Course Outcomes for B. Sc. Mathematics

B. Sc. I

MAT 101 Differential Calculus

1. Understand the geometrical interpretation of derivative of a function,
2. Find the derivatives of hyperbolic functions and implicit functions,
3. Find the nth derivative of standard functions and solve problems on the same,
4. Find the value of nth derivative at a particular point,
5. State and prove mean value theorems,
6. Apply mean value theorems to find nature of graphs of the functions and approximate values,
7. Understand the partial differentiation and its rules,
8. Understand and solve problems on Euler's theorem on homogeneous functions,
9. Find and apply the directional derivatives of scalar and vector point functions,
10. Solve problems on divergence, curl and gradient.

MAT 102 Differential Equations

1. Find the order and degree of a differential equation and recognize the difference between general, particular and singular solutions,
2. Identify the exact differential equation,
3. Apply various methods to solve a linear differential equations with constant coefficients,
4. Reduce the linear differential equations with variable coefficients to linear differential equations with constant coefficients and solve it,
5. Solve exact differential equation of order n,
6. Solve system of simultaneous ordinary differential equations,
7. Define a partial differential equation,
8. Eliminate arbitrary constants and arbitrary functions to obtain a partial differential equation.

MAT 201 Integral Calculus

1. Understand the meaning of integration as a limit of a sum,
2. Derive reduction formulae and use them to solve particular integrals,
3. Integrate the rational functions,
4. Integrate trigonometric functions with integer power,
5. Apply integration to find area of a random region (formed by a curve and tow coordinate axes),

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6. Apply integration to find the length of a curve between two points.

MAT 202 Geometry

1. Recognize and find the equation of a plane satisfying given conditions,
2. Find the equation of the plane in a given system,
3. Find the distances between two geometric objects like a point and a plane, a line and a plane etc.,
4. Find the angle between two lines and two planes,
5. Find the equation of a straight line satisfying the given conditions,
6. Understand the co-planarity of two lines,
7. Recognize the various forms of equation of a sphere and find the equation of a sphere under given conditions and calculate its centre and radius,
8. Differentiate between the central conicoids and find their equations under given conditions,
9. Check the condition tangency of a plane to sphere, cone, cylinder and conicoid, find the equation of the tangent plane and find the point of contact.

B. Sc. II

MAT 301 Number Theory

1. Solve numerical using division algorithm,
2. Find the greatest common divisor of sufficiently large numbers using Euclidean algorithm,
3. Recognize a solvability and obtain all the solutions of a Diophantine equation,
4. State and prove the fundamental theorem of arithmetic,
5. Understand the use of congruence theory and solve problems on Chinese remainder theorem,
6. Find the values of number theoretic functions
7. Understand the properties of the number theoretic functions,
8. Understand the relations among the number theoretic functions.

MAT 302 Integral Transforms

1. Define Beta and Gamma functions and represent them in different forms,
2. Apply properties of Laplace transforms to evaluate Laplace transforms of standard functions,
3. Apply properties of inverse Laplace transforms to evaluate inverse Laplace transform of standard functions,
4. Apply Laplace transforms and inverse Laplace transforms to solve linear ordinary differential equations,
5. Define Fourier transforms and find Fourier transforms of standard functions.

Course outcomes

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MAT 303 Mechanics I

1. Find the resultant of any number of forces acting on a particle,
2. Find the resolved parts of forces acting on a particle and solve numerical on the same,
3. State the condition of equilibrium of two forces acting on a particle,
4. State the necessary and sufficient condition for any number of forces to in equilibrium,
5. Define the moment of force and find the same for parallel forces and couples,
6. Solve the problems on moment of force,
7. Define and find the centre of gravity of some uniform bodies,
8. Solve simple problems on centre of gravity.

MAT 401 Numerical Methods

1. Obtain the approximate solution of a linear and transcendental equation up to a desired accuracy,
2. Understand the differences and apply interpolation formulae to solve problems,
3. Apply approximate linear or non-linear function that fits a given data,
4. Apply numerical methods of linear algebra in real life problems,
5. Obtain an approximate solution to differential equations whose analytic solution is not known.
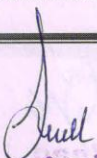
MAT 402 Partial Differential Equations

1. Define partial differential equation and know the difference between ordinary and partial differential equations,
2. Solve Lagrange's differential equation,
3. Understand complete and particular integrals, and use Charpit's method to solve a non linear partial differential equation,
4. Solve linear partial differential equations of order one with constant coefficients,
5. Solve linear partial differential equations of order two by Monge's method and transformations method.

MAT 403 Mechanics II

1. Understand the difference between kinematics and kinetics of a particle. Find the Cartesian components, tangential and normal components and radial and transverse components of velocity and acceleration,
2. Understand the laws of conservation of momentum and energy, work done in conservation and non conservative field of force,
3. To apply the knowledge of motion in non-resisting and resisting medium of projectile in practical situations,
4. To find the maximum range, time of flight and maximum height attained by a projectile,
5. Understand the equation of central orbit and pedal equations of standard curves.

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B. Sc. III

MAT 501 Real Analysis I

1. Understand the basic notion sets and its elements and able to decide whether an element is in a given set or not, also find the least upper bound for a given set, if it exists,
2. Perform various operations on sets,
3. Define real valued functions, one to one correspondence between two sets,
4. Recognize convergence and divergence of a sequence and compute the limit of convergent sequence,
5. Explain properties of monotone sequences, bounded sequences and results on these sequences,
6. Define and understand Cauchy criterion,
7. Define and compute convergence and divergence of series of real numbers,
8. Apply tests for absolute convergence on a given seies,
9. Compute Jacobian of given functions using the properties of Jacobians,
10. State and prove the necessary and sufficient condition to vanish,
11. Understand the functional dependence and find the relation among the dependent functions.

MAT 502 Abstract Algebra I

1. Define sets, mappings and integers and understand the properties of them,
2. Define groups and provide examples of the groups,
3. State and prove some standard results derived from the definition of group,
4. Define subgroups and understand the criteria to be satisfied by the subgroups,
5. Define normal subgroups and quotient groups and demonstrate their properties,
6. Prove that a given mapping between two groups is homomorphism and automorphism,
7. Define rings and derive its elementary properties,
8. Derive results on ideals, quotient rings.

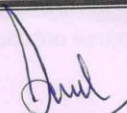### MAT 504 Ordinary Differential Equations I

1. Define complex numbers and understand its algebra and geometric representation,
2. Define functions, polynomials, complex series, exponential functions and determinants and state their properties,
3. State and prove existence and uniqueness theorem for the solution of first order homogeneous and non homogeneous differential equation,
4. Define linear differential equation of higher order,
5. State and prove existence and uniqueness of solution of second order linear differential equation with constant coefficients,
6. Define initial value problem for second order linear differential equation,

Course outcomes

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7. Define linear dependence and independence of functions and very the same using Wronskian.

MAT 601 Real Analysis II

1. Understand the of distance between two abstract notions like distance between two sequences, prove a given space is metric space, extend the continuity of a function to a general metric space, formulate continuity in terms of open and closed sets,
2. Understand and recognize the connectedness, completeness and compactness of a given metric space, check the continuity on these metric spaces,
3. Understand the concept of Riemann integration, recognize the Riemann integrable functions and evaluate the integration of such functions, prove the fundamental theorems of integral calculus,
4. Define which functions may be expanded as Fourier series and find the Fourier series of the such functions, deduce the convergence of some important series using Fourier series.

MAT 602 Abstract Algebra II

1. Define vector space and subspace and produce examples of it,
2. Derive elementary results and theorems using definitive axioms,
3. Define homomorphism and prove or disprove given mapping is homomorphism,
4. Explain linear dependence and independence, linear span and basis,
5. Understand and find the dimension of a vector space and prove results on finite dimensional vector spaces,
6. Define dual spaces and solve problems on the same,
7. Define inner product spaces and give some of its examples,
8. Define orthonormal sets and explain Gram Smidth orthogonalization process.

MAT 604 Ordinary Differential Equations II

1. Define initial value problem and its solution,
2. Define Wronskian and prove linear dependence of functions,
3. Reduce the order of a linear differential equation,
4. Solve the initial value problem,
5. Solve the Legendre's equation,
6. Define sngualarity and singualr points,
7. Recognize and solve Euler's and Bessel equations.

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(COURSE OUTCOME)

Sr. No.	Class	Paper	Outcome
1		**Paper I** Mechanics, Properties of Matter and Sound	This course would empower the student to acquire engineering skills and practical knowledge, which help the students in their everyday life. The properties of solids especially knowledge of elasticity help the students to identify the materials suitable for the construction of buildings, houses etc. Properties of fluids especially knowledge of viscosity and surface tension help the students in their daily life and agriculture. This syllabus will cater the basic requirements for their higher studies. This course will provide a theoretical basis for doing experiments in related areas.
2		**Paper II** Heat and Thermodynamics	This course is intended to give an insight to heat and thermodynamics. Students will familiarise with processes in thermodynamics which are the back bone of heat engine, which will be useful for research and job.
3	**B. Sc. I**	**Paper IV** Geometrical and Physical Optics	This course aims to provide necessary foundation in optics and photonics which prepare the students for an intensive study of advanced topics at a later stage. Covering the very important and fascinating areas of interference diffraction and polarization with many experiments associated with it.
4		**Paper V** Electricity and Magnetism	Electricity and Electrodynamics have the key role in the development of modern technological world. Without electric power and communication facilities, life on earth stands still. A course in electricity and electrodynamics is thus an essential component of physics programme at graduate level. This course is expected to provide a sound foundation in Electricity and Electrodynamics. Students should familiarise with electrical circuits, electrical connections, and storage devices their working etc. which will be quite useful in their daily life. Theoretical and practical knowledge about signal generating circuits enable the students to identify different communication techniques which will be useful in their daily life and higher studies

5		**Paper VII** Mathematical , Statistical Physics and Relativity	Students who have completed this paper should be familiar with the main mathematical methods used in physics. Students who have completed this paper should have a deep understanding of physical statistics and its relation to information theory.
6	**B. Sc. II**	**Paper VIII** Modern and Nuclear Physics	Develop the concepts of modern physics: basic knowledge of special theory of relativity and general theory of relativity, elementary quantum mechanics, nuclear physics, and particle physics. Understand the relationship between observation and theory and their use in building the basic concepts of modern physics Acquire knowledge in the content areas of nuclear and particle physics, focusing on concepts that are commonly used in this area. Develop familiarity with the vast areas of nuclear and particle physics as well as develop an interest in these subjects.
7		**Paper XI** General Electronics	Students who have completed this paper should have a deep understanding of basic knowledge of semiconductor physics. Understand basic digital electronic systems. Be learning function of basic transistors biasing and amplifiers.
8		**Paper XII** Solid State Physics	This course is intended to provide an introduction to the physics of Condensed Matter. Material science is a very wide branch where extensive research is going on. Thermal, electrical, optical and magnetic properties of matter provide a strong foundation in that direction
9	**B. Sc. III**	**Paper XV** Classical & Quantum Mechanics	This course is a prelude to advanced theoretical studies in Condensed Matter Physics, Spectroscopy, Astrophysics Electrodynamics and nuclear physics. It is conceptually rich and technically difficult. Special techniques are developed for attacking more realistic problems.
10		**Paper XVI** Electrodynamics	Students who have completed this paper should have a deep understanding of the theoretical foundations of electromagnetic phenomena, Be able to solve the Maxwell equations for simple configurations, Have a working knowledge of special relativity.
11		**Paper XIX** Atomic, Molecular Physics & Laser	The study of atomic physics has led to many present day technological wonders such as lasers and medical imaging. The second part of this course will describe the structure of atoms, and the interactions between atoms, as well as the effects of electric and magnetic fields on atomic and molecular structure, leading to a discussion of modern laser based spectroscopy.

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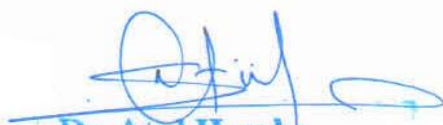## Department Of Zoology

Course outcome in Zoology 2018-19

Zoology

Paper No.	Course Outcomes (Cos)
Protozoa to Annelida	➤ Came to knowing the basic concept of biosystematics and procedure in taxonomy. ➤ Identified the taxonomic status of the entire non-chordates up to annelids and discuss the evolutionary model of the group. ➤ Described the general biology of few selected non-chordates useful to mankind. ➤ Know about some of the important and common protozoans, helminths of parasitic nature causing diseases in human beings.
Arthropoda to Protochordata	➤ Understood the importance of metamerism in annelids. ➤ Understood the diversity and classification and functional aspects of different systems of phylum Arthropoda, Mollusca and Echinodermata. ➤ Described the social life and economic importance of insects. ➤ Described the advanced characteristic features of cephalopod molluscs. ➤ Came to know that the resemblance and evolutionary significance of larval forms of echinoderms.
Cell biology	➤ Understood the structure of cells and cell organelles in relation to the functional aspects and understanding of the working principles and applications of microscopes ➤ Described the composition of prokaryotic and eukaryotic cells. ➤ Understood the structure and functions of chromosome; mitotic and meiotic cell divisions and their significance ➤ Understood the properties and treatment of cancer cells. ➤ Acquired knowledge of principles and working mechanisms of microscopes ➤ Understood the mechanism of mitosis and meiosis.
Genetics I	➤ Understood the theories of classical genetics and blood group inheritance in man ➤ Described the genetic variation through linkage and crossing over, chromosomal aberrations and sex determination. ➤ Understood the genetic defects and inborn errors of metabolism and genetic counselling and role of inbreeding and outbreeding. ➤ Understood the molecular structure of genetic materials and understood the mechanism of gene expression and regulation character formation.
Vertebrate zoology	➤ Identified the taxonomic status of the entire chordates and discussed the evolutionary model of the group. ➤ Imparted the knowledge on ecology of some important fishes, amphibians reptiles, birds and mammals. ➤ Impart knowledge in comparative anatomy and development systems of

	chordates.
	➤ Make able to discuss some and very important phenomena in Chordates.
	➤ Know about the conservation and management strategies of the chordate fauna.
Animal phyysiology	➤ Students gain fundamental knowledge of animal physiology
	➤ Students will gain skill to execute the roles of a biology teacher or medical lab technicians with training as they have basic fundamentals
	➤ Students are taught the detailed concepts of digestion respiration excretion the functioning of nerves and muscles
	➤ Understood about the composition of food and mechanism of digestion absorption and assimilation.
	➤ Attained knowledge of respiration and excretion and understood the mechanism of transport of gages and urine formation.
	➤ Described the mechanism of circulation and composition of blood
	➤ Knowledge of neuromuscular coordination and the mechanism of osmoregulation in animals and endocrine system and their function is attained.
	➤ Understood the menstrual cycle and the role of contraceptive in population control.
Genetics II	➤ To study the structure of nucleic acids
	➤ To understand the gene expression and regulation in Prokaryotes & Eukaryotes.
	➤ To gain better knowledge in both Prokaryotes & Eukaryotes about the Gene Mutation, Repair Mechanisms, Nuclear Genome Organization, Genes and gene numbers.
	➤ Comprehensive and detailed analysis of fine structure of the gene.
	➤ Analyze the role of transposable elements in prokaryotes and eukaryotes.
	➤ Insight into the manipulation of genetic material for a wide variety of
Biochemistry & Endocrinology	➤ This paper gives an idea about the glands which works inside the body and secretes a chemical called hormone.
	➤ Comprehended the energy source, chemical bonds and the principles of thermodynamic
	➤ understood the importance of acid base balance
	➤ Attained the knowledge of macromolecule such as carbohydrates, protein and fat, their types and significance.
	➤ Understood the knowledge of cholesterol and its biological significance
	➤ Described the enzymes, mechanism of enzyme action and factors affecting the enzyme activity
	➤ Understood the types and importance of vitamins
	➤ Interactions and interdependence of physiological and biochemical processes
Ecology	➤ learn basic concepts.
	➤ learn Auto Ecology and Population Ecology.
	➤ learn Dynamics of Population.
	➤ learn Ecology of Communities.
	➤ learn Functional and Structural Features of Communities.
	➤ learn Ecosystem and Characteristics.
	➤ learn Functional Characteristics of Ecosystems.
	➤ learn Ecological Cycles, Biological Accumulation.
	➤ learn The Great Ecosystems in the World.
	➤ learn Evolutional Ecology, Natural Selection, Genetic Variability.
	➤ learn Life Strategies, Gene Banks.
	➤ learn Applied Ecology.

	> learn Ecological Problems of Humanity, Protection of the Nature and Biological Variability.
Evolution	> Define Geological Time Scale and describe zoogeographical Realms. > Describe the barriers, dispersals and their impact on animal Distribution > Describe the adaptive features of both primary and secondary aquatic vertebrates. > Describe the adaptive features of desert reptile and mammals > Write down the Chemical basis of origin of life and experiments for supporting that idea. > Describe the Theory of Evolution considering Darwinism and Modern Synthetic Theory > Describe the Isolating mechanisms, modes of speciation, Biological & Evolutionary Species
Parasitology and Helminth I	> Describe the common parasitic diseases and life-threatening conditions caused by helminthes and protozoa as regards etiology and life cycle of parasites of medical importance > Describe the common diseases caused by helminthes and protozoa as regards pathogenesis, clinical features, differential diagnosis and complications > Point out the methods of recovery of parasites and their culture methods as well as immunological and molecular methods used for diagnosis of parasitic infections > Define the principles of management for common parasitic diseases and life-threatening conditions > Outline methods of disease prevention > Recognize safety procedures relevant to parasitic diseases during practical year
Parasitology and Helminth II	> Identify, describe and contrast unicellular parasites and parasitic worms Utilise > knowledge in the application of parasite control and treatment methodologies > Describe specific human and non-human parasitic diseases > observe live parasitic specimens > Report on observations of biological specimens such as parasites > Appraise the impacts of parasitic diseases on human societies > Evaluate the complexity of the parasite/host relationship (parasite evasion mechanisms *vs* host defensive mechanisms)
Sericulture:	> Gives knowledge of silk worm rearing > Pests and diseases associated with silk worm and mulberry > Various process involved in silk production > Understood the culture of mulberry plants

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(COURSE OUTCOME)

Sr. No.	Class	Paper	Outcome
1		**Paper I Inorganic Chemistry**	Students will able to understand • Structure of atom, various atomic properties like ionization potential, atomic size, electron affinity, electronegativity etc.in the groups and across the periods. • 2. S-block and P-block elements in the periodic table.
2		**Paper II Organic Chemistry**	Students will able to understand • General and basic ideas associated to structure, bonding, stereochemistry and reactivity of organic molecules. • Fundamental of mechanism of organic reactions. • General idea and chemical reactivity of alkane, alkenes and alkyl and aryl halides. • Aromaticity and electrophilic reactions of benzene. •
3	**B. Sc. I**	**Paper IV Physical Chemistry**	• Student understand mathematical parameters like logarithm derivative integration probability graph representation etc. • Understanding the surface phenomenon's like Adsorption, mechanism of adsorption, factors affecting Adsorption, difference between adsorption and absorption types of adsorption is important etc. • Deduction of Gas Laws: Boyles Law, Charles Law, Grahams Law of diffusion, Avogadro's hypothesis, deviation from ideal behavior, van der Waals equation of state. • Types of catalyst and order of reaction. • Difference between solids, liquids and gases state. Classification, structure of nematic and cholestric phases. • Understanding laws of crystallography and X-ray diffraction by crystals. Derivation of Bragg equation. • Definition of colloids, classification, properties and applications of colloids.

4		**Paper V Inorganic Chemistry**	Students will able to understand • Chemistry of nobel gases, meaning of ionic and covalent bonds, formation of covalent and ionic bonds, VSEPR theory, hydrogen bonding, MO theory • Basic concepts in nuclear chemistry and theory of volumetric analysis.
5		**Paper III &VI Lab Course**	Annual system (practical outcomes) • Acquaintance with glassware, handling of chemicals, safety measures, laboratory protocol. • Preparation of solution and its standardization. • Understanding of determination of equivalent weight of Mg and rate of reaction, viscosity, surface tension of liquid. Verification of Lambert-beer's law. • Estimation of organic compounds, qualitative and quantitative analysis skills. • Inorganic qualitative analysis.
6	B. Sc. II	**Paper VII Organic Chemisrry**	Students will able to understand • Synthesis of alcohols, reactions of ethylene glycol and glycerol, preparation and electrophilic aromatic substitution reactions of phenol. • Name reactions exhibited by aldehydes and ketones with mechanism • Synthesis and chemical reactions of carboxylic acids, decarboxylation of malic, tartaric and citric acids, reactions of compounds of nitrogen.
7		**Paper VIII Physical Chemistry**	• Understanding terms: System, Surrounding types of system, intensive and extensive properties. • Thermodynamic Process, reversible and irreversible process, concept of maximum work (Wmax). • Law of Thermodynamics: Statement, Definition of Internal energy and Enthalpy. Heat capacity, heat capacities at constant volume pressure and their relationship. • Calculation of W, q, du and dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible

			process.
			• Hess's law of heat Summation and its application.
			• Carnot Theorem. Concept of Entropy, Gibbs and Helmholtz.
			• Understanding the concept of Free Energy, Law of Mass Action, Le Chatelier's Principle, Clausius-Clapeyron Equation and its Application.
8		**Paper X Inorganic Chemistry**	Students will able to understand • Features, electronic configuration and general properties of first transition series elements like color, oxidation state etc. • Werner's co-ordination theory, nomenclature of coordinate compounds, formation of complexes based on VBT. • Chemistry of Lanthanides and actinides • Theories of acids and bases and reactions in nonaqueous solvents.
9		**Paper XI Physical Chemistry**	Students will able to understand • Understanding the concept Phase Rule Equation, Phase Equilibria of the one and two Component System with Example. • Raoult's Law and Henry's Law. Ideal and Non-Ideal system. Lower and Upper Consulate Temperature. • Types of Conductance, variation of equivalent and specific conductance with dilution. • Kohlrausch's law, Ostwald's Dilution Law. • Transport Number: Definition, Determination by Hittorfs Method and Moving Boundary Method. Types of Titration. • Types of Reversible Electrodes. Nernst Equation, Types of electrode, Electro-Chemical Series and its significance. • Buffer-Acidic and Basic Buffers, Mechanism of Buffer Action. Types of corrosion.
10		**Paper IX &XII Lab Course**	Annual system (practical outcomes) • Study the Gravimetric Estimation of Zn,Mn, Ni, Ba and Al. • Understanding the Complexometric Titration of Zn, Ni, Cu and Pb. By using indicator. • To study the instrument of Conductometer, pH-meter,

			colorimeter, Polarimeter and refractive meter.
			• To prepared Organic Derivatives likes Acetyl, Benzoyl, Hydrolysis, Bromo, Reduction and Osazone Derivatives.
			• The organic estimations of Estimation of nitro group by reduction.
			• Estimation of glucose.
			• Estimation of ester and amides by hydrolysis.
11		**Paper XIII Physical Chemistry**	• Study Black body radiation, Planck's radiation law, photoelectric effect, Compton effect. De Broglie Hypothesis. • Heisenberg's uncertainty principles, Harmiltonian operator, Schrödinger wave equation and its importance. • Understanding the concept electromagnetic radiation, regions of the spectrum, basic features of different spectrometers, statement of the born-oppenheimer approximation. Rotational Spectrum and numerical problems. • Study laws of photochemistry, Grothus - Drapper law, Stark-Einstein law, Jablonsiki diagram. • Quantum yield and its types. • Understanding the Nano-materials and synthesis methods.
12	**B. Sc. III**	**Paper XIV Organic Chemistry**	Students will able to understand • Detailed study of NMR spectroscopy, structure determination of organic compounds using NMR, IR and UV techniques. • Chemical reactions of organometallic compounds like G.R, organozinc and organolithium compounds. • Synthetic applications of active methylene groups ethyl aceto acetate and diethyl malonate. • Chemistry of fats, oils and detergents.
13		**Paper XVI Inorganic Chemistry**	Students will able to understand • Crystal field theory and it's basic concepts, splitting of d-orbitals in octahedral, tetrahedral and square planar complexes, factors affecting CFT. • Types of electronic transitions, selection rules for d-d transition, energy level diagrams. • Nomenclature and classification of organometallic

			compounds, preparation and properties.
			• Essential and trace elements in biological processes, biological role of Na+ and K+, nitrogen fixation.
			• Classification of chromatographic techniques, ascending, descending techniques, TLC applications.
14		**Paper XVII Organic Chemistry**	Students will able to understand • Synthesis of heterocyclic compounds, electrophillic and nucleophillic reactions of heterocyclic compounds. Comparison of basisity of pyridine, piperidine and pyrrole. • Introduction and classification of carbohydrates open and ring structure of glucose, mechanism of mutarotation and polysaccharides. • Classification and synthesis of synthetic polymers, properties of polymers, introduction to synthetic rubber and it's uses. • 4. Color and constitution of dyes, synthesis of dyes. Classification, synthesis of drugs. Properties of ideal drug.
15		**Paper XV &XVIII Lab Course**	Annual system (practical outcomes) • Semi-micro qualitative analysis, organic and inorganic quantitative analysis skills. • Separation of Ca and Ni from binary mix. and estimation of Ni gravimetrically. • Estimation of Cl in given sample of bleaching powder. • Estimation of Vit.C, ascorbic acid, carbonyl group. • Organic preparation and it's purity by TLC. • Conductometric, PH metric and potentiometric titrations. • Determination of interfacial tension , standard free energy change.

Mr. Ghumare A. B.

mr. A.B. Gorepatil.

Mr. J.M.Mali

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Course Outcomes of all Programmes offered by Department

Name of Department: Botany

S.R No	Name of the Course	Course Code	Course Outcomes (CO)
1	I. Diversity of Cryptogams - I	B-2061	1. The students will be able to understand the Structure and reproduction of certain selected algae, fungi. 2. learn about the importance of the plant diversity. 3. they WII know the economic values of this lower group of plant community.
2	II. Morphology of Angiosperms	B-2056	1. The Students will understand various Angiosperm plant habits. 2. Learn about vegetative and reproductive structural features of Angiosperms. 3. Understand various modifications and its purpose in plant parts.
3	V. Diversity of Cryptogams - II		1. The students will learn about the structure and reproduction of certain selected species of and bryophytes, pteridophytes and Gymnosperms 2. learn few representatives of fossil forms.
4	VI. Histology, Anatomy and Embryology	Y-2074	1. The students will learn about the basic concepts in anatomy. 2. Understand the various components of stem and wood during its secondary growth. 3. be enlightened about the mechanism of pollination and basic structure of the embryo.
5	IX. Taxonomy of Angiosperms	N-2031	1 Comprehend the concepts of plant taxonomy 2. Learn about various Angiosperm families and its economic value.
6	X. Plant Ecology		1. The students wIll understand the basic concepts of general geology, ecology and phytogeography. 2. learn about the analyse and basic principles of Ecology. 3. Understand the importance of ecology and Conservation
7	XIII. Gymnosperms and Utilization of plants		1. know the characters of Gymnosperms. 2. The students will understand the use of the plant resources to produce valuable products. 3. Be enlightened about the opportunities for income and employment generation. 4. be able to develop the ability to think and create useful plant products.
8	XIV. Plant Physiology		1. The Students will learn about absorption, translocation and utilization of water and other minerals. 2. Comprehend the changes during growtn process (germination to absCission).

			3. Understand the energy flow and various metaboiic cycles with their integration. 4. Get an overall perception about various physiological processes occurring in plants.
9	XVII. Cell Biology and Molecular Biology		1. The students will be able to learn about then basics of cell and its inclusions. 2. By the end of this course students will be able to understand the structure of cells in relation to the functional aspects. 3. to understand the difference between prokaryotic and eukaryotic cells. 4. to learn the functioning of the cell at the molecular level. 5. to understand the properties of nucleic acids (DNA &RNA).
10	XVIII (C) Plant Pathology		1. Know the terminologies in plant pathology. 2. Understand the scope and importance of Plant Pathology. 3. Know the control measures of plant diseases.
11	XXI. Genetics and Biotechnology		1. Understand the basic concepts of mendelian genetics, its variations and applications. 2. have a basic understanding of the plant genetic transformation methods 3. The students will understand the basic Concepts of genome organization in plants. 4. be fully aware of the basics and applications of plant biotechnology.
12	XXII (C) Microbiology and Disease Management		1. The students will get an understanding about the diversity of microbes. 2. They will learn the potentialities of microbes Enhancing human welfare. 3. Thay Wil be enlightened about the role of Microbes ecological balancing of nature.

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Paranda - 413502

Name : Dr. Sambhaji Manikrao Gate

DEPARTMENT OF COMMERCE

COURSE OUTCOMES

1) To create confidence, curiosity about Accounting.

2) To prepare students to stand firmly in this global world.

3) To introduce students with various job opportunities while having confidence about Commerce Faculty.

4) To prepare students to face competitive exam.

5) To teach human values, ethics, and moral.

6) To build a personality of the students as a social, national responsible person.

SPACIFIC OUTCOMES

F. Y. B.Com.

Title of the Paper: Finical Accounting

Outcomes

a) To familiarize students with excellent pieces of accounting method that they realize the beauty and communicative power of Commerce.

b) To expose them to native Commercial cultural experiences and situations in order to develop humane values and social awareness.

F. Y. B.Com.

Title of the Paper : I.T Application and Business

Outcomes

a) To familiarize students with excellent pieces of Computer method that they realize the beauty and communicative power of Computer.

b) To develop an integrated view about Computer in them.

Principal
Shikshanmaharshi Guruvarya
R.G.Shinde Mahavidyalaya,Paranda
Dist.Osmanabad

S. Y. B.Com.

Title of the Paper: Corporate Accounting

Outcomes

a) To familiarize students with excellent pieces of accounting method that they realize the beauty and communicative power of Commerce.

b) To expose them to native Commercial cultural experiences and situations in order to develop humane values and social awareness

c) To expose students to the basics of Corporate Account

d) To introduce the basic units of Corporate account so that they become aware of the technical aspects and their practical usage

e) To prepare students to go for detailed study and understanding of accounting and Finance.

S. Y. B. Com.

Title of the Paper: Principal of Business Management
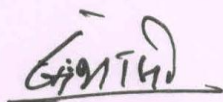
Outcomes

1. To develop competence among the students for self-Business.

2. To develop students' interest in reading Business pieces.

3. To expose them to native Commercial experiences and situations in order to develop humane values and social awareness

4. To develop overall Business competence and communicative skills of the Students
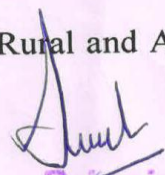
T. Y. B.Com.

Title of the Paper: Rural Development And Agricultural Management

Outcomes

1. To expose students to the basics of knowledge one of the forms of Commerce.

2. To familiarize them with different types of Scheme of GOVT.

3. To make them understand the Development of Rural aria.

4. To introduce some advanced Techniques of Agricultural development.

5. To prepare students to go for detailed study and understanding of Rural and Agricultural Development.

Principal
Shikshanmaharshi Guruvarya
R.G.Shinde Mahavidyalaya,Paranda
Dist.Osmanabad

मराठी विभाग

अ. क्र	प्रोग्रॉम	प्रोग्रॉम ऑऊटकम	प्रोग्रॉम स्पेसिफीक ऑऊटकम
१	बी. ए. मराठी	मराठी साहित्याच्या ऐतिहासीक परंपरेचे ज्ञान तसेच साहित्याच्या प्रेरणा, प्रवृत्तीचे ज्ञान विद्यार्थींना मिळेल. मराठी भाषेचे स्वरूप, उत्पन्न आणि साहित्याच्या निर्मीतीची प्रक्रिया विद्याथ्यांना कळेल.	

कोर्स ऑफर्ड

अ. क्र.	कोर्स	कोर्स आऊटकम
१	एफ. वाय. बी. ए. मराठी कम्पलसरी आवश्यक मराठी मराठी गद्य पद्य आणि आयोजित मराठी	①विद्याथ्यामध्ये मराठी भाषा समर्थपणे वापरण्याची क्षमता निर्मान होईल ②साहित्याच्या विविध प्रकारांचे व प्रवाहांचे आकलन, आस्वाद आणि विस्लेषण वैभव त्यांच्या दृष्टीपथास येईल. ③साहित्यात मोडलेल्या विषयाच्या अनुषंगाने जिवनातील प्रश्न विद्याथ्यांना कळतील व समाजकार्य करण्यास प्रेरणा मिळेल. ④व्यवहारीक मराठीतुन विद्याथ्यांना आर्थिक दृष्टया आत्मनिर्भय राहण्यास दिशा मिळेल.
२	एफ. वाय. बी. ए. मराठी ऑप्शनल पेपर क्र. १, २, ३, ४ * काव्यात्म साहित्य १. * नाट्यात्मक साहित्य २. * कयात्म साहित्य ३. * मुहीन माध्यमासाठी लेखन कौशल्ल ४.	①साहित्य अभ्यासातुन विद्याथ्यांमध्ये जिवन विषयक समज विकसीत होईल ②मराठी साहित्यातील भिन्न — भिन्न प्रवाह आणि प्रकार लक्षात येतील ③जागतीकीकरणात विविध श्रेयांना सामोरे जाण्यासाठी भाषीक श्रमता विकसीत होवुन विद्याथ्यांच्या व्यक्तीमहत्व विकासात भाषेचे महत्व स्पष्ट होईल.

अ. क्र.	कोर्स	कोर्स आऊटकम
३	एस. वाय. बी. ए. मराठी पेपर नंबर ३ गद्य पद्य व्यवाहीक आणि आयोजित मराठी	①वाड्मयाची ओळख विद्याथ्यांना होईल. मराठीत कथा, कादंबरी, नाटक, काव्य, इ. प्रकारांची माहिती विद्याथ्यांना विविध गद्य पद्यांच्या माध्यमातुन विद्याथ्यांच्या व्यक्तीमहत्व विकासात भाषेचे महत्व स्पष्ट होईल ②तसेच उपयोजित मराठीया घटकातुन विद्याथ्यांना बातमी, लेखन, पत्रलेखन, वृत्तांत लेखन इत्यादींची

४	एस. वाय. बी. ए. मराठी पेपर नं. ५ निवडक कथांचा अभ्यास	⓵ कथा वाङ्मय प्रकाराची ओळख विद्याथ्यांना होईल. ⓶मराठी कथेची जडनघडण, ऐतिहासीक स्थितनतरे, कथा व इतर साहित्याच्या अनुबंध समजुन कथा वाङ्मयाने समकालीन स्वरूपाचे आकलन विद्याथ्यांना होईल.
५	एस. वाय. बी. ए. पेपर नं. ६ मराठी भाषा विकास संवर्धन आणि भाषीक कौशल्ल	⓵मराठी भाषा निर्मीती कशी झाली त्याचे ज्ञान विद्याथ्यांना होईल. भाषा विकसीत कशी होईल हे कळेल भाषेचे सवर्धन कर्ता येईल. भाषेचे विविध कौशल्ल विद्याथ्यांना ज्ञान होतील.
६	टी. वाय. बी. ए. मराठी पेपर नं. ७ भारतीय साहित्य विचार	साहित्य भारताची ओळख विद्याथ्यांना होईल.⓶साहित्य लक्षनांचा विद्याथ्यांना परिचय साहित्याची प्रयोजने विद्याथ्यांना निदर्शनास येतील. ⓷ साहित्य विषयी विद्याथ्यांची साहित्य व सौंदर्यविषयक दृष्टी विकसीत होईल.⓸शब्द शक्तीची ओळख होवुन वाङ्मय प्रकाराच्या संमल्पना कळतील.
७	टी. वाय. बी. ए. मराठी पेपर नं. १० भाषा विज्ञान	⓵भाषेचे स्वरूप व त्याची मानवी जिवनातील महत्व विद्याथ्यांना समजुन सांगने.⓶भाषेचा अभ्यास पद्धतीचा परिचय करून देणे. ⓷भाषेमध्ये होणारी परिवर्तने विद्याथ्यांना समजतील भाषा. आणि व्याकरण यातील अनुबंध स्पष्ट होईल.
८	टी. वाय. बी. ए. मराठी पेपर नं. २१ वस्तूनिष्ठ आकलन	⓵विद्याथ्यांना वस्तूनिष्ठ मराठी आकलनाच्या दृष्टीने माहित होतील.⓶वस्तूनिष्ठ पद्धतीने आभ्यास कसा करावा याची माहिती मिळेल.⓷तसेच विद्याथ्यांचा वाचन करण्याची क्षमता विकसीत होईल.
९	टी. वाय. बी. ए. मराठी. पेपर नं. १२- आधुनिक मराठी व्यायकरनाचा इतिहास	⓵आधुनिक मराठी वाङ्मयाच्या इतिहाचा परिचय या काल खंडातील वाङ्मय प्रेरणाची ओळख विद्याथ्यांना होईल. ⓶आधुनिक वाङ्मयाची स्वरूप व वैशिस्ट्यांचे ज्ञान विद्याथ्यांना होईल.⓷या कालखंडातील प्रमुख संप्रदा बद्दल माहिती घेवुन यास संप्रदायातील ग्रंथ निर्मीती बद्दल ही त्यांना सविस्तर माहिती मिळेल.⓸एकुणच या कालखंडातील भाषेचे स्वरूप आणि ग्रंथकार व त्यांच्या ग्रंथ निर्मीती यांचे ज्ञान विद्यांथ्याना अवगत होईल.

मराठी विभाग

विभाग प्रमुख

DEPARTMENT OF ENGLISH

COURSE OUTCOMES

1) To create confidence, curiosity about English Language.

2) To prepare students to stand firmly in this global world.

3) To introduce students with various job opportunities while having confidence about English Language.

4) To prepare students to face competitive exam of English Language.

5) To teach human values, ethics, and moral.

6) To build a personality of the students as a social, national responsible person.

SPACIFIC OUTCOMES

F. Y. B. A. Compulsory English

Title of the Paper: Language Through Literature: An Anthology of Prose and Poetry

<u>Outcomes</u>

a) To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English

b) To expose them to native cultural experiences and situations in order to develop humane values and social awareness

c) To develop overall linguistic competence and communicative skills of the students.

F. Y. B. A. Optional English

Title of the Paper: 1)The Structure of English

2) Reading Literature

<u>Outcomes</u>

1. To expose students to the basics of literature and language

2. To familiarize them with different genre and form of literature in English, the literary devices and terms so that they understand the literary merit, beauty and creative use of language

3. To introduce the basic units of language so that they become aware of the technical aspects and their practical usage

4. To prepare students to go for detailed study and understanding of literature and

language

5. To develop an integrated view about language and literature in them.

S. Y. B. A. Compulsory English

Title of the Paper: Language through Writing: An Anthology of Prose and Poetry

<u>**Outcomes**</u>

1. To develop competence among the students for self-learning

2. To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English

3. To develop students' interest in reading literary pieces

4. To expose them to native cultural experiences and situations in order to develop humane values and social awareness

5. To develop overall linguistic competence and communicative skills of the Students

S. Y. B. A. Optional English

Title of the Paper: 1) Literature in English (1550-1750)

2) Literature in English (1750-1900)

Outcomes

1. To expose students to the basics of poetry, novel, drama one of the forms of literature

2. To familiarize them with different types of drama, novel, poetry in English

3. To make them understand the literary merit, beauty and creative use of language

4. To introduce some advanced units of language so that they become aware of the technical aspects and their practical usage

5. To prepare students to go for detailed study and understanding of literature and language

6. To develop integrated view about language and literature in them.

T. Y. B. A.

Title of the Paper: Twentieth Century English Literature

Outcomes:

1. To introduce students to master pieces of the Modern English Literature

2. To familiarize students with the communicative power of English Language

3. To enable students to become competent users of English in real life situations

4. To expose students to varied cultural experiences through literature

5. To contribute to their overall personality development by improving their communicative and soft skills.

Title of the Paper: Indian Writing in English

Outcomes:

1. To expose students to some of the best samples of Indian English Poetry, drama and novel.

2. To make the students see how Indian English poetry, drama, novel expresses the ethos and culture of India.

3. To make them understand creative uses of language in Indian English Poetry, drama and novel

4. To introduce students to some advanced areas of language study.

5. To prepare students to go for detailed study and understanding of literature and language .

6. To develop integrated view about language and literature among the students.

Title of the Paper: Introduction to Literary Criticism and Terms

Outcomes:

1. To introduce students to the basics of literary criticism

2. To make them aware of the nature and historical development of criticism

3. To make them familiar with the significant critical approaches and terms

4. To encourage students to interpret literary works in the light of the critical approaches

5. To develop aptitude for critical analysis.

Title of the Paper: Project Work on History of English Literature

1) To make familiar students with the History of English Literature

2) To know English periods and master pieces of that period.

3) To develop research skill among the students.

4) To develop analytical, Critical attitude among the students.

5) This paper provide opportunity to the students to enrich their writing and presentation skill

Departmental Programme:

The Department of English conducted following activities:

1) Inauguration of English Literary Association: Students conduct whole programme in English

2) Poster Presentation

3) Writing poems, articles, jokes letters etc

Outcomes:

1) Multidimensional development of the students

2) Skills development of the students

3) Personality development of the students

4) Scope to write and stage daring

5) Creativity

D. G. Todkari
Assistant Professor

Dr. Prashant Gaikwad

Principal
Shikshanmaharshi Guruvar
R.G.Shinde Mahavidyalaya,Para
Dist.Osmanabad

Bachelor of Arts
History
Outcomes from the Course

BAI - Paper I - Shivaji and His Time (1630 AD. to 1707 AD)

Paper - III - History of the Marathas (1707 AD to 1818 AD)

- Understand the background and the inspiration behind the establishment of Swarajya.
- Explain the reasons bhind Chatrapati shivaji's early conflicts with the regional lords and the outsiders.
- Know about the early conflicts of Chatrapati Shivaji with regional lords and outsider powers of Adilshahi and Mughal Empire.
- Know about the importance of grand Coronation of Chatrapati shivaji
- Know about the administrative system and it's nature of Chatrapati shivaji
- Asses the Chatrapati shivaji's invasion on Karnatka
- Understand the formation of welfare state during the Maratha rule.
- Understand the industrial and agricutural aspects of Charapati shivaji's regime.
- Understand the administrative aspect of the swarajy.

B·A·I - Paper - II - History of Modern Maharashtra (1818AD to 1905A
Paper - IV - Twentieth Century Maharashtra (1905 AD to 1960 AD

- Identify the importance and the legacy of freedom Movement
- Distinguish the detail account of British raj as well as its overall impacts on the Indian society.
- Evaluate the renaissance and Religious and social reforms movement in India
- Understand some of the early resistance to British rule
- Understand early Political awakening in Indian freedom struggle.
- Identify the social institutions of late ninteenth Century.

B.A. II - Paper - VI - History of Delhi Sultanat (1200 AD to 1526 AD)
Paper - VIII - History of Mughal India (1526 AD. to 1757 AD)

- Identify the various types of sources of Medieval Indian History
- Grasp the details of medival Age of Indian History
- understand the about the Establishment of mughal Empire in India under the leadership of Babar.
- Identify the Conflict between Humayun and shersha about achieving the Power.
- Grasp the details of Political Developments in India during age of Akbar.
- Know about the Political development in India during Jahangir and shahajan's era as a Golden Age
- understand about the Policy of Aurangzeb led to decline of mughal Empire in India
- understand about the Importance and development in Administrative system during the mughal period
- Identify the developments and unique legacy of Art and Architecture during the mughal period.

- Understand various phases of the national movement
- Understand the difference between Moderates extre-mists and revolutionaries.
- Comprehend the Socio-religious scenario and the social reformation.
- Grasp the details of freedom movement under the Mahatma Gandi's Leadrsip
- Understand the evolutionary processes of constitutional development.

B.A.II - Paper - V History of early India (up to 300 B.C.)
Paper - VII History of India (300 B.C. to 650 AD.)

- Identify the various types of Sources of Ancient Indian History.
- Grasp the details of Pre-Historic Age of Indian History
- Understand the about the cultural heritage of India during the Indus valley Civilization
- Identify the importance and the Legacy of vedic Period.
- Grasp the details of Political Developments in Indic during Magadh Empier.
- Know about the political Development in India during Mauryan Empire
- Perceive about the political Development in India during Satvahanas and Gupta Empire.
- Understand about the Political Development in India during Vardhan Dynasty and Vakatak Empire.

BA-III - Paper-IX - Historiography

Paper-XIII Fields of History (Archaeology, Museology, Tourism)

- Identify the meaning Nature and Scope of History.
- Grasp the details of various types of sources and It's importance in History writing
- Understand about the Research Process in Historical research.
- Grasp about the Historical writing Process.
- Know about the Importance and It's staluable role in Political success in Monarchy system.
- Grasp about the importance of Museums in understanding of Historical legacy properly.
- Understand about the Historical Tourism and It's importance in grasping Historical facts.
- Identify the valuable contribution of leading historian in Indian History writing.

BA. III - Paper-X - History of Indian National movement.
(1885 AD to 1947 A.D.)
Paper-XIV - Landmark in the History of Modern World

- Identify the Indian National Movement to modern Indian time.
- Understand about the New Imperialism of world countries
- Identify the Globalization and its various aspects.
- Grasp about the French Revolution in France.
- Grasp about the Industrial Revolution in Ingly
- Know about the Dictatorships in Germany & Italy
- Identify the American Revoloution in America
- Grasp about the First World war and thereafter.
- Grasp about the second world war

BA-III - Paper-XI - Women's struggle in modern India

Paper-XV - Glipses of the History of Marathwada
(UP to 1948 AD)

* Idenityify the Major issues and Conception of women's Problems in 19th century in India
* Identify the child marriage, Sati Tradition in India
* Understand the Banns of woman Education in India
* Understand the women's and social struggle in India
* Identify Social reform movement and women's in]
* Understand women's and Law in India.
* Understand Political History of Marathwada A brife servey
* Understand the Religious movement in Marathi
* Understand Art and Architecture, Temple Architect Forts in Marathwada.
* Socio-Economical and Cultural History of unde the Nizam state in Marathwada.
* Understand Hydrabad Freedom Struggle Role of all Indian Scheduled Cast Fedration in Hyderabad Freedom struggle

Principal
Shikshanmaharshi Guruvarya
R.G.Shinde Mahavidyalaya, Paranda.

Dept-of-Political Science- Course outcome-

1	F.Y.B.A.	Basic concepts of Poli. Scie. –I	It is strategy for maintaining cooperation among people with different needs and ideals in life of for resolving the conflict within the group wither this is a family atrible a village or a nation state
2	F.Y.B.A.	Government And politics of Maharashtra	State Reorganizaiton commissions and Ideological Basis of Movement Eocucative legislature judiciary & cooperative movement in Maharashtra .
3	S.Y.B.A.	Indian Government & Political Science	Indian constitution , consitututional provision , Union Government, budgetary process and parlmentary commitiees, constitutional Institiutions, suprim court, centre –state- Relations,. Election commission etc achive to Political Science knowledge .
4	S.Y.B.A.	International Relations	Informed to students approaches to the study of international relations Indian foreign policy, collective security and U..N. major Issus in internationalism – Non alignment movement etc.
5	T.Y.B.A.	Indian Political Thinkers.	Indian political Thinkers and social workers thoughts effect on Indian socity and Indian poli, Scoi, Edu and Eco- cultcher and its informed to student.
6	T.Y.B.A.	Western political Thinkers	Western political Thinkers and his idealgis, effectives political thoughts informed to students.
7	T.Y.B.A.	Political Idealogies.	Nationalism, liberalism, Democracy, imperialism,. Feminism this all concepts is important for basically under standing of political science .
8	T.Y.B.A.	Research Methodology	The Course provides extension and application of knowledge in a current specialized field and current issues. To get exposed to a few elements of social science research .

(HOD Politics Dept)

Principal
Shikshanmaharshi Guruvarya
R.G.Shinde Mahavidyalaya, Paranda
Dist. Osmanabad

1	FYBA	Indian Economy	To make the students known about the various sectors of the economy indetail. To highlight the potential of the Indian economy to study the facts and figures as out development.
2	FYBA	Money, Banking	To create the awareness of the student of money, Banking system. Understandins of the opportunities of banking their interaction with nest of the economy essential to realize how monotory force operates through multitude of channels.
3	SYBA	Public finance	To understand the policies and operations which involve the use of tax and expediture measures while budgatary policy. It helps to understand expenditure program, stabilization instruments, etc.
4	F.Y.B.A.	Micro Economics	To understand the behaviour of an economoc agent namely, a consumer, a producer, a factor owner and the price fluctions in a market. Price formation in different makets structure and the equilibrium of a firm and industry.
5	S.Y.B.A	Macro Economics	To understantthhe economic analysis in terms of theorotical, empirical as well as policy making issues. The objective of the course is to familiarize the students the basis concept of macro economics and applications.

Principal
Shikshanmsharshi Guruvarya
R.G.Shinde Mahavidyalaya,Paranda

1	FYBA	Indian Economy	To make the students known about the various sectors of the economy indetail. To highlight the potential of the Indian economy to study the facts and figures as out development.
2	FYBA	Money, Banking	To create the awareness of the student of money, Banking system. Understandins of the opportunities of banking their interaction with nest of the economy essential to realize how monotory force operates through multitude of channels.
3	SYBA	Public finance	To understand the policies and operations which involve the use of tax and expediture measures while budgatary policy. It helps to understand expenditure program, stabilization instruments, etc.
4	F.Y.B.A.	Micro Economics	To understand the behaviour of an economoc agent namely, a consumer, a producer, a factor owner and the price fluctions in a market. Price formation in different makets structure and the equilibrium of a firm and industry.
5	S.Y.B.A	Macro Economics	To understantthhe economic analysis in terms of theorotical, empirical as well as policy making issues. The objective of the course is to familiarize the students the basis concept of macro economics and applications.

6	T.Y.B.A	History of Economic Thought	To understand the economic thought in terms of theorotical, empinical by various economists of Indian and global level.
7	S.Y.B.A	Economics of Development	This paper is deveted to the theories of economics development, approaches to economic development, social and institutional aspects of development.
8	T.Y.B.A	Research methodology	The course provides extension and application of knowledge in a current specilized field. To get exposed to a few elements of social science research.
9	T.Y.B.A	Agricultural Economics.	In this course the students are promoted to be capable to understand pattern of industrilization in India as well as world over. Agriculture is the major sector of economy in the country.

Kharde A.C.

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बी.ए. प्रथम वर्ष (ऐच्छिक हिंदी प्रथम सत्र)

प्रश्नपत्र 1 उपन्यास साहित्य

कोर्स का परिणाम (Course Outcomes)

1) छात्रों को उपन्यास साहित्य का परिचय देकर प्रतिनिधी उपन्यास कारों का परिचय देना।

2) हिंदी साहित्य के प्रति छात्रों की रुचि बढाना तथा साहित्य की, विविध विद्या ओं से परिचित कराना।

3) छात्रों मे राष्ट्र के प्रति प्रेम एवं सामाजिक प्रतिबध्दता की भावना विकसित करना।

4) हिंदी उपन्यास में यशपाल का उपन्यास साहित्य से परिचय कराना।

5) आपका बंटी मन्नु भंडारी लिखित उपन्यास से छात्रों को परिचय कराना।

6) राष्ट्रीय ऐक्य सामाजिक उत्तरदायित्व, वैज्ञानिकता आदि मुल्यों के प्रति, छात्रो की ध्यान आकर्षित करना।

बी.ए. प्रथम वर्ष (ऐच्छिक हिंदी व्दितीय सत्र)

प्रश्नपत्र 1 उपन्यास साहित्य

कोर्स का परिणाम (Course Outcomes)

1) छात्रों को हिंदी के प्रतिनिधी कहानी कारो से परिचित कराना ।

2) छात्रों को कहानी साहित्य एवं विकास का परिचय कराना।

3) कथा यात्रा की कहानीयों का संवेदना तथा शिल्पगत परिचय कराना।

4) छात्रों को व्यंग्य का स्वरुप एवं विकास का परिचय कराना।

5) हरिशंकर परसाई के व्यक्तीत्व एवं कृतित्व का परिचय छात्रो को करानी ।

बी.ए. व्दितीय वर्ष (व्दितीय हिंदी व्दितीय सत्र)
प्रश्नपत्र : सामान्य हिंदी

कोर्स का परिणाम (Course Outcomes)

1) छात्रों को गद्य के विविध आसाम का परिचय कराना।
2) साहित्य आस्वादन अभिरुची का परिसंस्कार करना।
3) साहित्य को जीवन मूल्यों के प्रति आस्था निर्माण करना।
4) छात्रों को पाठयक्रम के माध्यमसे अत्याधुनिक इलेक्ट्रानिक माध्य मों का परिचय कराना ।
5) छात्रों को व्यवसायिक पत्रलेखन की पध्दति से अवगत कराना।
6) छात्रों में भाषा कौशल कला को विकसित करना।
7) छात्रों में अग्रेजी से हिंदी में अनुवाद करने की कला को विकसित करना।

बी.ए. व्दितीय वर्ष (ऐच्छिक हिंदी व्दितीय सत्र)
प्रश्नपत्र :V कथेत्तर गद्य साहित्य

कोर्स का परिणाम (Course Outcomes)

1) छात्रों को हिन्दी कथेत्तर गद्य संवदेना की परम्पंरा का परिचय कराना।
2) छात्रों को हिंदी आत्मकथा विधा तथा यात्रा साहित्य का उद्भव और विकास का परिचय कराना।
3) छात्रों को हिंदी के प्रतिनिधी निबंध कारो से परिचित कराना ।
4) परिभाषिक शब्दावली के माध्यम से हिंदी शब्दों से परिचित कराना।
5) छायों को देवनागरी लिपि का उद्भव और विकास का परिचय कराना।

बी.ए. व्दितीय वर्ष (ऐच्छिक हिंदी)
प्रश्नपत्र :VII आधुनिक हिंदी कविता

कोर्स का परिणाम (Course Outcomes)

1) छात्रों को आधुनिक हिंदी कविता की विशेषताओं से परिचित कराना।
2) छात्रों को लंबी कविता का रचना विधान से परिचय कराना।
3) भुमिजा (खण्ड काव्य) नागार्जुन की रचना का

बी.ए. तृतीय वर्ष (पंचम सत्र)
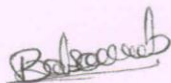## प्रश्नपत्र :आदि तथा मध्यकालिन हिंदी साहित्य का इतिहास

कोर्स का परिणाम (Course Outcomes)

1) हिंदी साहित्य के आदिकालीन और मध्यकालिन इतिहास को अवगत कराना।

2) हिंदी साहित्य की दार्शनिक पूर्वपीठीका से परिचय कराना।

3) हिंदी साहित्य के आदिकालीन और मध्यकालिन कालजयी रचना तथा रचनाकारों का सामान्य परिचय कराना।

4) हिंदी साहित्य के इतिहास का परिचयात्मक अध्ययन कराना।

5) हिंदी साहित्य के इतिहास के आदिकाल, भक्तीकाल, रितीकाल का अध्ययन कराना।

बी.ए. तृतीय वर्ष (षष्ट सत्र)
प्रश्नपत्र :XIV आधुनिक हिंदी साहित्य का इतिहास

कोर्स का परिणाम (Course Outcomes)

1) हिंदी साहित्य के आधुनिक काल के इतिहास का परिचय कराना।

2) आधुनिक हिंदी साहित्य की राजनितीक, सामाजिक, धार्मिक परिस्थितीयोंका परिचय कराना।

3) आधुनिक हिंदी साहित्य के रचनाकारों का व्यक्तीत्व एवं कृतित्व का सामान्य परिचय कराना।

4) आधुनिक हिंदी साहित्य के भारत के युग, व्दिवेदी युग, प्रगतिवाद, प्रयोगवाद नई कविता का विकास का अध्ययन कराना।

(Dr. Raut B.B)

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Broadcasting And Journalism (B.Voc)
Course Outcome (FY)

Sr.no	Class	Paper	Outcome
1	F.Y (sem 1)	Linguistic Proficiency	It gives basic knowledge of Linguistic. It develops personality. It creates confidence among the students about Linguistic Proficiency. It also provide opportunities for jobs in various fields and also develop critical attitude.
2	F.Y (sem1)	Computer Basics- Theory	Information technology has been taught as part of media for several years. With computer literacy now a basic requirement in media practice. In modern world known as computer world. In this computer era every one depends on the computer, also every business depends on computer . this course would empower the students to the basic computer skills every students regardless of the age should know include common application programs such as Microsoft word, Microsoft power point, Microsoft excel, etc . students who have completed this paper should have a deep understanding of basic computer knowledge.
3	F.Y(sem1)	Environment Awareness	Environmental science makes the student aware of the problems which our society will face in future, Thus to overcome the environmental disturbance environment awareness is necessary in today's world. The Environmental Awareness facilitates students' understanding of complex environmental issues from a problem-oriented, interdisciplinary perspective. Appreciate concepts and methods from ecological and physical sciences and their application in environmental problem solving. Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems. Appreciate that one can apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.
4	F.Y(sem1)	Introduction To mass Communication	Mass Communication is the process of exchanging information through mass media to large segments of the population . This course aims to provide whole knowledge of mass communication . It is usually

Broadcasting And Journalism (B.Voc)
Course Outcome

			understood for relating to various form of media . Through Mass communication information can be transmitted quickly to many people who generally stay far away from the sources of information . Mass communication is being done through many mediums such as radio, television, social networking , billboards, newspapers , magazine, films and Internet . This course will be use full for research and jobs .
5	F.Y(sem1)	Introduction to broadcast media	Students Who have completed this paper should have deep understanding of the broadcasting method and process . Broadcasting is the important part of electronic media as like television and radio. Broadcasting is the distribution of audio and video signals to a number of recipients that belong to a large group. This course will be useful for job and research . Various area for job as like radio , community radio, web radio, television etc
6	F.Y(sem1)	Fundamentals of journalism	This course is intended to provide and introduction to the basic concept of journalism. Reporters role is very impotent in journalism . Students who have completed this paper should have a deep understanding about news values, gathering the news , writing the story , copy preparation and editing , inverted pyramid etc.
7	F.Y(sem1)	Media Laws and Ethics	This course aims to provide necessary knowledge about Media law and ethics for media person. Where media laws and the issues of ethics are derived in constitutional societies, The relevance of laws and ethics to modern journalism , the difference between objective journalism and so called Yellow journalism . Media Laws and Privileges within the constitution of india and other derived sources

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Broadcasting And Journalism (B.Voc)
Course Outcome (SY)

Sr.no	Class	Paper	outcome
8	F.Y(semII)	Linguistic proficiency -II	It developed skills of effective communication it teaches appropriate use of body language. It gives effective use of verbal and nonverbal language and also gives knowledge of linguistic difference. It introduce standard Pronunciation of language.
9	F.Y(semII)	Computer fundamental –theory	After having completed this course the students shall have advanced knowledge in information technology . students have deep knowledge in the subject areas. Use relevant methods for work in electronic and print media in an independent manner .They analyze and relate in a critical manner to deferent information sources . After this course students evaluate instruments and application to optimize data collection, analysis and management.
10	F.Y(semII)	Public Relations	This course is intended to provide an introduction to the Public Relations. PR is a part of journalism .public Relation is the strategic communication process companies, individuals and organizations use to built mutually beneficial relationship with the public. One of the major goals of any organization PR and communication campaign is to increase the awareness of organization its products and services to the public . in today's competitive organizations are determined to succeed by getting to public to purchase their goods and services . job opportunities for public relation professionals are very assuring in various industries .
11	F.Y(semII)	News Writing and Reporting	This course would empower the students to news writing and reporting . one of the most fundamentals differences between journalism and other forms of writing is the way journalist obtain the information they write about. Journalist obtain information through a variety of reporting techniques , which can include interviewing sources , looking through government documents , researching old articles and observing events firsthand. good news writing begins with good accurate reporting . journalist perform a public service for citizens by representing truthfully facts in honest straight forward articles. This course provide a theoretical and practical basis for doing experiments in related area .
12	F.Y(semII)	News Anchoring	This course is prelude to advanced theoretical studies of news anchoring .A news Presenter also known as News Reader\Anchor . anchor is a person who presents news during a news program on the television , on the radio or on the internet . students who have completed this paper should have a deep understanding of basic

Broadcasting And Journalism (B.Voc)
Course Outcome

			knowledge of anchor , anchors role, anchors duties , presentation skills etc
13	F.Y(SemII)	Camera Operations And Handling – photography and videography	The study of camera operation and handling photography and videography is the important part of electronic media . without camera basic knowledge someone cant work in electronic media . students competed this paper should have a deep understanding of basic knowledge of basic camera handling a few tips and tricks, what is shutter, speed , what is aperture, depth of field , framing , composition lighting etc This course knowledge will be usefull for jobs .
14	F.Y(semII)	Editing Audio Video Photo	The study of audio video photo editing is very use full for electronic media. Editing is a skill . in modern communication as like television programme or radio programme editing is main part of electronic media . This course is a prelude to advanced theoretical studies in audio video and photo editing . Editing knowledge will be use full in television programme , news channels radio programmes daily soaps and also use full for students for career in film industries

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Department of Computer Science

Course outcome

- Students will be able to use appropriately system design notations and apply system design engineering process in order to design, plan, and implement software systems

- Students will be able to communicate in written and oral forms in such a way as to demonstrate their ability to present information clearly, logically, and critically.

- Students will be able to apply mathematical and computing theoretical concepts in solution of common computing applications, such as computing the order of an algorithm.

- Students will be able to complete successfully be able to program small-to-mid-size programs on their own. Sufficient programming skills will require use of good practice.

- In a self-selected area of depth in Computing, students will demonstrate a depth of knowledge appropriate to graduate study and/or lifelong learning in that area. Students should be able to read for understanding materials in that area beyond those assigned in coursework.

- Students will be prepared for a career in an information technology oriented business or industry, or for graduate study in computer science or other scientific or technical fields.