mean and the harmonicmean.

CO3: Evaluate mean & its division, standard and deviation and quartile deviation.

CO4: Solve Karl pearson's and co-efficient of correlation .

CO5: Calculation of ratio, proportion percentages, simple and compound, interest and profit loss.

COURSE: BUSINESS COMMUNICATION

CO1: Understand the concept of communication and types

CO2: Analyse the concept of business communication and its principles and roles of public relation management.

CO3: Understand technology management information system and business communication.

COURSE: BUSINESS REGULATORY FRAME WORK

CO1: Aware of various laws relating to the business laws, meaning & significance.

CO2: Identify the law relating to sell of goods acts 1930, the Indian partnership act1932.

CO3: Understanding law relating to negotiable instrument act 1881.

CO4: Understanding the law relating to the consumer protection act 1986 information technology act 2000 and cyber law.

COURSE: BUSINESS ENVIRONMENT

CO1: Understand the nature and role of legal, economic, Political and technological environment.

CO2: Gain in-depth knowledge in industrial policy and its impact on privatization.

CO3: Capable of understanding the concept of globalization, FDI, MNCs and its importance.

COURSE: INDIAN TAX SYSTEM

CO1: Understand the basics of national income accounting, the components of the balance of payments and Tax system of India

CO2: Understand the concepts, in reference receipt of tax.

COURSE: INCOME TAX LAW

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CO1: Understanding the concept of income tax

CO2: Solve a numerical under the head of income from salary

CO3: Solve a numerical under the head of income from house property

CO4: Calculate the numerical of income from other sources.

COURSE: PRACTICAL (TPP)

CO1: Filling and filing of different type of forms relating to income tax.

COURSE: COMPUTER FUNDAMENTALS

CO1: Awareness of basics of Computer .

COURSE: PC SOFTWARE AND MULTIMEDIA

CO1: Developed understanding of technical aspect of Multimedia Systems.

CO2: Understand various file formats for audio, video and text media.

CO3: The course introduces you to fundamental 'Computer Literacy' concepts. You will learn to use Windows NT/XP/7 /10 on the PC compatible computers.

COURSE: PRACTICAL (COMPUTER APPLICATION)

CO1: Categorize and create a word document effortlessly.

CO2: Apply various excel features for data analysis and interpretation.

CO3: Determine the output generated by access.

CO4: Experiment the various themes in MS power point.

CO5: Work with well-known accounting software i.e. Tally ERP 9.

CO6: Enter accounting voucher entries including advance voucher entries, etc. in Tally ERP 9 software.

COURSE: CORPORATE ACCOUNTING

CO1: Understand the basic concepts of issues of shares, debentures and underwriting of shares.

CO2: Analyse and compute profit prior to incorporation and post in corporation period and to find out the mechanism for redemption of preference shares.

CO3: Evaluate the financial position of the company.

CO4: Analyze and Compute various methods of goodwill and shares of the company.

CO5: Apply the procedure for liquidation of companies.

COURSE: COMPANY LAW

CO1: Outline the basic concepts of company law and describe the procedure for formation of a company.

CO2: Acquire knowledge on basic documents in a company.

CO3: Acquire knowledge on the various methods of raising capital.

CO4: Apply the law governing various duties owed by officers of the company imposed by law.

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CO5: Discuss the powers, duties and liabilities of the officer of the company in case of misstatement in the prospectus of the company. CO6: Instantiate knowledge about the company meetings.

CO7: Examine about the procedures relating to winding-up of the company.

COURSE: COST ACCOUNTING

CO1: Express the place and role of cost accounting in the modern economic environment and select the costs according to their impact on business.

CO2: Differentiate methods of schedule costs per unit of production and differentiate methods of calculating stock consumption.

CO3: Calculate the different methods of wage payment according to their efficiency of the labourer.
CO4: Describe the various incentive scheme, overhead apportionment and reapportionment techniques that are applied to manufacturing and service business.

CO5: Determine the cost of each process where product passes from different stages of manufacturing to get its finished form.

COURSE: PRINCIPLES OF BUSINESS MANAGEMENT

CO1: Demonstrate conceptual skills, apply principles and functions of management, managerial actions of planning.

CO2: Evaluate the global context for Organizing, Directing and Controlling.

CO3: Develop skills and ability to work in groups to achieve organizational goals and ability to lead teams.

CO4: Demonstrate and apply the managerial concepts in real time problems.

COURSE: BUSINESS STATISTICS

CO1: Gain knowledge about basic of statistics.

CO2: Solve problems on averages and dispersion.

CO3: Gain knowledge about the index numbers.

CO4: Analyze using correlation and regression.

CO5: Apply the concepts of time series and probability.

COURSE : FUNDAMENTAL OF ENTREPRENEURSHIP

CO1: Understand the concept of entrepreneurship.

CO2: Identify the various business opportunities available for entrepreneurs in the society.

CO3: Apply the creative process of opportunity identification and screening.

CO4: Identify the institutions that support entrepreneurship.

CO5: Design strategies for successful implementation of ideas.

CO6: Identify the causes for industrial sickness.

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COURSE: STATISTICAL ANALYSIS

CO1: Distinguish types of studies and their limitations and strengths,

CO2: Describe a data set including both categorical and quantitative variables to support or refuse a statement,

CO3: Apply laws of probability to concrete problems,

CO4: Perform statistical inference in several circumstances and interpret the results in an applied context,

CO5:Use mathematical tools, including calculus and linear algebra, to study probability and mathematical statistics and in the description and development of statistical procedures,

COURSE: DIRECT TAXES :PROCEDURE & PRACTICS

CO1: To make aware about provisions of direct tax with regard to IT Act, 1961 and IT Rules,

CO2: To make aware about agriculture income, residential status and incidence/charge of tax.

CO3: To understand the provisions and procedure to compute total income under five heads of income i.e. salaries, house property, profits & gains from business & profession, capital gains and other sources.
CO4: To understand the provision and procedure for clubbing & aggregation of incomes and set-off & carry forward of losses.

COURSE: PRACTICAL (TPP)

CO1: Practical Approaches of statistical analysis.

COURSE: INTERNET APPLICATION & E-COMMERCE

CO1. Define and differentiate various types of E-commerce.

CO2. Describe Hardware and Software Technologies for E-commerce.

CO3. Explain payment systems for E - commerce.

CO4. Describe the process of Selling and Marketing on web.

CO5. Implement interactive web page(s) using HTML

C06: Demonstrate rich internet application

COURSE: RELATIONAL DATABASE MANAGEMENT SYSTEM

CO1: Explain the features of database management systems and Relational database

CO2: Create and populate a RDBMS for a real life application, with constraints and keys, using SQL

CO3: Retrieve any type of information from a data base by formulating complex queries in SQL

COURSE: PRACTICAL (COMPUTER APPLICATION)

CO1: Apply relational database theory and be able to describe relational algebra expressions,tuple and domain relation expression from quarries

COURSE : INCOME TAX

CO1: Understand fundamental concepts of income tax law.

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CO2: Develop experience in identifying tax issues and applying the income tax law to arrive at reasoned solutions to problems.

CO3: Provide knowledge on computation of income under house property, business and profession income.

CO4: Apply critical thinking and problem solving skills related to capital gain.

CO5: Analyze and apply the provision regarding set off and carry forward losses.

COURSE: AUDITING

CO1: Determine the nature, purpose and scope of audit including the role of external audit and its regulatory and ethical framework.

CO2: Determine the nature of internal audit and describe its role as part of overall performance management and its relationship with the external audit.

CO3: Demonstrate how the auditor obtains an understanding of the entity and its environment, assesses the risk of material misstatement, whether arising from fraud or other irregularities, and plans an audit of financial statements.

CO4: Describe and evaluate information system and internal controls to identify and communicate control risks and their potential consequences, making appropriate recommendations.

CO5: Identify and evaluate the work and evidence required to meet the objectives of audit engagements and the application of computerized on Auditing.

COURSE: INDIRECT TAX

CO1: Identify various Concepts of Taxation.

CO2: Compute total income from different Heads of Income.

CO3: Justify levy of Indirect Taxes.

CO4: Explain the application of GST in India.

COURSE: MANAGEMENT ACCOUNTING

CO1: Determine the techniques of Management Accounting.

CO2: Apply ratio analysis in decision making process of the management.

CO3: Evaluate the cash position of the firm by applying fund flow and cash flow techniques.

CO4: Examine the marginal costing and budgetary control techniques

COURSE: FINANCIAL MANAGEMENT

CO1: Be familiar with various sources of finance, which a business house can mobilize effective management of finance.

CO2: Develop the ability to measure the capital structure and leverage analysis of a firm.

CO3: Describe the importance and various forms of cost of capital.

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CO4: Analyse and implement investment decision, the process and methods of evaluation of various investment proposals.

CO5: Understand and analyse the concept of working capital and calculation of working capital requirements.

COURSE: FINANCIAL MARKET OPERATIONS

CO1: Understand the concept of financial markets.

CO2: Gain knowledge about the market for Corporate Securities.

CO3: Enlighten the evolution of Secondary markets and financial intermediaries.

CO4: Understand the concepts of new modes of financing.

COURSE: PRINCIPLES OF MARKETING

CO1: Develop an idea about Marketing and its Functions.

CO2: Enhance the students on Consumer Behavior.

CO3: Familiar about product and its classifications.

CO4: Understand the concepts of Pricing Policies and Branding Decisions.

COURSE: INTERNATIONAL MARKETING

CO1: Apply basic international marketing theories and concepts to understand the environment.

CO2: Undertake strategic business analysis in order to develop appropriate international marketing objectives and strategies.

CO3: Identify and evaluate data and evidence related to international business.

CO4: Apply appropriate Marketing strategy in International trade.

CO5: Design suitable promotional strategy by using social networks.

COURSE: CORPORATE TAX PLANNING AND MANAGEMENT

CO1: Describe how the provisions in the corporate tax laws can be used for tax planning.

CO2: Determine the assessment of individuals under different heads.

CO3: State the use of various deductions to reduce the taxable income.

CO4: Assess tax for the total income of an individual.

CO5: Explain different types of incomes and their taxability and expenses and their deductibility.

CO6: Understand the concept of Goods and Service Tax and its impact on society.

COURSE: PROJECT REPORT AND VIVA (TPP)

CO1: Understand the value of the project.

CO2: Identify the problem. CO3: Collect the data for Project design.

CO4: Analyze the data. CO5: Prepare the final report of project.

COURSE: PROGRAMMING IN VISUAL BASIC

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CO1: Demonstrate fundamental skills in utilizing the tools of a visual environment in terms of the set of controls.

CO2: Explain and use of events for producing event-driven application.

CO3: Implement SDI and MDI applications while using forms, dialogs, and other types of GUI Components.

CO4: Implement syntax rules in Visual Basic programs.

CO5: Explain variables and data types used in program development.

COURSE: SYSTEM ANALYSIS DESIGN AND MIS

CO1: Gather data to analyze and specify the requirements of an Information system.

CO2: Design system components and environments Data Dictionary.

CO3: Build Decision Tables Terminology and Development.

CO4: Design a database for storing data and a user interface for data input and output.

CO5: Analyze modern approaches in system analysis and design.

COURSE: PRACTICAL (COMPUTER APPLICATION)

CO1: Design, create, build, and debug Visual Basic applications.

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Course Outcomes: BA. / B.Sc. /B.Com. - Part-I

Subject: English Language:

On studying this paper, the student will be able to:

1. Development of comprehensive ability.
2. Improvement of vocabulary.
3. Effective communication skills.
4. Inculcation of moral and human values.
5. Acquire knowledge of Indian culture and tradition.
6. Write effectively and coherently.

BA. / B.Sc. /B.Com. - Part-II

Subject: English Language:

On studying this paper, the student will be able to:

1. Ability to discuss and respond to the content of the passage.
2. Knowledge of development of science and information technology.
3. Develop the writing skills through exercises in grammar and composition.

BA. / B.Sc. /B.Com. - Part III

Subject: English Language:

On studying this paper, the student will be able to:

1. Familiarity with values of Indian life and social system.
2. Development of India in the Modern context.
3. Development of linguistic competence and communication skills.
4. Writing skills through essay writing and comprehension.

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बी.ए./ बी.एससी./बी. कॉम.- प्रथम

आधार पाठक्रम

प्रश्नपत्र - प्रथम हिंदी भाषा

उद्देश्य

1. भाषा ज्ञान का विकास
2. भाषा का शुद्ध प्रयोग करना
3. संप्रेषण कौशल बढ़ाना

बी.ए./ बी.एससी./बी. कॉम.- द्वितीय

आधार पाठक्रम

प्रश्नपत्र - प्रथम हिंदी भाषा

1. हिंदी भाषा के विविध रूपों का ज्ञान
2. साहित्य संस्कृति से जोड़ना
3. व्याकरणीय ज्ञान का विकास

बी.ए./ बी.एससी./बी. कॉम.- तृतीय

आधार पाठक्रम

प्रश्नपत्र - प्रथम हिंदी भाषा

1. संप्रेषण कौशल की वृद्धि
2. साहित्य संस्कृति एवं सामान्य ज्ञान प्रदान करना

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PRINCIPAL
Dr. B.R. Ambedkar
Govt. College baloda
Distt.- Mahasamund (C.G.)