4TH CYCLE
Assessment and Accreditation by NAAC

CRITERION-II - Teaching- Learning and Evaluation
QlM 2.6.1

Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and Cos are evaluated
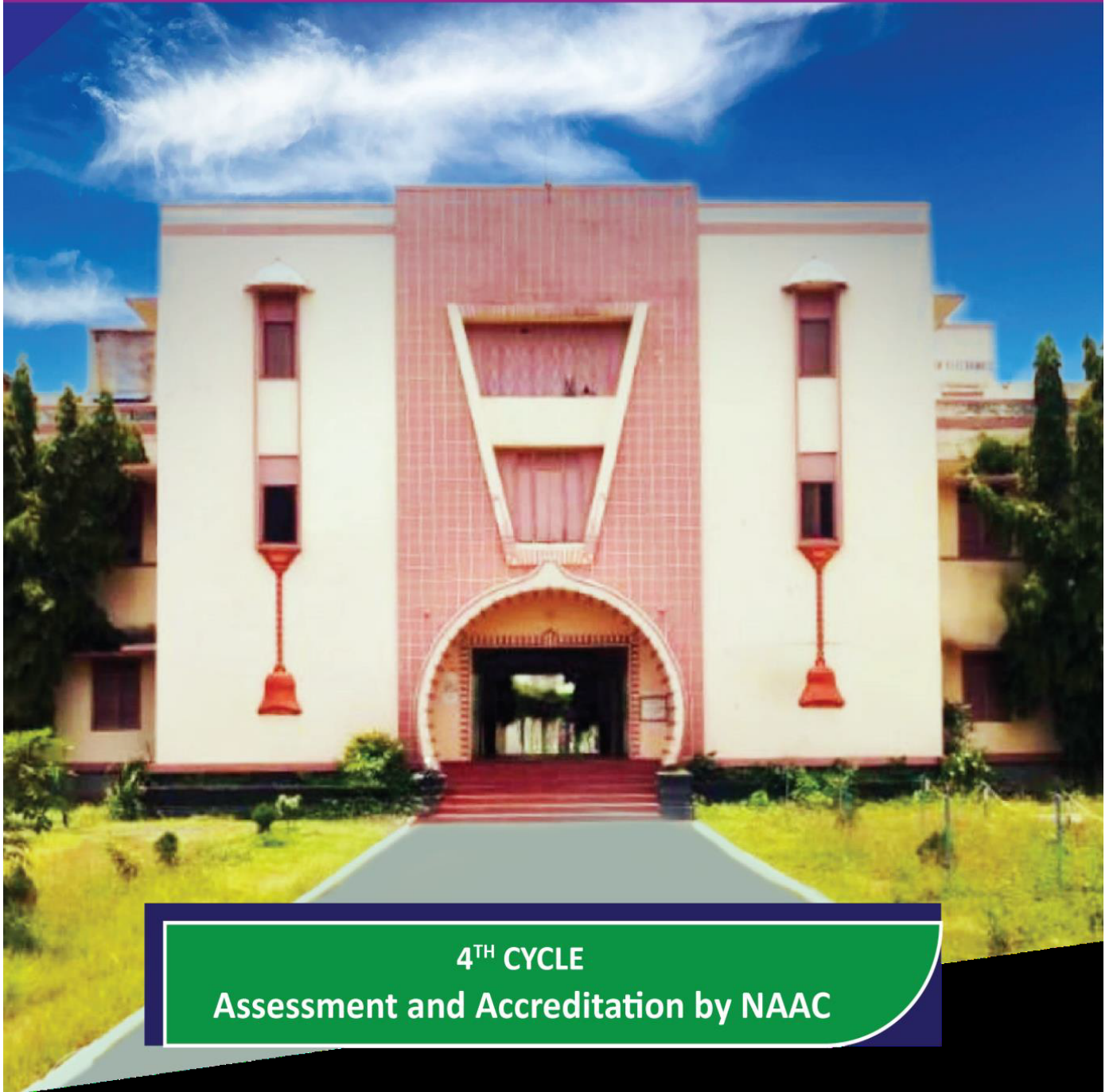
Dhamangaon Education Society's
(Hindi Linguistic Minority Educational Institution)
Adarsha Science, J.B. Arts & Birla Commerce Mahavidyalaya
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No.

Date:

21/12/2022

Declaration

The information, reports, true copies of the supporting documents, numerical data, etc. furnished in this file is verified by IQAC and found correct.

Hence this certificate.

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IQAC Coordinator

IQAC Co-ordinator
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Contents

Programme Outcomes

1. Critical Thinking: Apply the knowledge of botany to make scientific queries and enhance the comprehension potential.

2. Effective Communication: Successful transfer of scientific knowledge both orally and in writing.

3. Social Interaction: Function as an individual, as a member or a leader to perform a task in class room situation or during field study and at the time of social gatherings.

4. Effective Citizenship: Responsible for learning, develop honesty in work and respect for self and others and responsible towards nature.

5. Ethics: Convey and practice social, environmental and biological ethics which is now a days very burning issue of the entire world.

6. Environment and Sustainability: Maintain the significance of conserving a clean environment for endurance and sustainable development.

7. Self-directed and Life-long Learning: study unremittingly by self to cope with growing competition for higher studies and employment.

Programme Specific Outcomes

1. Educate students in and around Dhamangaon Railway District Amravati, a prime area of Satpura Range, about plant science.

2. Inculcate strong nitty-gritties on contemporary and traditional aspects of Botany.

3. Build life skills in Edible mushroom cultivation, Biofertilizer production, Gardening and its maintenance followed by seed bank.

4. Create platform for higher studies and research in Botany.

5. Enable students to take-up efficacious career in Botany.

Course Outcomes

SEM I Diversity & Applications of Microbes and Cryptogams

1. Discuss about importance of morphological structure, classification, reproduction and economic importance of Algae.

2. Study and impart knowledge about the general Characteristics, structure, reproduction, life history and economic importance of fungi. Understand the features of Lichens.

3. Know the control measures of plant diseases.

4. Students able to explain about structure, classification, reproduction, life cycle and economic importance of Bryophytes.

Laboratory Exercise

1. Learn the microscopic technique, familiarize with the external and internal structure of lower and higher group organisms.

2. Study of Lichens and its types. Study of plant diseases causal organisms, and control measures.

3. Study of mushroom cultivation process.

SEM II: Gymnosperm, Morphology of Angiosperms and Utilization of Plants

1. Study and impart knowledge about the Structure, reproduction, life cycle, fossil, fossilization and geological time scale.

2. Students able to explain about structure, classification, reproduction, life cycle and economic importance of Gymnosperms.

3. Study and impart knowledge about the Structure, reproduction, life cycle, fossil, fossilization and geological time scale.

4. Students able to explain about structure, classification, reproduction, life cycle and economic importance of Gymnosperms.

5. Diversity in Plants habits. Understand different systems of traditional medicines

6. Acquire knowledge on collection and processing of herbal drugs

7. Get knowledge on pharmacological importance of medicinal plants and its bioactive compounds

8. Acquire knowledge on different adulterants.

Laboratory Exercise

1. Study of gymnosperm morphology, anatomy, and economic importance of gymnosperms.

2. Learn about Double stained permanent mount preparation of gymnosperm plant material

3. Learn about fossils

4. Study of morphology and modification of plants.

5. Learn about pharmacology and pharmacognosy along with morphology of medicinal plants.

SEM III Plant Systematics, Anatomy and Embryology

1. Student will able to study nomenclature of the plant in scientific way according to different taxonomic classifications.

2. Learn about rules for plant nomenclature by ICBN

3. Plant anatomy and embryology are much awaited subject to study the internal structures & function of reproductive organs in plants.

4. The course paper cover basic aspects of anatomy of plant tissues such as meristems, epidermis, permanent tissues, complex tissue, systems and structure of plant organs; reproductive developmental aspects of male reproductive system - Pollen grains, female reproductive system - embryo sac.

5. Students will be benefitted by studying the plant anatomy enables to identify scrappy plant materials, wood, forensic investigation, and applied aspects of meristems cultures.

6. Students will be able to utilize embryological studies in various aspects like analysis of evolutionary trends, circumscription and delimitation of taxa and making a decision on systematic positions.

Laboratory Exercise

1. Observation of wide range of flowers available in the locality and methods of their pollination.

2. Students came to know fundamentals of embryology through the study of permanent slides.

3. Hands on training for the students about microscope handling and understanding the hidden world of embryology.

4. Description plants belongs to different families in technical language.

5. Students could identify plants in a scientific way up to family level.

Sem IV : Cell Biology, Genetics and Biochemistry

1. Acquire knowledge on ultrastructure of cell.

2. Understand the structure and chemical composition of chromatin and concept of cell division.

3. As a part of classical genetics, students learned about the Mendel's principles, acquire knowledge on cytoplasmic inheritance, Linkage and sex-linked inheritance.

4. Learned about crossing over mechanism

5. Understand the concept of 'one gene one enzyme hypothesis' along with molecular mechanism of mutation.

6. The student Acquires a general knowledge of the physical, chemical properties and metabolism of carbohydrates and lipids in living system.

7. The student knows basic knowledge of the biological importance of the biomolecules such as carbohydrates, lipids, protein, nucleic acid and enzymes.

8. The students will be able to understand the fundamental biochemical principles of enzymes, such as the structure and function of enzymatic process and its classifications in living system.

Laboratory Exercise

1. Students learn about process of Isolation of mitochondria and chloroplast

2. Squash and Smear technique helped students to learn about most fundamental part of the life doing observations of various stages of cell division that are Mitosis & meiosis.

3. New way to learn and prove the Mendel's lows performing practical based on probability.

4. By performing different tests students came to know about different types and specificity of enzymes.

SEM V :Plant Physiology and Ecology

1. To become knowledgeable in plant and its water relations.

2. Students will able to gain knowledge on role of micronutrients in plant growth, their development and understand the mechanism of nitrogen metabolism.

3. To gain knowledge about chloroplast structure, photosynthetic pigments, the path of energy from the light reactions through Calvin cycle.

4. Students are able to understand the process of translocation of organic solutes in plants.

5. To understand the energy releasing steps in Glycolysis. Students will be familiar about the mechanism of respiration.

6. To acquire knowledge in plant growth regulator and its uses, understand the physiology of flowering and photoperiodism.

7. Students learned about the interaction between biotic and abiotic components of the environment.

8. Know about the concept of energy flow in the ecosystem.

9. Students will acquire knowledge regarding vegetation and its analysis.

10. Know about different pollutions, consequences in the environment and its justification

11. Students will know about the floristic regions and plant formation of the planet.

12. Students will deepen the vegetation types of Melghat Region. (Type of Dry Tropical deciduous forest)

Laboratory Exercise

1. Learned about physiological experiments like paper chromatographic method

2. Study of osmosis phenomenon by plasmolytic method

3. Students will study and understand how water travel from soil to the top most portion of the plants by studying ascent of sap

4. Physical factors affect permeability of biomembranes will be studied by students using laboratory exercise

5. Students will come to know about effect of light CO_2 and other factors affecting the rate of photosynthesis.

6. Study morphology in concern about adaptations of plants in different ecological conditions.

7. Students can study population dynamics by studying quadrat method.

SEM VI : Molecular Biology and Biotechnology

1. Plant Molecular Biology focuses on exploration of molecular basis of plant life..

2. The course paper enlightens mainly on DNA, RNA, Protein, molecular systems and regulation of gene expression in prokaryotic and eukaryotic organisms.

3. Through this course paper students will be able to understand the function of cells at molecular level.

4. The students will be able to apply the molecular knowledge in metabolic engineering of transgenic plant to produce biologically important products.

5. Students will be able to pertain knowledge on molecular breeding methods that are coupled with genetic engineering techniques

6. Understand the basic principles of plant tissue culture along with its application like micropropagation and synthetic seed production.

Laboratory Exercise

1. The practical course paper elaborates fundamental skills and techniques in plant molecular biology.

2. It contains more experiments based on general and applied aspects.

3. These experiments will be helpful to student for better understanding of the scientific principles and skillful implementation of the experiments.

4. Students enable to familiarize about the preparation of solutions of different strength. Ex. Buffer.

5. Student will be able to utilize all basic instruments used in molecular biology.

6. Isolation, quantification and storage methods of DNA will be helpful to students to carry out advanced studies like genetic engineering.

Programme Outcome

1. **Critical thinking and scientific knowledge**

    a. Employ critical thinking and the scientific knowledge of chemistry to try design, carry out chemical reactions, record and analyse the results of chemical reactions.

    b. Understood the basic concepts, fundamental principles, and scientific theories based on various scientific phenomenons in chemistry and their applications in life activities.

    c. Acquired expert skills in handling and operating the laboratory instruments, performing laboratory oriented experiments, highlight significant observations and deduce the logical conclusions based on facts and findings.

2. **Awareness**

    a. Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community.

    b. Create an awareness of the importance of chemistry as central subject to undertake higher studies.

3. **Effective and Social Communication**

    a. Developed various relational abilities, for example, composing, perusing, tuning in, talking, and so forth, which will in the end help in communicating, thoughts and cognitive perspectives obviously and adequately.

    b. Developed an aptitude for partaking in different socio-social exercises with excitement, to scatter the seeds of information and contribute in making mindfulness about the social legends, mistrusts.

4. **Effective Citizenship**

    a. Developed a patriotic and disciplined citizen to address complex local, national and global issues, cultural and religious conflict.

    b. Developed with undoubted sense of their rights and responsibilities as citizens.

5. **Ethics**

    a. Imbibed science oriented ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.

6. Environment and Sustainability

    a. Understand the need of rational use of natural resources and their alternatives and be aware of waste treatment, reduction in carbon footprint and production of reusable and recyclable materials for sustainable environment.

7. Self-directed and Life-long Learning

    a. Vibrant knowledge achieved in combination with positive attitude and energetic effort has the potential to undertake the self learning and life lasting association with scientific approach in the context of chemical science.

Programme Specific Outcome

1   Gain the knowledge of Chemistry through theory and practical's.

2   Understand nomenclature, stereochemistry, structures and reactivity of chemical compounds and mechanism of the chemical reactions, derivations and important theories.

3   Explain mechanism of organic reactions.

4   Explain properties of elements through periodic table.

5   Understand the applications of organic and inorganic compounds.

6   Identify chemical formulae and solve numerical problems.

7   Use modern chemical tools, Models, Charts and Equipment's.

8   Explain structure-activity relationship, basic fundamental theories.

9   Understand good laboratory practices and safety measures performing in the laboratory.

10   Demonstrate fundamental experiments of chemistry and develop research oriented skills in laboratory.

11   Analyse the compounds at elementary level on the basis uv- visible, IR, and NMR spectroscopic techniques.

12   Make aware chemicals and handle the sophisticated instruments/equipment and Understand derivations of thermodynamics, laws of photochemistry, kinetics of chemical reactions, electrical and magnetic properties of compounds and properties of dilute solutions.

Course outcomes

B. Sc. I - Semester I Inorganic Chemistry

CO 1   Define the periodic properties like atomic and ionic- radii, Van der Waal's radius, and ionization energy.

CO 2   Able to know the effect of ionization energy and electronegativity on the different properties of elements scales of electronegativity, Screenings effects and effective nuclear charge.

CO 3   Discuss the Slater's rules and calculating the Screening constant and solve

problem based on it, factors affecting ionic bond formation, Born Lande equation and Born-Haber's cycle to calculate lattice energy.

CO 4   Understand the terms Screenings effects, screening constant and effective nuclear charge, solvation and solvation energy.

CO 5   Detail and comparative study of S-block and P-block elements.

CO 6   Understand the concept of inert pair effect, abnormal behaviour of nitrogen, hydrides of boron and their preparation, properties, diagonal relationship of elements like Li – Mg, Be-Al.

CO 7   Analyse acidic and basic radical from a given mixture by semi-micro qualitative analysis method.

Organic Chemistry

CO 1   Define and discussion on the different terms involved in electronic displacements e.g.Inductive effect, Electromeric effect, Resonance and Hyperconjugation effect and their applications.

CO 2   Study the reactive intermediate like carbocation, carbanion and free radicals. Discuss their generation stability and reactions.

CO 3   Know about aliphatic and aromatic hydrocarbons, important name reactions, E1 and E2 reactions, Huckel's rules of aromaticity and the various substitution reactions.

CO 4   Prepare various organic compounds by using different methods.

Physical Chemistry

CO 1 Understand adiabatic and isothermal processes in thermodynamics, first law of thermodynamics and its limitations, Carnot's engine, concept of entropy.

CO 2 Solve the numericals after discussion on thermodynamics.

CO 3 Know the postulates of kinetic theory of gases, derivation of kinetic gas equation, Maxwell-Boltzmann distribution law of molecular velocities.

CO 4 Come to know the deviation of real gases from ideal gas behaviour. Van der Waal's equation of state and its derivation for real gases.

CO 5 Understand Statement of phase rule, explanation of phase, number of components and degree of freedom and its applications.

Course outcomes
B. Sc. I - Semester II Inorganic Chemistry

CO 1 Discuss the term polarization, polarizing power, polarizability, effect of polarization on nature of bond, Fajan's rules of and its applications, structure and bonding in diborane, carbides, types of carbides and fullerenes.

 CO 2 Study the aspects of hybridisation, types of hybridisation to explain geometries of NH_4^+ ion, PCl_5, SF_6 and IF_7, Lux-Flood concept of acids and bases, structure and bonding in diborane, carbides, types of carbides and fullerenes.

CO 3 Know the term hard and soft acids and bases and discuss the Pearson's HSAB or SHAB principle with important applications.

CO 4 Understand the comparative study of P-block elements with reference to electronic configuration, ionization energy and oxidation states, interhalogen compounds.

CO 5 Define the term noble gases, Study of their compounds with respect to their structure and bonding e.g. XeF_2, XeF_4, XeF_6, XeO_3 and XeO_4, non aqueous solvents and requirements of a good solvent.

CO 6 Discuss the physical properties of solvents namely liquid range, dielectric constant, dipole moment, heat of vaporisation and solubility behaviour.

Organic Chemistry

CO 1 Able to understand alkyl halide, aryl halide and alcohol, their synthesis, chemical and physical properties, pinacol - pinacolone rearrangement.

CO 2 Come to know the structure, molecular formula, synthesis chemical and physical properties of phenol, ether and epoxide.

CO 3 To do complete analysis of simple organic compounds containing one or two functional groups.

Physical Chemistry

CO 1 Able to understand electrical and magnetic properties

CO 2 Understand the rate of reaction, order of reactions and their units, half-life period of a reaction.

CO 3 Able to understand determination of order of a reaction by integration, graphical, equifractional change, Vant Hoff's differential method and Ostwald's isolation method.

CO 4 Able to solve the numerical after discussion of chemical kinetics, Arrhenius equation, activation energy and its determination using Arrhenius equation.

CO 5 To determine physical properties like surface tension, viscosity, cleaning power of detergent, percentage composition of given ethanol-water mixture by viscometer, activation energy of a reaction, and heat of solution.

Course outcomes
B. Sc. II - Semester III Inorganic Chemistry

CO 1 Understand the concept of covalent bonding, metallic bonding and VSEPR theory.

CO 2 Understand postulates of molecular orbital theory, LCAO approximation, formation of bonding and anti-bonding MOs and rules for LCAO. M O energy level diagram.

CO 3 Come to know MO structure of homonuclear diatomic molecules

namely He_2 , H_2 , N_2 and O_2 and heteronuclear diatomic molecules like NO, HF and CO

CO 4 Know various rules under VSEPR theory to explain molecular geometry.

CO 5 Able to understand different theory of quantitative Inorganic analysis like volumetric and gravimetric Analysis.

CO 6 To perform analysis of a components volumetrically.

 CO 7 To perform analysis of a components like Ba^{2+} as $BaSO_4$, Fe^{3+} as Fe_2O_3 gravimetrically.

Organic Chemistry

CO 1   Understand the synthesis, chemical and physical properties of aldehydes and ketones, various naming reactions and its mechanisms.

CO 2   Know the structure and reactivity of carboxylic acids, its acidity, acid strength, chemical reactions and physical properties of carboxylic acids.

CO 3   Understand an optical isomerism, geometrical isomerism conformational isomerism.

CO 4   Understand element of symmetry, chirality, asymmetric carbon atom, enantiomers, diastereomers, relative and absolute configurations, DL and RS nomenclature, racemisation and resolution.

CO 5   Understand the Cis-trans & E-Z nomenclature, Bayer's Strain theory and Newman & Sawhorse projection formulae.

Physical Chemistry

CO 1   Know the terms Gibb's and Helmholtz's free energy function, Gibb's- Helmholtz's equation in terms of G and its application, Partial molar function, derivations of Gibb's-Duhem equation, Vant Hoff's isotherm and its application to equilibrium state.

CO 2   Solve the numerical after discussion on problems of thermodynamics and phase equilibrium.

CO 3   Discuss the immiscible liquids, Nernst distribution law and its application to association and dissociation of solute in one of the solvent.

CO 4   Derive Clausius-Clyperon equation, partially miscible liquids - Phase diagram of phenol-water, triethyl amine - water and nicotine-water systems.

 CO 5 Understand the terms surface tension, viscosity and its determination and its S.I. Unit. Effect of temperature on surface tension and viscosity.

CO 6   Understand the terms involved in electrochemistry like conductance, Specific Conductance, equivalent and molar conductance.

CO 7   Understand conductometric titrations, applications of conductometric titration, transport number and its determination by Hittorf's method and Moving boundary method and Kohlrausch's law of independent migration of ions.

CO 8   To construct phase diagram of phenol-water system and to determine consulate temperature for the system.

CO 9   To determine transition temperature, study kinetics of hydrolysis of methyl acetate catalysed by acid and kinetics of saponification of ethyl acetate by NaOH.

CO 10 Determine partition coefficient of iodine and solubility of benzoic acid at different temperature.

Course outcomes

B. Sc. II - Semester IV Inorganic Chemistry

CO 1   Understand the Chemistry of elements of transition series (3d, 4d and 5d) with respect to their Electronic configuration, Atomic and ionic size, Ionization energy, Metallic nature, Oxidation states, Magnetic properties, Colour of salts, Catalytic properties and Complex formation behaviour.

CO 2   Come to know principles involved in extraction of elements, methods of extraction of elements and factors affecting choice of extraction method.

CO 3   Understand the thermodynamics of reduction processes-Ellingham diagrams for oxides.

CO 4   Understand Lanthanides and Actinides and their comparative study with respect to different properties.

CO 5   Understand definition of metallurgy, steps in metallurgy. Ore dressing by gravity separation, froath floatation and electromagnetic separation. Calcination, roasting, smelting and refining of metals.

CO 6   Estimate Zn(II) by complexometric titration, hardness of water by complexometric titration and Cu(II) in commercial copper sulphate by colorimetrically or spectrophotometrically.

CO 7   Perform chromatographic separation of Cu(II), Co(II) and Ni(II) ions by paper chromatography

CO 8   Determination the concentration of unknown $KMnO_4$ solution from standard solutions of $KMnO_4$ by colorimetrically.

Organic Chemistry

CO 1   Know the concept of polynuclear hydrocarbons e.g. napthalene, its structure, preparation and chemical reactions.

Co 2   Know the concept of reactive methylene compounds, synthesis and application of malonic ester and acetoacetic ester.

CO 3   Understand carbohydrate, its constitution and epimerization.

CO 4   Understand structure, synthesis, reactivity and applications of aromatic nitro compounds, amino compound, diazonium salts, amino acids and proteins.

CO 5   Know the terms like Zwitterion, isoelectric point etc.

CO 6   Perform isolation of casein from milk, nicotine from tobacco leaves, caffeine from tea leaves and lycopene from tomato juice.

 CO 7 Estimate glucose, acetamide and can determine the equivalent weight of an organic acid.

Physical Chemistry

CO 1   Come to know different colligative properties of dilute solutions and Van't Hoff's factor.

CO 2   Understand the overall idea about crystalline state, symmetry in crystal, laws of symmetry and Weiss and Miller indices.

CO 3   Understand seven crystal systems and fourteen Bravais lattices, derivation of Bragg's equation for X-ray diffraction and Bragg's X-ray spectrometer method for the determination of crystal structure of NaCl and KCl.

Course outcomes
B. Sc. III - Semester V Inorganic Chemistry

CO 1   Understand the basic terms in coordination chemistry.

CO 2   Understand the concept of Werner's and Sidgwick's electronic theory in coordination compounds, nomenclature, structure, geometry, and optical isomerism of various coordination compounds.

CO 3   Gain the knowledge of valence bond theory and magnetic properties.

CO 4   Gain the depth knowledge of chelates, its applications in analytical chemistry and understand the concept of stability of chelates.

CO 5   Acquire the knowledge about basic concept of crystal field theory, crystal field splitting in octahedral, distorted octahedral, square planar and tetrahedral complexes and energy in high spin and low spin complexes.

CO 6   Gain the depth knowledge of electronic spectra of transition metal complexes, types of absorption spectra and selection rules for d-d transitions and spectrochemical series.

CO 7 To prepared tetraamminecopper(II)sulphate, hexaamminenickel(II)chloride, potassiumtrioxalate aluminate(III), Prussian blue, chrome alum, sodium thiosulphate and dithionite.

Organic Chemistry

CO 1   Know the importance and applications of heterocyclic compounds.

CO 2   Learns the nomenclature of five and six membered heterocyclic compounds.

CO 3 Understand the various methods of synthesis of heterocyclic compounds and their electrophilic & nucleophilic substitution reactions.

CO 4 Understand the chemistry of organometallic compounds (organomagnesium and organolithium compounds).

CO 5 Understand the classification of dyes on the basis of structure and mode of applications.

CO 6 Learns the synthesis, properties and applications of various dyes.

CO 7 Learn about analgesic and antipyretic drugs.

CO 8 Understand the importance of pesticides, classification of pesticides such as insecticides, herbicides, fungicides and rodenticides and their synthesis.

Physical Chemistry

CO 1 Acquire good knowledge of photochemical and thermal reactions.

CO 2 Understand the principle and laws of photochemistry and difference between thermal and photochemical reactions.

CO 3 Understand the laws of absorption of light (Lambert's law and Beer's law) and applications of Beer's-Lamberts law.

CO 4 Understand the concept of quantum yield and kinetics of photochemical decomposition.

CO 5 Understand the Joblonski diagram and the terms involved such as singlet, triplet, internal conversion, inter-system crossing, fluorescence, and phosphorescence.

CO 6 Know chemiluminescence and bioluminescence.

CO 7 Gain the Knowledge of electromagnetic radiation spectrum, various types of spectra and degrees of freedom.

CO 8 Understand rotational (microwave), vibrational, and Raman spectroscopy with their selection rules.

CO 9 Determine strength of given HCl solution conductometrically, strength of given $CH_3 COOH$ solution conductometrically, strength of HCl solution potentiometrically, strength of HCl and $CH_3 COOH$ in a given mixture conductometrically, redox potential of $Fe+2/Fe+3$ system potentiometrically, molecular weight by Rast's method and specific rotation of optically active compound by Polarimeter.

Course outcomes

B. Sc. III - Semester VI Inorganic Chemistry

CO 1   Understand the thermodynamic and kinetic stability of the complexes, factors which affect the stability of complexes and stability of labile and inert complexes.

CO 2   Gain the brief idea about substitution reactions, SN1-dissociative and SN2- associative mechanism, substitution reactions in square planer complexes and its mechanism and concept of molar extinction coefficient.

CO 3   Understand the technique of colorimeter and spectrophotometer with its components and their applications.

CO 4   Understand the theory, principle classification and applications of chromatography technique.

CO 5   Understand the classification, nomenclature, methods of preparation, properties and reactions of organometallic compounds.

CO 6   Understand the structure of carbonyls on the basis of valence bond theory and effective atomic number in metal carbonyls.

CO 7   Learn the classification of inorganic polymers on the basis of nature of monomers and types of reaction and synthesis and applications of various polymers.

CO 8   Understand the terms essential and non-essential elements in biological process.

CO 9   Gain the knowledge about metalloporphyrins and role of hemoglobin and myoglobin in oxygen transport.

Organic Chemistry

CO 1   Understand electromagnetic radiations.

CO 2   Understand the principle and instrumentation of spectrophotometer.

CO 3   Learn the terms used in uv - visible spectroscopy and understand the importance of uv - visible spectroscopy for the elucidation of structure of organic compounds.

CO 4   Understands IR spectroscopy and NMR spectroscopy and their applications to characterize the organic compounds.

CO 5   Gain the knowledge of mass spectrometry.

CO 6   Estimate formaldehyde, glycine, ascorbic acid (vitamine C), phenol by bromination method, aniline by bromination method, urea by hypobromite method, unsaturation by bromination method and equivalent weight of an ester by saponification reaction.

CO 7   Separate a mixture of methyl orange and methylene blue by thin layer chromatography (using benzene), mixture of 2,4-dinitro phenyls of acetaldehyde and benzaldehyde by thin layer chromatography, mixture of dyes by thin layer chromatography, mixture of 2,4-dinitro phenyls of acetaldehyde and benzaldehyde by thin layer chromatography.

Physical Chemistry

CO 1   Able to understand the Plank's quantum theory, Photoelectric effect and Compton Effect.

CO 2   Know de Broglie hypothesis of matter waves, de Broglie's equation and Heisenberg's uncertainty principle. Classical wave equation and Schrodinger's wave equation in one-dimension.

CO 3   Understand the physical significance of wave function and application of Schrodinger wave equation to a particle in one- dimensional box and its extension to a three-dimensional box. Concept of atomic orbital.

CO 4   Know the terms used in electrochemistry, types of electrodes. Determination of pH of the solution using hydrogen, quinhydrone and glass electrodes.

CO 5   Understand the concept used in nuclear chemistry like Shell model of a nucleus - Assumptions, evidences for existence of magic numbers and liquid drop model

CO 6   Know the types of nuclear reactions, applications of radio isotopes in industry, agriculture, medicines and bio-sciences.

CO 7   Determine dissociation constant of weak acid by conductometry, dissociation constant of weak acid by potentiometry, dissociation constant of dibasic acid by pH-metry, pH of a soil sample by pH-meter and solubility and solubility product of sparingly soluble salts conductometrically.

CO 8   Do titration of strong acid and strong base by pH-metry and potentiometric titration of KCl and $AgNO_3$.

Program Outcomes

1.   This program makes learners aware of the history of the discipline of Computer Science and understand the conceptual underpinnings of the subject.

2.   Students understand the nature of the software development process, including the need to provide appropriate documentation.

3.   The program also empowers the graduates to appear for various competitive examinations or choose the post graduate programe of MSc Computer Science .

4.   Understand the nature of the software development process, including the need to provide appropriate documentation.

5.   Understand standard techniques for solving a problem on a computer, including programming techniques and techniques for the representation of information.

Course Outcome

1.Programming in C and Computer Fundamentals

CO1   Introduction to Computer ,its generation, block diagram of computer Understanding the concept memory & its types ,input and output devices of

Computers

CO2.   Describe the basic components of an operating system and their role in Implementations for general purpose, real-time and embedded applications. Explain Types of O.S.

Explain File attributes and File Handling

 CO3   Explain the local, metropolitan and wide area networks. Discussion of various networking technologies.

Explain the concepts of protocols, network interfaces . Explain internet, its history and various types of connection.

CO4. Explain the basic terminology used in computer programming Explain Flowchart assembler, compiler &n interpreter.

Explain about the basic concepts of program development stages. Explain Structured Programming.

Explain history of C and Structure of C program

CO5. Write, compile and debug programs in C language and use different data types for writing the programs.

CO6. Discuss I/O operation i.e Formatted and Unformatted .

Design programs connecting decision structures, conditional statements and loops .

2S.WEB Technology and Advanced Programming in C

CO1. Explain History of HTML. Explain Various HTML tag.

Explain Attributes of Alignment, Color & text.

CO2. Describe Style sheet with its advantages and disadvantages. Explain CSS & its types of style sheet

CO3. Introduction of XML and how it is differ with HTML Introduction and need of DTD and its types

CO4. Describe Array and its types,its Declaration.

Explain Pointer and Strings with string Function and String handling mechanism.

CO5. Explain Function and its Need.

Discuss about the various types of Functions . Explain Function Recursion.

CO6. Explain the Concepts of structures and Unions.

Explain File handling in C with creating and opening file.

3S. Data Structure and C++

CO1. Introduction to Data structure ,its types and operation

CO2. Explain Queues ,its representation and its operation Discuss Circular Queue ,dequeue and Priority Queue

CO3. Explain Trees, Concept of binary tree and traversing Operation Explain Sorting and Searching Techniques

CO4.   Explain OOPS ,its Introduction ,Advantages and application Explain Classes and Objects

Explain Managing console I/O process

Explain Operator in C++ with new and delete operator

CO5.   Explain Function in C++ with Friend function and Inline Function Describe Array of Object and This pointer

CO6.   Explain Operator overloading with unary and binary operator Explain Inheritance, its types and Virtual base class

4S. Relational Database Management System & PL/SQL

CO1   Describe the fundamentals of File processing and database processing system.

CO2.   Explain the various data model and its application.

CO3   Explain the various normal forms and its role in DBMS.

CO4.   Explain the fundamental concepts of SQL programs.

CO5.   Describe the concepts of function, procedure, package, trigger and exception handling.

CO6.   Explain Transaction and its properties.

Explain Securities of Database by maintaining user and privileges

5S. Java Programming and Vb.net

CO1   Explain about basic Java language syntax and semantics to write Java programs.

CO2.   Describe the concepts of variables, conditional and iterative execution methods etc.

CO3   Discuss the fundamentals of object-oriented programming in Java, including

defining classes, objects, invoking methods

CO4.   Explain the various methodologies to handle the exception mechanisms and the

principles of inheritance, packages and interfaces

CO5.   Demonstrate the programming concepts for applet and graphics.

6S. Advanced Java Program and vb.net

CO1.   Discuss Exception handling and multithreading

CO2.   Describe Applet,its life cycle with all its attributes ,Explain graphics class

CO3.   Explain Event Handling, Event delegation Model

CO4.   Explain How control is added in form Discuss msgbox & inputbox function

Explain Keyboard and mouse event with common control

CO5.   Explain class,object ,method and event

Describe Exception handling and exception class in .net framework

CO6.   Explain data Access with ADO.net

Programming in C LAB

CO1   Explanation of design and algorithmic solution for a given problem.

CO2.   Construction of flowchart for the computer programs.

CO3   Explains the program using Control Statements

CO4.   Explains the program using Arrays and Functions.

CO5.   Explain the program using file handling with structure.

Data Structure Lab Using C++

CO1   Explain the features of C++ using object oriented programming.

 CO2. Describe the relative merits of C++ as an object oriented programming language.

CO3   Describe the major object-oriented concepts to implement object oriented programs in C++ Using encapsulation and inheritance.

CO4.   Describe the major object-oriented concepts to implement object oriented programs in C++ Using polymorphism.

Java Programming Lab

CO1   Explain the programming language design, syntax and semantics.

CO2.   Describe the critical thinking skills through solving programming problems.

CO3   Explain the standard syntax for java programs and other programming Tools.

CO4.   Describe the animation and events based advanced java program concepts (Applet)

CO5.   Explain the java programs using object oriented class with parameters, constructors, utility, calculations, methods including inheritance, test classes and exception handling.

Web Design Technology Lab

CO1   Explain the fundamental tags used in HTML.

CO2.   Develop the web page in various applications.

CO3   Develop the web page using various ordered and unordered listing commands

CO4.   Develop the web page using frame concepts with multi-media handling.

Program Outcomes

1.   It facilitates the graduates to use and apply current technical concepts and practices in the core computer applications

2.   Identify computer application related problems, analyze them and design the system or provide the solution for the problem considering legal, ethical and societal issues.

3.   The program also empowers the graduates to appear for various competitive examinations or choose the post graduate programme of their choice (M.C.A &M.Sc (C.S.)). 4.Students learn to work and communicate effectively in interdisciplinary environment, either independently or in team, and demonstrate scientific leadership in academic and industry.

5.Recognize the need for and an ability to engage in continuing professional development. 6.Thisprogramme makes learners aware of the history of the discipline of Computer Science and understand the conceptual underpinnings of the subject.

7.   Students understand the nature of the software development process, including the need to provide appropriate documentation.

8.   The program also empowers the graduates to appear for various competitive examinations or choose the post graduate programme of MSc Computer Science .

9.   Understand the nature of the software development process, including the need to provide appropriate documentation.

10.   Understand standard techniques for solving a problem on a computer, including

programming techniques and techniques for the representation of information.

ST1. Computer Fundamentals

UNIT-I   Able to understand the basic of Computer, like its generation, block diagram of computer and its Types

UNIT-II   Able to understand the hardware Input and Output devices

UNIT-III   Able to understand the use of Various memories used in computer System

UNIT-IV   Study the Number system used in computer with it's conversion and representation.

UNIT-V   Study and understand the basic Programming Concept and Able to implement the algorithms and draw flowcharts

1 ST2. C Programming

UNIT-I   Able to understand the basic concept of Programming

UNIT-II   Able to understand the Operators and Expressions in C

UNIT-III   Understand the implementations of I/O operations in C

UNIT-IV   Able to implementations Controlled structures in C

UNIT-V   Ability to work with array and pointers

1 ST3. Digital Techniques-I

UNIT-I   To understand the Number System and logic operations and logic Gates

UNIT-II   To Understand Logical Families

UNIT-III   Able to impliment the Boolean algebra

UNIT-IV   Able to draw and understand Arithmetic logic Unit

UNIT-V   Able to draw and understand Combinational logic Circuit

1 ST4. Numerical Methods

UNIT-I   Understand the basic concept of Numerical method

UNIT-II   Able to solve the Rounding off errors

UNIT-III   Able to solve the Routs of Equations using Bracketing Methods

UNIT-IV   Able to solve the Routs of Equations using open Methods

UNIT-V   Understand the Solution of Linear Equations

1 ST5.Discreate Mathematics

UNIT-I   Study the Functions and Relations

UNIT-II   Study the Generating Functions

UNIT-III   Study the Recurrence Relation

UNIT-IV   Study the Boolean Algebra-I

UNIT-V   Study the Boolean Algebra-I

1 ST6.Communication Skill

UNIT-I   Study the Grammar and Vocabulary

UNIT-II   Study the Language Proficiency

UNIT-III   Study the Forms of written Communication

UNIT-IV   Study the Creative Writing

UNIT-V   Study the Imaginative Approach

Course Outcome

2ST1. Operating System

UNIT-I   Able to understand the concept in basic operating system

UNIT-II   Understand the introduction of OS and implement the DOS Commands

UNIT-III   Able to understand the functions of operating system

UNIT-IV   Understand the file management concept

UNIT-V   Able to implement and understand Memory management concept

2 ST2. Advance C

UNIT-I   Understand the Concept of String Handling

UNIT-II   Understand the function in C

UNIT-III   Understand the structures in C

UNIT-IV   Able to understand the File Handling

UNIT-V   Understand the Random Access and Error handling

2 ST3.Digital Techniques-II

UNIT-I   To understand the Multivibrators and Flip Flop

UNIT-II   To Understand Counters

UNIT-III   Able to understand the Shift Registers

UNIT-IV   Able to Understand the concept of Memory

UNIT-V   Able to understand the A/D & D/A Converters

2ST4. Numerical Methods

UNIT-I   Understand the concept of Curve Fitting

UNIT-II   Explain the General Linear Least Squares

UNIT-III   Explain the Interpolation

UNIT-IV   Able to study inverse interpolation

UNIT-V   Able to Numerical Integration

2 ST5.Discreate Mathematics -II

UNIT-I   Study the Graph Theory(a)

UNIT-II   Study the Graph Theory (b)

UNIT-III   Study the Graph Theory (c)

UNIT-IV   Study the Graph Theory (d)

UNIT-V   Study the Graph Theory (e)

2 ST6.Communication Skill

UNIT-I   Understand the Comprehension Skill

UNIT-II   Understand the Command over Language

UNIT-III   Understand the Analytical Ability

UNIT-IV   Understand the Drafting Language

UNIT-V   Understand the General awareness

Course Outcome

3ST1. Data Structure

UNIT-I   Understand and implementation of algorithm the List, Array and Stacks in data Structure

UNIT-II   Able to understand the Recursion

UNIT-III   Understand implementation the queues and link list

UNIT-IV   Understand the Tree concept

UNIT-V   Able to understand the sorting and searching concept with Algorithm

3 ST2.Object Oriented Programming with C++

UNIT-I   Understand the basic concept of Object oriented Programming

UNIT-II   Understand the control structure and functions in C++

UNIT-III   Understand the Classes, object and Constructors in C++

UNIT-IV   Understand the Array, Pointers, operator overloading and inheritance

UNIT-V   Able to understand the Virtual Functions and Polymorphism. Understand the File and streams

3 ST3. Data Base Management System

UNIT-I   Understand the Basic concept of DBMS

UNIT-II   Understand the concept of relational Model

UNIT-III   Understand the Concept of SQL

UNIT-IV   Understand and implement the Functions in DBMS

UNIT-V   Understand the Concept of PL/SQL and Transaction in DBMS

3 ST4. Advance Operating System

UNIT-I   Understand the Basic concept of Operating System

UNIT-II   Understand the Asynchronous Concurrent Processors

UNIT-III   Understand the concept of Deadlock Indifinite postponement

UNIT-IV   Able to understand the storage management and the virtual storage management

UNIT-V   Understand the Process Management concept

3 ST5. Electronics

UNIT-I   Able to study the 8085 microprocessor and also study Block diagram and Pin diagram

UNIT-II   Able to perform Instruction and programming of 8085

UNIT-III   Understand the concept of Interfacing

UNIT-IV   Abe to understand the 8086 Architecture

UNIT-V   Able to perform Instructions and programming of 8086

Course Outcome for B.C.A Part-II.(Semester-IV)

4ST1. System analysis design & MIS

UNIT-I   Understand the basic of System analysis and Design

UNIT-II   Able to understand the Project management

UNIT-III   Able to study the system design Understand files and databases

UNIT-IV   Able to study the MIS and Decision making with MIS

UNIT-V   Study the information system planning

4 ST2. Visual Basic

UNIT-I   Study and implement the basic concept of VB

UNIT-II   Implement the Object and Classes in VB

UNIT-III   Implement the study the internal functions in VB

UNIT-IV   Study and implement the Working with forms

UNIT-V   Study and implement the concept of Files

4 ST3. Web Designing and office Automation

UNIT-I   Study the application, infrastructures in IT

UNIT-II   Able to study the implementation of EXCEL

UNIT-III   Able to study the implementation of ACCESS

UNIT-IV   Able to study the implementation Web publishing concept and E-Commerce

UNIT-V   Understand the Web page Construction with help of HTML-4 Study the pointshop pro

4 ST4. Networking

UNIT-I   Understand Networking Concept such as Topology, LAN ,WAN, OSI model

UNIT-II   Study the digital and analog data Communication

UNIT-III   Understand the data link protocol and network layer

UNIT-IV   Understand the LAN, WAN FDDI

UNIT-V   Understand Communication services and network security

3 ST5. Advance Microprocessor and Microcontroller

UNIT-I   Understand the 80286 and instruction

UNIT-II   Able to study 80386, 80486 and 80586 microprocessor

UNIT-III   Study the Microcontroller

UNIT-IV   Understand the 8051 instruction set and arithmetic and logical instruction

UNIT-V   Study the 8051 interfacing & Application

Course Outcome for B.C.A Part-III. (Semester-V)

5ST1. Core Java

UNIT-I   Study the Introduction to java

UNIT-II   Study the and implement the Classes and inheritance

UNIT-III   Study the and implement the Packages and interfaces

UNIT-IV   Study the and implement the Exception handling and threads

UNIT-V   Study the and implement the Applet, AWT, Input, output stream

5ST2. Network Security

UNIT-I   Understand the Introduction to network security

UNIT-II   Understand the Block ciphers and data Encryption standard

UNIT-III   Understand the Finite field

UNIT-IV   Understand the Public key cryptography & RSA

UNIT-V   Understand the Security in NS

5ST3. Software Engineering

UNIT-I Understand the Introduction to software engineering

UNIT-II Understand the Software Project management concept

UNIT-III Understand the System design

UNIT-IV Able to understand Structured programming

UNIT-V Able to understand Software quality management

5ST4. Computer Graphics

UNIT-I Study the introduction to computer Graphics

UNIT-II Study the Geometrical Transformations

UNIT-III Understand the Drawing Algorithms

UNIT-IV Study and understand Animation

UNIT-V Study the Implementation

3 ST5. E-Commerce

UNIT-I Understand the basic concept of E-Commerce

UNIT-II Able to understand Business strategy in an Electronic Age

UNIT-III Able to understand Business strategy implementation

UNIT-IV Able to understand Business-to-Business electronic Commerce

UNIT-V Able to understand Electronic payment System

Course Outcome
6ST1 :-.NET using ASP

UNIT-I Able to understand the basic of ASP.NET

UNIT-II Able to develop the ASP.NET application

UNIT-III Understand the concept of C#

UNIT-IV Able to deal with database in ADO.NET

UNIT-V Understand the Advance concept of ASP.NET

6ST2 : Client Server Technology

UNIT-I   Understand the Client Server Technology

UNIT-II   Understand the basic concept with programming language

UNIT-III   Able to learn Scheduling Implementation and synchronization

UNIT-IV   Able to understand the Semaphores and its implementation in Novell network And Windows NT , Unix O.S. memory management

UNIT-V   Able to deal with oracle and its tool

6ST3 Multimedia and its application

UNIT-I   Study the introductory concept of multimedia

UNIT-II   Study the Multimedia Various Software

UNIT-III   Understand the Building Blocks

UNIT-IV   Understand the Production Tips

UNIT-V   Study the multimedia Project Development and case study

6ST4 : software Testing

UNIT-I   Study principles of software testing

UNIT-II   Study white box testing

UNIT-III   Study integration testing and its application

UNIT-IV   Study acceptance testing and its application

UNIT-V   Study regression testing and its application

6ST5 Advance Database Management System

UNIT-I   Study the basic of Database with file organization

UNIT-II   Study the concurrency control transaction and crash Recovery

UNIT-III   Study Parallel and distributed database and its application

UNIT-IV   Understand the concept of Object oriented database system

UNIT-V   Study Data Warehousing

PROGRAMME OUTCOMES (POs)

After graduating from science faculty, a student should have:

Critical thinking

•	Understood the basic concepts, fundamental principles, and scientific theories based on various scientific phenomena and their applications in life activities.

•	Acquired expert skills in handling and operating the laboratory instruments, analyzing scientific data and performing laboratory-oriented experiments, highlight significant observations and deduce the logical inferences/conclusions based on facts and findings.

Effective Communication

•	Developed numerous communication skills such as writing, reading, listening, speaking, etc., which shall eventually help in expressing thoughts, ideas and cognitive views evidently and effectively.

Social Communication

•	Developed an aptitude for participating in various socio-cultural activities with enthusiasm, to disperse the seeds of knowledge and contribute in creating awareness about the social myths, disbeliefs.

•	Realized that importance of knowledge of other faculties such as Arts, Commerce performing arts, social sciences and sports can greatly and effectively influence & inspire in evolving new scientific theories and inventions.

Effective Citizenship

•	Developed a patriotic and disciplined citizen following the rules and regulations for furtherance of society.

Ethics

•	Imbibed science oriented ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.

Environment and Sustainability

• Understood the need of rational use of natural resources and be aware of waste treatment reduction in carbon footprint for sustainable environment

Self-directed and Life-long Learning

• Realized that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude to rejoice a successful life.

• Developed creative thoughts and propose novel ideas to solve the immediate societal problems and invade in advancing the current technologies.

Carrier perspective

• Able to work in different areas such as Public service commissions, education system, industry, medical fields, defense area, research field etc

Programme Specific Outcomes (PSOs)

By the end of this programme, the students will be able to:

1. Understand the basic concepts of different Electronics components, Network theorems, Measuring instruments, Semiconductor devices, Integrated circuits, Digital Electronics, Amplifiers, Converters, Microprocessors Microcontroller programming, Modulations, Instrumentation, Transducers, Sensors, Actuators, Biomedical instrumentation, Timers, advance microcontroller.

2. Study and analyze different parameters of various electronic circuits.

3. Understand the use of Electronics components and circuits in day-to-day life.

4. Perform and testing of different electronics components and circuits.

5. Study and analyze the different input, output characteristics of different devices and components.

6. Understand the application of Electronics in domestic appliances.

7. Analyze the relationship between analog and digital circuits.

8. Repair small household electrical and electronics appliances.

9. Construct different electronic devices and system for commercial and industrial purposes.

10. Able to join different electronics industries as technician or as embedded engineer.

11. Work as Instructor in different School and colleges for skill oriented programs such as ATAL labs.

Course Outcomes (COs)

B.Sc. SEM I: Basics of Electronics

1. Identify the different electronics components used in electronic circuits.

2. Understand working principle of different measuring instruments.

3. Understand the working of solid state semiconductor devices used in the circuit.

4. Describe working, characteristics and applications of semiconductor devices.

5. Understand different concepts of optoelectronics devices and applications.

6. Understand Integrated circuits fabrication technology.

B.Sc. SEM I Course: Practical

1. Identify different Electronic components.

2. Design the circuits using bread boards.

3. Performs the calculations on combination of basic components such as resistors and capacitor.

4. Solved different complex circuits using network theorems

5. Analyze the characteristics of different diodes, BJT, FET, MOSFETs, etc.

B.Sc. SEM II Course: Digital Electronics

1. Understand the concepts of digital electronics.

2. Understand the basic concept number system.

3. Understand different logic gates and Boolean laws.

4. Understand adder circuits.

5. Understand the basic concepts of different logic families and characteristics.

6. Understand the concept of flipflops, counters and shift registers.

7. Understand different combinational logic circuits such as encoder, decoder, multiplexer, demultiplexer.

8. Understand the construction and working principle of memories.

B.Sc. SEM II Course: Practical

1. Perform conversions of different number system.

2. Develop different circuits using combinations of logic gates.

3. Simplify complicated digital equations using Boolean laws.

4. Selection and implementation of specific logic family for specific applications.

5. Construct multivibrators, flip-flops using logic gates.

6. Construct registers, counters using different flipflops.

7. Reading, writing and erasing process of different memories.

B.Sc. SEM III Course: Electronics Devices and Circuits

1. Describe Hybrid-parameters, equivalent circuit of transistor in different configuration, analysis, cascading, coupling tuning of amplifier.

2. Calculate different hybrid parameter for different configurations.

3. Understand working principle of different power amplifiers.

4. Understand the concept of feedback amplifier and oscillators.

5. Describe different parameters of operational amplifiers.

6. Construct inverting, noninverting amplifier, adder, subtractor, differentiator and integrator.

7. Develop more advance applications like oscillators, amplifiers and multivibrator.

B.Sc. SEM III Course: Practical

1. Calculate different hybrid parameters for different transistor configurations.

2. Construct, verify and calculate efficiency of various power amplifiers such as Class A, B, C, AB power amplifiers.

3. Construct and calculate frequency parameters of different Oscillators.

4. Derive different circuits such as Adder, subtractor, intergrator, differentiator, etc.

5. Construct and test various Op-Amp circuits such as multivibrators, comparator, amplifier etc

6. Construct and study different Analog and digital converters.

B.Sc. SEM IV Course: Communication Electronics and Microprocessor 8085

1. Understand the concept of Modulation and demodulation.

2. Understand the concepts and working of AM and FM transmitters and receivers.

3. Understand fiber optic communication process.

4. Understand the concept and different types of Pulse modulation in digital communication.

5. Understand internal architecture, function of each block, and each pin of IC 8085.

6. Understand instruction format and instruction cycles of 8085 microprocessor.

7. Program 8085 microprocessor using different instructions.

8. Prepare algorithm and flowcharts of different programs.

9. Understand the interfacing concept of microprocessor with other peripheral devices.

B.Sc. SEM IV Course: Practical

1. Perform Amplitude and frequency modulation and demodulation.

2. Calculated different parameters in fiber optic communications.

3. Perform pulse modulation for digital communication.

4. Program 8085 microprocessor for different applications.

5. Interface 8085 microprocessor with peripheral devices for further applications.

B.Sc. SEM V Course: Measuring Instruments

1. Understand the concept of generalized instrumentation system.

2. Understand the construction and working principle of different transducers.

3. Understand block diagram of Timer IC 555.

4. Construct Astable, monostable and bistable multivibrator ciruits using IC 555.

5. Understand block diagram and concept of Phase lock loop.

6. Understand use of PLL for the applications such as FM demodulator, AM detector and frequency synthesizer.

7. Understand the concept of different display devices.

8. Understand the working principle of digital instrument such as digital frequency meter, digital voltmeter, and digital capacitance meter.

9. Understand the concept of different recorders.

10. Understand the working principle of different Sensors and actuators.

11. Understand the working principle of different biomedical equipment.

B.Sc. SEM V Course: Practical

1. Measure different physical parameters using resistive, inductive, capacitive transducers, and displacement measurement using capacitive transducer.

2. Develop different multivibrator circuit such as monostable, astable and bistable circuit using IC 555.

3. Implement different circuits of PLL as FM demodulator, AM detector and frequency synthesizer.

4. Implementation of different display devices, digital instrument and encoder.

5. Measurement of different physical parameters using sensors and actuators.

6. Measurement of different biological signals using Electronic instruments.

B.Sc. SEM VI Course: Advance Microprocessor and Microcontroller

1. Understand internal architecture and pins of IC 8086, function of BIU and EU, concept of different registers, addressing of register and memory.

2. Understand different instruction and programming of 8086 microprocessors.

3. Programming of 8086 microprocessor using assembly language programming.

4. Understand internal architecture of 8051 microcontroller.

5. Programming of 8051 microcontroller.

6. Understand the interfacing concept of and applications of 8051 microcontroller.

7. Understand architecture and different internal blocks of AVR microcontroller.

B.Sc. SEM VI Course: Practical

1.   Program 8086 microprocessor for addition, subtraction, multiplication and division etc using assembly language programming.

2.   Program 8051 microcontroller for addition, subtraction, multiplication and division etc using assembly language programming.

3.   Interface 8051 microcontroller with RS232, DAC, ADC and 8255 PPI.

DEPARTMENT OF ELECTRONICS PROGRAMME: M. Sc.

PROGRAMME OUTCOMES (POs)

Critical thinking

•   Understood the basic concepts, fundamental principles, and scientific theories based on various scientific phenomena and their applications in life activities.

•   Acquired expert skills in handling and operating the different laboratory instruments, analyzing scientific data and performing laboratory oriented experiments, highlight significant observations and deduce the logical inferences/conclusions based on facts and findings.

Effective Communication

•   Developed numerous communication skills such as writing, reading, listening, speaking, etc., which shall eventually help in expressing thoughts, ideas and cognitive views evidently and effectively.

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•   Developed an aptitude for participating in various socio-cultural activities with enthusiasm, to disperse the seeds of knowledge and contribute in creating awareness about the social myths, disbeliefs.

•   Realized that importance of knowledge of other faculties such as Arts, Commerce performing arts, social sciences and sports can greatly and effectively influence & inspire in evolving new scientific theories and inventions.

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•	Developed a patriotic and disciplined citizen following the rules and regulations for further development of society.

Ethics

•	Imbibed science oriented ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.

Environment and Sustainability

•	Understood the need of rational use of natural resources and be aware of waste treatment reduction in carbon footprint for sustainable environment

Self-directed and Life-long Learning

•	Realized that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude to rejoice a successful life.

•	Developed creative thoughts and propose novel ideas to solve the immediate societal problems and invade in advancing the current technologies.

Carrier perspective

•	Able to work in different areas such as Public service commissions, education system, industry, medical fields, defense area, research field etc.

•	Aspire to work in different areas of education system, research and development, industries, etc. research and development

Programme Specific Outcomes (PSOs)

By the end of this programme, the students will be able to:

1.	Understand the basic concepts of different Electronics components, Network theorems, Measuring instruments, Semiconductor devices, Integrated circuits, Digital Electronics, Amplifiers, Converters, Microprocessors Microcontroller programming, Modulations, Instrumentation, Transducers, Sensors, Actuators, Biomedical instrumentation, Timers, advance microcontroller.

2.	Study and analyze different parameters of various electronic circuits.

3.	Understand the use of Electronics components and circuits in day to day life.

4.   Perform and testing of different electronics components and circuits.

5.   Study and Analyze the different input, output characteristics of different devices and components.

6.   Handle and control different machines in industries.

7.   Develop different Antenna set up for communication and broadcasting purpose.

8.   Understand the application of Electronics in domestic appliances.

9.   Built and develop different power electronics system.

10.   Program advance microcontrollers for different applications.

11.   Identify different computer hardware and interfacing techniques.

12.   Analyze the relationship between analog and digital circuits.

13.   Understand the basic concepts of VLSI design and VHDL programming.

14.   Develop different virtual instrumentation system for different applications.

15.   Understand numerical methods and programming using C language.

16.   Understand the concept of fuzzy logic and neural network for different learning.

17.   Repair small household electrical and electronics appliances.

18.   Construct different electronic devices and system for commercial and industrial purposes.

19.   Able to join different electronics industries as technician or as embedded engineer.

20.   Work as Instructor in different School and colleges for skill-oriented programs such as ATAL labs.

Course Outcomes (COs)

Programme: M.Sc. SEM I Course: 1ELE1-Fundamentals of Semiconductor Devices

•   Know brief idea about different type of semiconductor in detailed.

•   Know the basic diode and their characteristics in detailed.

•   Learn different diodes in detailed. Applications of semiconductor devices in microwave communication.

•   Learn and analysis different transistor and switching device in detailed.

•   Understand different fabrication methods of semiconductor technology in detailed.

Programme: M.Sc. SEM I Course: 1ELE2- Instrumentation and Measurement Techniques

- Know all the display device and printers in detailed.

- Know all the digital measuring instruments in detailed.

- Learn about all the signal analyzer in de counters and measuring instrument.

- Learn all type and application of transducer.

- Learn about detailed knowledge about CRO, frequency measuring instruments and audio amplifier.

- Set up microwave frequency measurement.

Programme: M.Sc. SEM I Course: 1ELE3- Biomedical Instrumentation

- Know basic concepts of measurement biomedical system in detailed.

- Learn all the biomedical signal and electrodes of their use in biomedical system in detailed.

- Understand all biomedical recorders used in biomedical system in detailed.

- Learn all the concept of Magnetic Resonance Imaging System and its application in detailed.

- Know all the radiation sources and equipment in detailed.

Programme: M.Sc. SEM I Course: 1ELE4- Optical Electronic devices and applications

- Basic concepts of optical fiber system mechanism and its different applications in detailed.

- Learn different parameter of optical sources in detailed.

- Know the principal and application of all Photo detector devices in detailed.

- Know the principal and application of all Optical Instruments in detailed.

- Learn the type of laser, its application and different uses in detailed.

Programme: M.Sc. SEM II Course: 2ELE1- Analog Circuit Design And Analysis

- Learn basic concepts and characteristic of operational amplifier in detailed.

- Learn different type of operational amplifier circuits in detailed.

- Learn frequency response amplifier and different application of OPAMP in detailed.

- Know filters circuit, comparators and convertors knowledge in detailed.

- Learn all the multivibrators and regulators application.

Programme: M.Sc. SEM II Course: 2ELE2- Microprocessor and Microcontroller

- Learn brief introduction of basic concepts of 8086 microprocessor in detailed.

- Know the PIN diagram of 8086, minimum mode and system Configurations.

- Learn brief introduction of basic concepts and family of 8051 microcontroller and embedded systems.

- Know I/O port programming and different addressing modes. Also learn PIN description 8051.

- Learn all type of instruction sets and operations of 8051 microcontroller.

Programme: M.Sc. SEM II Course: 2ELE3- Digital IC'S & Design

- Learn develop digital circuits and bolean algebra theorems in detailed.

- Design various integrated circuits using 74XX series in detailed.

- Learn application of memories with microprocessor and microcontroller.

- Learn development of digital display circuits in detailed.

- Learn Asynchronous sequential network analysis.

Course Outcomes: By the end of this course, the students will be able to:

- Learn basic introductory concept of Mechatronics system.

- Know control system and basic concepts.

- Learn introductory PLC knowledge in detailed.

- Learn communication system knowledge in detailed.

- Learn fault finding concepts in mechatronics.

Programme: M.Sc. SEM III Course: 3ELE1- Antenna and Mobile Communications

- Learn design of antenna and parameters in detailed.

- Learn different type of antennas and its application with detail.

- Understand basic knowledge of mobile communication in detail.

- Learn different modulation techniques of mobile communication.

- Learn multiple access Techniques and digital mobile system in detail.

Programme: M.Sc. SEM III Course: 3ELE2- Power Electronics

Course Outcomes: By the end of this course, the students will be able to:

- Learn basic knowledge of Power Electronics system and parameters concepts in detail.

- Know power electronics devices, power diodes, Thyristor devices, power transistor device in detail.

- Learn different rectifiers, controllers and converters knowledge in detail.

- Learn choppers and inverters knowledge in detail.

- Learn types of supply, motors drives, parameters and applications in detail.

Programme: M.Sc. SEM III Course: 3ELE3- Advanced Microcontroller and Embedded system

Course Outcomes: By the end of this course, the students will be able to:

- Learn design and development of embedded system for society and industry in detail.

- Learn basic concepts of AVR and ARM processor, selection of process for embedded system.

- Learn introduction of basic concepts and application of embedded system.

- Learn communication standards and interfacing devices. They also know skill for development of hardware in embedded system.

- Learn software development tool and debugging of embedded system skill in detail.

Programme: M.Sc. SEM III Course: 3ELE4- Computer Hardware and Interfacing

Course Outcomes: By the end of this course, the students will be able to:

- Learn knowledge of CPU essentials and peripheral effect in detail.

- Learn internal structure of motherboard knowledge and error handling in detail.

- Learn knowledge of different storage system used in CPU.

- Learn interfacing standard and peripheral knowledge.

- Learn different bus architecture knowledge.

Programme: M.Sc. SEM IV Course: 4ELE1- VLSI Design and VHDL Programming

Course Outcomes: By the end of this course, the students will be able to:

- Learn introduction and design of component using VLSI circuit.

- Learn knowledge of design of IC chips.

- Understand skill of design and development tools for fabrication of IC.

- Learn introduction and programming skill of VHDL.

- Learn various combinational circuits design and development using VHDL.

Programme: M.Sc. SEM IV Course: 4ELE2- Virtual Instrumentation

Course Outcomes: By the end of this course, the students will be able to:

- Learn detailed idea about VI programming and environment.

- Learn VI programming techniques in detail.

- Learn knowledge of DAQ system interface in detail.

- Learn basic common interface and communication system.

- Learn application and sensor technology knowledge with its application in detail.

Programme: M.Sc. SEM IV Course: 4ELE3- Numerical Methods and C Programming

Course Outcomes: By the end of this course, the students will be able to:

- Learn knowledge of C tokens and programming.

- Learn knowledge of Array and function of programming using user defines function.

- Learn knowledge of structure and pointers in detail.

- Learn basic knowledge numerical system and different numerical methods solution in detail.

- Learn knowledge of different numerical method and problems solving solution in detail.

Programme: M.Sc. SEM IV Course: 4ELE4- Fuzzy logic and Neural Networks

Course Outcomes: By the end of this course, the students will be able to:

- Learn utility, classical set and fuzzy sets and relations in fuzzy logic in detail.

- Learn different properties, logic and fuzzy system in membership function in detail.

- Learn programming concept related to fuzzy system and decision making methods in detail.

- Learn Neural and fuzzy machine Intelligence and network theory in detail.

- Learn unsupervised learning in neural networks in detail.

Program Outcomes

1.   Develop among themselves a spirit of scientific temper and inquiry.

2.   Deal with the situations, problems and people with better understanding.

3.   Understand, analyze and explain the basic principles of science in most of its allied fields.

4.   Develop among themselves a sense of social responsibility.

5.   Handle the unexpected situation by critically analyzing the problem.

6.   Think clearly and critically about the choices, aspirations, challenges, opportunities, and threats in the course of their life.

7.   Communicate with the world in a better and meaningful way

PSO (Program Specific Outcomes)

To develop problem-solving skills and apply them independently to problems in pure and applied mathematics.

•   To assimilate complex mathematical ideas and arguments.

•   To improve your own learning and performance.

•   To develop abstract mathematical thinking. Apply knowledge of Mathematics, in all the fields of learning including higher research and its extensions.

•   To understand the basic concepts of Mathematics and Formulae.

•   Recognize the importance and value of mathematical thinking, training and approach to problem solving, on a diverse verity of disciplines.

•   Mathematics is open door in engineering, business, finance, computing, data science, health sciences, environment science and public policy.

•   Identify and become familiar with the scope, methodology and application of mathematics and learn to appreciate its ability to explain various aspects.

CO (Course Outcomes)

- Innovate, invent and solve complex mathematical problems using the knowledge of pure and applied mathematics.

- To solve one dimensional Wave and Heat equations employing the methods in Partial Differential equations.

- Utilize Number Theory in the field of Cryptography that helps in hiding information and maintaining secrecy in Military information transmission, computer password and electronic commerce.

- Facilitate in the study of crystallographic groups in chemistry and Lie symmetry groups in physics.

- Identify Simulation of ground freezing and water evaporation, Heat transfer analysis due to solar radiation, Calculation of temperatures and heat flow under steady-state or transient boundary conditions.

- Explain the knowledge of contemporary issues in the field of Mathematics and applied sciences.

- Work effectively as an individual, and also as a member or leader in multi-linguistic and multi-disciplinary teams.

- Adjust themselves completely to the demands of the growing field of Mathematics by lifelong learning.

- Effectively communicate about their field of expertise on their activities, with their peer and society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations

Program Outcomes

After the completion of the program the students are able to:

1. Develop among themselves a spirit of scientific temper and inquiry.

2. Deal with the situations, problems and people with better understanding.

3. Understand, analyze and explain the basic principles of science in most of its allied fields.

4. Develop among themselves a sense of social responsibility.

5. Handle the unexpected situation by critically analyzing the problem.

6. Think clearly and critically about the choices, aspirations, challenges, opportunities and threats in the course of their life.

7. Communicate with the world in a better and meaningful way

PSO (Program Specific Outcomes)

•   To understand the basic concepts of Mathematics and Formulae.

•   Recognize the importance and value of mathematical thinking, training and approach to problem solving, on a diverse verity of disciplines.

•   Mathematics is open door in engineering, business, finance, computing, data science, health sciences, environment science and public policy.

•   Identify and become familiar with the scope, methodology and application of mathematics and learn to appreciate its ability to explain various aspects.

•   Explain how Mathematics is useful for social and real life problems.

CO (Course Outcomes)

- To Learn De Moivre's Theorem and Understand Relation Between Circular & Hyperbolic Function.

- To understand the Trigonometric Series & Euler's Series.

- To understand concept of Elements of Quaternion.

- Learn to Theory of equation & Descarte's rule of signs.

- Learn to concept of Matrices and Clayey –Hamilton theorem.

- To understand the definition of limit of a function and calculation of limit.

- To understand the Leibnitz theorem and L' hospital Rule. Learn to Mean Value Theorems.

- To understand Concept of Partial derivatives and Euler's Theorem.

- Learn to Integration and reduction formulae.

- To understand the First order differential equation

- To Learn Second order Linear differential equation.

- Learn to Reduction formulae

- To solved Partial Differential equation

- Learn to Charpits's general method of solution.

Programme Outcomes: -M. Sc. Microbiology

M. Sc. I/Sem I:- Microbial Techniques (Paper I)

1. Student are trained in various techniques of Electrophoresis and chromatography.

2. This particular course deals with the working of various advanced techniques in Microbiology and Molecular Biology.

3. Students are acquainted with basics of of Spectroscopy, IR Spectroscopy, Flame photometry.

4. Getting the idea about Isotopic tracer tech.

5. Students are trained with the knowledge to handle microbes and basic instrumentation used in microbiological laboratory.

6. Understanding of various basic techniques to isolate, characterize the microbes morphologically.

Course Outcomes: -M. Sc. Microbiology

M. Sc. I/Sem I:-Microbial Enzymology (Paper II)

1. This paper develops in the students' mind a concept regarding the diversity of metabolic processes occurring in biological system.

2. Understanding of effect of the structural and functional role of the enzymes governing the metabolic processes.

3. Importance of the metabolic pathways in maintaining homeostasis in biological system.

4. This particular paper helps in understanding the basic concepts on Enzymes.

5. Students are acquainted with techniques of Enzyme Isolation and Purification.

6. Understanding the knowledge of Mechanism of Enzyme action.

7. Getting the idea about effect of pH, temp., substrate on enzyme action.

8 The importance of enzymes as a regulatory molecule in metabolism.

M. Sc. I/Sem I:-Microbial Physiology and Photosynthesis (Paper III)

1. Understand the microbial transport systems and the modes and mechanisms of energy conservation in microbial metabolism– Autotrophy and heterotrophy

2. Know the various Physical and Chemical growth requirements of bacteria and get equipped with various methods of bacterial growth measurement.

3. This particular paper helps in understanding the bacterial and mitochondrial respiration.

4. On the completion of this paper, student will be able to get the overview of classes of cells and structural and function aspects of plasma membrane and cell organelle.

5. This paper develops in the students' mind a concept regarding the microbial photosynthesis.

6. Besides this, they are acquainted with prokaryotic photosynthetic machinery in detail and the knowledge gained can be applied for enhancing the efficiency of plants.

M. Sc. I/Sem I:- Environmental & Agriculture Microbiology (Paper IV)

1. This particular paper acquaints students with the concept of ecology and its importance for existence of various species on the planet.

2. Student after studying the course will be having knowledge of microbes and their importance, application in day to day life with special reference to environmental sustainability.

3. Competently explain various aspects of environmental microbiology and microbial ecology and to become familiar with current research in environmental microbiology.

4. Understand various biogeochemical cycles – Carbon, Nitrogen, Phosphorus cycles and sulfur cycle

5. Understand various plant microbes interactions especially rhizosphere, phyllosphere and mycorrhizae and their applications especially the biofertilizers and their production techniques

6. Understand the basic principles of environment microbiology and be able to apply these principles to understanding and solving environmental problems – waste water treatment and bioremediation

M. Sc. I/Sem II:- Biostatistics, Bioinformatics and Computer Applications (Paper V)

1. This paper acquaints the students with the various types of statistical packages, softwares and use of statistics in research.

2. It imparts knowledge on the use of computers for bioinformatics, a science that is gaining importance day by day.

3. Student will be able to apply statistics to the experiments being carried out by them.

4. On completion of the course the students will possess knowledge of biostatistics to handle and analysis of bulk data in a significant way.

M. Sc. I/Sem II:- Enzyme Technology (Paper VI)

1. This particular paper helps in understanding the basic concepts on Enzyme specificity.

2. Students are acquainted with various measures to control Enzyme action.

3. Understanding the knowledge of Methods Immobilization of microbial enzymes..

4. Getting the idea about Enzyme engineering.

5. Students are trained with the applications of microbial enzymes.

6. Application of enzymes in large scale industrial processes.

M. Sc. I/Sem II:- Microbial Metabolism (Paper VII)

1. This paper helps in understanding the basic knowledge of major biomolecules carbohydrates, lipids, proteins and nucleic acid which help in techniques used in biochemistry and research.

2. .Overview of major biomolecules –carbohydrates, lipids, proteins, aminoacids, nucleic acids, classification, structure, function of the above mentioned biomolecules

3. Discuss the biosynthesis and the degradation pathways involved.

4. Specify the biological significance of biomolecules in metabolism

5. This paper provides basis to understand the biosynthesis and the degradation pathways involved.

M. Sc. I/Sem II:- Environmental Microbiology and Extremophiles (Paper VIII)

1. This paper deals with concept of Recalcitrant and biomagnifications.

2. Students are acquainted with Eutrophication and its management.

3. Its an advanced course where students know about the microbes in extreme environment, their mode of functioning under stress.

4. Students gain the basic background of handling wastewater and its treatment.

5. Besides this student are acquainted with the deterioration or transformation caused by microbes and its management which is again an important field of Microbiology.

6. Management of wastewater using various techniques.

7. Overview on concept of Indicator organisms in water.

8. Students are trained in bacteriological analysis of water and in water treatment processes.

M. Sc. II/Sem III:- Molecular Biology (Paper IX)

1. This paper provides basic information of molecular biology.

2. Know the terms and terminologies related to molecular biology.

3. Students understand the properties, structure and function of genes in living organisms at the molecular level

4. Explain the significance of central dogma of gene action.

5. Have a conceptual knowledge about DNA as a genetic material, enzymes and replication strategies.

6. Understand the molecular mechanisms involved in transcription and translation.

7. Students gain ideas of molecular mechanisms underlying mutations, detection of mutations and DNA damage and repair mechanisms.

8. Explains the concept of recombination, linkage mapping and elucidate the gene transfer mechanisms in prokaryotes.

M. Sc. II/Sem III:- Virology (Paper X)

1. On the completion of course student acquires sound knowledge on various historical aspects of Viruses.

2. Students know how viruses are classified.

3. Understand the architecture, replication of viruses.

4. Comprehend the intricate interaction between viruses and host cells.

5. Know the methods used in studying viruses.

6. The student acquires an adequate knowledge and could co relates the human body to the parameters that have clinical importance.

7. Students understand the detailed account on important pathogenic viruses.

8. Understand the interactions between viruses and the host immune system.

9. Explain vaccine strategies and mechanisms of antiviral drugs and interferons.

M. Sc. II/Sem III:-Fermentation Technology (Paper XI)

1. The students obtain the advanced knowledge to work in fermentation industries.

2. Understand the beneficial role of microorganisms in fermented foods and in food processing and the microbiology of different types of fermented food products – Cottage and Cheddar cheese, Yoghurt and Dahi, Soya Sauce.

3. The students obtain the advanced knowledge on alcoholic beverages and Whisky.

4. Understand the significance and activities of microorganisms in food and role of intrinsic and extrinsic factors on growth and survival of microorganisms in foods.

5. Know the spoilage mechanisms in foods and thus identify methods to control deterioration and Spoilage.

6. Learn the characteristics of important pathogens and spoilage microorganisms in foods.

7. Get equipped with a theoretical and practical understanding of industrial production of antibiotics-Penlcillin, Streptomycin and Tetracycline.

8. The students obtain the advanced knowledge on anticancer agents.

M. Sc. II/Sem III:- Immunology (Paper XII)

1. This paper demonstrates an understanding of key concepts in immunology.

2. Understand the overall organization of the immune system.

3. Conceptualize roles of B lymphocytes/cells and the antigen receptor in T cells.

4. Learn how "clonal selection" allows for the expansion of a limited number of antigen-recognizing lymphocytes in response to an specific antigenic stimulus.

5. Students are acquainted the significance of maintaining a state of immune tolerance sufficient to prevent the emergence of autoimmunity.

6. Understand about Tumor Immunology and help the students to understand its immune prophylaxis and immune therapy.

7. The students obtain the advanced knowledge on salient features of antigen antibody reaction & its uses in diagnostics and various other studies.

8. Students learn about immunization and their preparation and its importance

9. Students are acquainted with concepts on Immunobiotechnology and Hybridoma Technology

M. Sc. II/Sem IV:- Biotechnology (Paper XIII)

1. Students are acquainted with some applied aspects in microbiology to create awareness and more interest in the subject.

2. Know the basics and concepts of various biotechnological related terms.

3. The students obtain the advanced knowledge on the physiological processes that occur during plant growth and development.

4. Understand the methodology involved in plant tissue culture and plant transgenics.

5. Know the issues related to plant nutrition, quality improvement, environmental adaptation, transgenic crops and their use in agriculture

6. On completion of the course the scholars acquires knowledge on the concepts and terminology in genetic engineering.

7. Students are made familiar with various cloning strategies in prokaryotes as well as in eukaryotes.

8. Students learn various techniques in genetic engineering.

9. They also get awareness about the social and ethical issues concerning cloning by genetic engineering.

10. Students are trained in applications of biotechnology and genetic engineering.

11. Students obtain knowledge on wide-ranging topics related to applications of biotechnology in industries.

M. Sc. II/Sem IV:- Clinical Virology (Paper XIV)

1.   Students understand the detailed account on classification, life cycle and replication of plant viruses ((TMV, Cynophages, Mycoviruses).

2.   On the completion of course student acquires sound knowledge on structure, replication and life cycle bacterial viruses.

3.   Explain vaccine strategies and mechanisms of viroids, prions.

4.   After completing the course students have a detailed understanding of the terms Oncogenes and tumor suppressor genes, and how tumor viruses interact with these products and their intersecting pathways and cause oncogenesis.

M. Sc. II/Sem IV:- Microbial Technology (Paper XV)

1.   This particular course deals with the working of various advanced techniques in Microbiology

2.   Student know the use of various advanced microbial techniques for application in various fields.

3.   Students get equipped with modern trends in industrial production of bioplastic, biopolymer.

4.   Students are acquainted with theoretical and practical understanding of industrial production of organic acids.

5.   Appreciate how microbiology is applied in manufacture of industrial products.

6.   Know how to source for microorganisms of industrial importance from the environment.

7.   Know about enzyme biotechnology -design of bioreactors, factors affecting growth and production, heat transfer, oxygen transfer.

8.   Understand the detailed knowledge on biofertilizers and biopestcides

M. Sc. II/Sem IV:- Medical Microbiology (Paper XVI)

1.   It provides knowledge of pathogenic microorganisms, their characterization, pathogenesis and control.

2.   Student can safeguard himself & society and can work in diagnostics labs.and hospitals.

3.   This course provides learning opportunities in the basic principles of medical microbiology and infectious disease.

4.   It covers mechanisms of infectious disease transmission, principles of aseptic practice, and the role of the human body's normal microflora.

5. The course provides the conceptual basis for understanding pathogenic microorganisms and the mechanisms by which they cause disease in the human body.

6. It also provides opportunities to develop informatics and diagnostic skills, including the use and interpretation of laboratory tests in the diagnosis of infectious diseases.

7. Understand the importance of pathogenic microorganisms in human disease with respect to infections of the respiratory tract, gastrointestinal tract, urinary tract, skin and soft tissue.

8. Explain the methods of microorganisms control, e.g. chemotherapy & vaccines.

Course Outcomes:-Ph.D. Microbiology

1. Students develop the skill to think independently, plan research and execute it in different fields of Microbiology.

2. Students develop the skill to think independently and execute it in entrepreneurship and become job providers.

3. Students can excel in academics, consultancy, industry and pollution control boards, industry as well as policy makers.

4. Students can make impactful contributions in the field for the development of nation as a whole.

5. After successful completion of Pre-Ph.D course students are acquainted with the research methodology, and scientific conduct, ethics and morality in research and publication.

Program Outcomes: B.Sc. (UG Program).

1.   Students pass out this program become expertise in hands-on practice.

2.   Students will acquire knowledge and laboratory skills applicable to microbiological research or clinical methods.

3.   Students can opt for job or training courses.

4.   This Program inculcates scientific thinking and awareness among the student.

5.   Research aptitude is also developed in the minds of budding generation.

6.   After PG program, students develop concept of set up of small scale industries, develop confidence to tasks of research in the field of Microbiology.

7.   After PG program, Students learn to integrate science with society for the overall development of the nation.

8.   After Ph.D. program, Students develop the skill to think independently, plan research and execute it in different fields of Microbiology.

9.   After Ph.D. program,students may opt for entrepreneurship and become job providers.

10.Microbiology students can excel in academics, consultancy, industry and pollution control boards, as well as in industry.

11.These students make many contributions in the field for the development of nation as a whole.

Program specific Outcomes:- B.Sc.

1. Students acquire ability to use laboratory instruments like Autoclave, Bacteriological Incubator, Hot air oven, spectrophotometer, colorimeter, Laminar Airflow system, PH meter, Electrophoresis apparatus, Compound microscope, Centrifuge during graduation.

2. Such studies instill techniques of isolation and cultivation of microorganisms from their natural habitat like air ,water, soil as well as specimens collected from patients.

3. Studies in Microbiology help to opt for career in a pharmaceutical companies, Industries, pathology Laboratories, Dairy and medical related business or industries. 4.Acquire ability to plan and establish the small-to-mid-size their own industries and laboratories.

5. Knowledge can be applied to improve and develop processes or systems utilizing microorganisms-based industries.

6. knowledge of microorganisms may be used to solve environmenta lproblems.

Course Outcomes:-B.Sc. Microbiology

B. Sc. I/Sem I:- Fundamentals of Microbiology and Microbial Physiology (Paper I)

1. Introduction to techniques of Microscopy and Staining

2. Awareness about basic knowledge of microbiology.

3. Understanding of scope of microbiology.

4. Getting the idea about control of Microorganisms.

5. Students are acquainted with prokaryotic bacterial cell in detail and the knowledge gained can be applied for further studies.

B. Sc. I/Sem II:- Microbiology, Biochemistry, Biostatistics and Computer (Paper II)

1. Understanding the structure, Morphology, Cultivation and Replication of Viruses.

2. Brief ideas about different types of Microorganisms.

3. Demonstrating and educating different applied areas in microbiology.

4. Students are acquainted with the basics of biostatistics and computers, a science that is of utmost use in fast changing world of research.

B.Sc II /Sem III:- Molecular Biology and Genetic Engineering: (Paper III)

1. Understanding theknowledge in Molecular Biology, and Genetic engineering and acquire ability to apply in various fields.

2. This paper acquaints the student with detailed study of genetic material in prokaryotes, mutations, reproduction which are of importance for applying the knowledge in research.

3. Students are educated and trained for various advanced molecular biology techniques and the knowledge gained is helpful to get a job in molecular biology laboratories and the knowledge can be applied for advanced research.

B.Sc. II /Sem IV:- Medical Microbiology (Paper IV)

1. Studying and understanding detailed knowledge of causative agents/pathogens, diseases and their control.

2. 2.Students are educated with underlying principles of immunology and its application in solving problems in humans.

3. Students are acquainted with immune mechanisms that protect against pathogens and the implication for vaccine development useful to health.

4. Studying detailed knowledge of viral diseases in humans. 5.Students are acquainted with basics of Epidemiology.

B. Sc III Sem V:-Environmental Microbiology and Bioinstrumentation(Paper V)

1. This paper deals with understanding the knowledge of environmental microbiology and pollution.

2. Students are acquainted with basics of assessment of water.

3. Students are educated to recognize the polluted water and treatment using proper methods.

4. This paper deals with details of Air and Soil Microbiology.

5. Understanding the knowledge of wastewater management using various methods.

6. This paper also focuses on various analytical instruments and techniques that a student should know to pursue higher studies.

B. Sc III Sem VI:-Industrial Fermentations, Food Microbiology and Metabolism (Paper VI)

1. Students learn concepts and techniques in the area of Industrial Microbiology.

2. This helps students in finding a job in fermentation based industry.

3. Students are charged with the concepts of fermentation to set up small scale industries. 4.Thus, students learn to integrate science with society for the overall development of the nation. 5.Students understand the classification of industrial products and their use.

6. This course also acquaints students with food products, their production techniques and prevention of spoilage.

7. Student are trained to undertake job in food industries. 8.This course is coupled to an industrial visit also.

7. Scholar learns to formulate the research proposal while maintain the duplication.

Program Ourtcomes

1. Use his knowledge to analyze new situations and learn skills and tools like mathematics, engineering, and technology to find the solution, interpret the results and make predictions for the future developments.

2. Identify and apply appropriate physical principles and methodologies to solve a wide range of problems associated with Physics.

3. Plan and execute Physics-related experiments or investigations.

4. Create an awareness of the impact of Physics on the society.

5. Use modern techniques, decent equipment's.

Program specific outcomes

1) Gain the knowledge of Physics through theory and practicals.

2) Identify their area of interest in academic and R&D.

3) Understand good laboratory practices and safety.

4) Acquire analytical and logical skill for higher Education.

5) Pursue master degree in Science i.e. M.Sc, work in research related fields and can even look for professional job oriented courses.

Course Outcomes

1) Mechanics

2) Waves and Oscillations

3) Properties of matter   1)   Apply Kepler's law to describe the motion of planets and satellite in circular orbit, through the study of law of Gravitation.

2) Write the expression for the moment of inertia about the given axis of symmetry for different uniform mass distributions.

3) Explain the phenomena of simple harmonic motion and the properties of systems executing such motions.

4) Learn the fundamentals of harmonic oscillator model, including damped and forced oscillators.

5) Describe the production, detection of ultrasonic waves and applications

6) Know the basic principles of properties of matter.

7) Understand the principles of elasticity through the study of Young Modulus and modulus of rigidity.

8) Understand simple principles of fluid flow and the equations governing fluid dynamics.

9) Compare the viscosity and interfacial surface tension between the liquids

10) Solve numerical problems involving topics covered.

11) In the laboratory course, the student perform the experiments related to mechanics (compound pendulum), rotational dynamics (Flywheel), and elastic properties (Young Modulus and Modulus of Rigidity).

1) Learn the basic aspects of kinetic theory of gases, Maxwell- Boltzman distribution law, equitation of energies, mean free path of molecular collisions, viscosity, thermal conductivity, diffusion and Brownian motion.

2) Differentiate the terms heat and temperature and measure temperature using thermometer and convert one scale of temperature to another scale.

3) Comprehend the basic concepts of thermodynamics, the first and the second law of thermodynamics, the concept of entropy and the associated theorems, the thermodynamic potentials and their physical interpretations.

4) Learn about the real gas equations, Van der Waal equation of state.

5) Learn about Maxwell's thermodynamic relations and Joule Thomson effect.

6) Differentiate between principles and methods to produce low temperature, liquefy air, helium and hydrogen

7) Learn about motion of electron in electric and magnetic field.

8) Recognize the motion of the charged particle in electromagnetic field.

9) To learn the basic principles of working of linear accelerator, mass spectrograph and cyclotron.

10) Apply Kirchhoff's rules to analyze AC circuits consisting of parallel and/or series combinations of voltage sources and resistors and to describe the graphical relationship of resistance, capacitor and inductor.

11) Apply various network theorems such as Superposition, Thevenin, Norton, Maximum Power Transfer, etc. and their applications in electronics, electrical circuit analysis.

12) Compare the principles and working of different types of galvanometers

13) To learn to solve A.C. circuit using j – operator.

14) Apply and analyze the behavior of ac circuits based on L, C and R

15) To learn the basic principle of working of transformer.

16) Solve numerical problems involving topics covered.

17) In the laboratory course, the students perform the experiments related to network theorems, RLC circuit, transformer etc.

B.Sc (II) Sem III (Physics)

1) Understand vector calculus in three dimensions and derive Gauss theorem, Stoke's theorem and Green's theorem.

2) Demonstrate Gauss law, Coulomb's law for the electric field, and apply it to systems of point charges as well as line, surface, and volume distributions of charges.

3) Explain and differentiate the vector (electric fields, Coulomb's law) and scalar (electric potential, electric potential energy) formalisms of electrostatics.

4) Apply Gauss's law of electrostatics to solve a variety of problems.

5) Explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.

6) Understand the unification of electric and magnetic fields and Maxwell''s equations governing EM waves.

7) Understand the physics of semiconductors.

8) Understand the structure, working and applications of different semiconductor devices such as, P – N junction diode, LED, Varactor diode, transistors and FET.

9) To study the Operational Amplifier and their applications.

10) To understand the Special Theory of Relativity.

11) Describe special relativistic effects and their effects on the mass and energy of a moving object.

B.Sc (II) Sem IV

1) Use the principles of wave motion and superposition to explain the Physics of polarisation, interference and diffraction.

2) Understand the working of selected optical instruments like prism, diffraction grating, and holograms.

3) In the laboratory course, student will gain hands-on experience of using various optical instruments and making measurements of wavelength of light using Newton Rings experiment, diffraction grating etc.

4) Know the basic concepts in LASER, basic principle and working of different types of lasers such as He – Ne laser, Ruby laser and semiconductor laser and know the applications of lasers in various fields.

5) Understand the basic principle (total internal reflection) behind the working of optical fiber.

6) Understand the structure, types and applications of optical fibers.

7) To understand various renewable energy sources – Solar energy, Wind energy, ocean energy-Waves & tides, geothermal energy, Hybrid Systems, Hydrogen energy systems, Fuel cells

B.Sc (III) Sem V

1) Know main aspects of the inadequacies of classical mechanics and understand historical development of quantum mechanics and ability to discuss and interpret experiments that reveal the dual nature of matter.

2) Understand the theory of quantum measurements, wave packets and uncertainty principle.

3) Understand vector atom model, coupling schemes, emission and absorption spectra.

4) Understand basic principle, types and applications of X – rays.

5) Understand the Raman effect and its theory.

6) Understanding the properties of nuclei like density, size, binding energy, nuclear forces and structure of atomic nucleus, liquid drop model and nuclear shell model and mass formula.

7) Understand alpha, beta and gamma decay, Neutrinos and its properties and role in theory of beta decay.

10) Explain hydrid parameter model of amplifier.

11) Design of h – parameter equivalent circuit of CE amplifier and to analyze it.

12) Design and explain the circuit of RC coupled amplifier and to study its frequency response.

13) Explaining different noises and distortions in amplifier circuits.

14) Understanding the effect of feedback on amplifier circuit.

15) Design and understand the working of different oscillator circuits such as Hartley oscillator, Colpitt's oscillator, Phase shift oscillator and Wein bridge oscillator.

B.Sc (III) Sem VI

1) Understand the concepts of microstate, macrostate, ensemble, phase space, thermodynamic probability and partition function.

2) Understand three different distribution laws e.g. Maxwell- Boltzmann distribution, Bose-Einstein distribution and Fermi-Dirac distribution laws of particles and their derivation.

3) Understanding the difference between crystalline and amorphous solids.

4) To understand the principles and techniques of X-rays diffraction.

5) Understanding of the defects in solids.

6) Understanding of electrical properties of materials.

7) Understanding the band structure in solids and classification of solids depending on their band structure.

8) To give an extended knowledge about magnetic properties like diamagnetic, paramagnetic, and ferromagnetic.

9) Understanding of classical and quantum theory of diamagnetic and paramagnetic materials.

10) Understanding of Hysteresis in ferromagnetic materials.

11) Understanding of basic concepts and applications of superconductors.

12) Understanding of history, theory and applications of nano – materials.

13) Solve numerical problems involving topics covered.

Program Outcomes: (B.Sc.):

On completion of B.Sc. degree academically a student is empowered with

- Critical Thinking: The students begin to introspect on their own preconceived notions in light of contrary but reliable observations. Graduating students develop the ability to analyse and assess a phenomenon objectively so that an unbiased judgement can be made. The students begin to unravel fallacies and bad reasoning so that cooperative reasoning can blossom.

- Hands on Laboratory Experience: Students are able to perform basic laboratory protocols following sound scientific methods with minimum error. Should develop a thorough understanding behind logic and theory of using different stains for different structures and components.

- Individual and Team work: Students are able to come up with new ideas that address current local problems and take initiative in formulating solutions through spreading awareness. Students should also be able to work in cohesion as a team so that constructive tasks are performed.

- Bibliographic Search: Students are able to employ modern literature survey and retrieval methods to obtain information about concepts, scientific techniques and natural phenomena.

- Effective Communication: Communication on complex scientific topics through effective reports and design documents.

- Academic Integrity & Ethics: Graduate education is a multifaceted enterprise, but its purpose is to prepare student to be professionals capable of teaching and conducting research that is ethically sound.

- Social Responsibility: The students is able to bring about positive change in society through awareness campaigns, speeches, dialogue and social outreach especially to underprivileged.

- Life-long Learning: The student may leave the institution but does not relinquish learning and augments the traditional wisdom of society with modern scientific knowledge imparted through formal educational programme.

- Analytical skills – Begins to understand, interpret and manipulate complex scientific data and statistics

- Data-handling skills – Learns to record, collate and analyse data using appropriate techniques and equipment

- Project management skills - organising and undertaking research projects and experiments (including budgeting, contingency planning and time management) developing a good competence of information technology along the way

Job opportunities: after completion of B.Sc. degree with Zoology a student can be offered for jobs in the following fields.

- Animal nutritionist

- Ecologist

- Environmental consultant

- Field trials officer

- Nature conservation officer

- Science writer

- Zookeeper

- Zoologist

Program Specific Outcomes:

- Understand the nature and basic concepts of chordate, non-chordate, evolution, genetics, ecology, Animal physiology, economic zoology and molecular biology and biotechnology

- Analyse the relationship among animals, plants and microbes to develop a synergistic/ integrated view of the biosphere.

- Perform experiments as per laboratory standards in the different areas of zoology

- Demonstrated a broad understood of animal diversity

- Gain knowledge about various tools & techniques used in biological systems and gives them insight about their use in research.

- Understand the complex evolutionary processes; origin and development of animals.

- How zoological principles can be applied to problems in public health and Hygiene, conservation and applied biology.

Course Outcomes: (Paper Wise):

Semester – I Life and Diversity of Non-chordata

- Understand the diversity of Non-Chordata, its systematic position and how they contributed for the evolution of complex organisms

- Understand the anatomical features of non-chordates through type study.

- Generate an idea about minor phyla

Semester – II Cell Biology

- Understand basic knowledge about cell with reference to its structure and function at molecular level including signaling and proliferation in prokaryotic and eukaryotic organisms.

- Able to draw the structure of cell organelles and locate its parts along with functions

- Explain the organization of genes & chromosomes

- Compare and contrast the events of cell cycle and its regulation

- Summarize the definition, sources and applications of stem cells

Semester – II Developmental Biology

- Explain the process of development in general

- Distinguish the various process involved in animal development

- Comprehends different events in gametogenesis

- Gain knowledge about structure, types and functions of placenta

- Recognizes different modes of reproduction like parthenogenesis

- Able to explain the mechanism in regeneration of vertebrate. and invertebrates

Semester – III Life and Diversity of Non-Chordata & Concept of Evolution

- Observe the diversity in chordates and their classification

- Analyze the significant adaptive features in fishes

- Understand anatomical and physiological aspects through type study

- Appreciate transitional stages and their significance in evolution

- Create a positive attitude towards conservation of biodiversity

- Understand natural selection as an evolutionary process and its significant role

- Obtained the knowledge about direct observation of fossils and evolutionary important specimen by which evolutionary relationship of animal groups can be design

Semester – IV Advanced Genetics

- Understand the role of genes as dominant, recessive and interaction of genes through Mendel's laws

- Understand significant importance of linkage and crossing over in variation of population

- Understanding of genetic methodology and how quantification of heritable traits in families and populations provides insight into cellular and molecular mechanisms

- Understanding how genetic concepts affect broad societal issues including health and diseases, food, environmental sustainability etc.

- The knowledge required designing, executing and analysing the results of genetic experiments in animal and plants model system

- The ability to evaluate conclusions based on genetic data

Semester – IV Animal Ecology

- Discuss, evaluate and apply scientific principles to the ecology and conservation

- Apply a conceptual framework to solve problems in animal ecology

- Characterize the chemical and physical features of environment of animals and pressure exerted by these features on the later.

- Develop holistic view of biosphere, building up from local ecosystems so that the importance of organisms in each other's lives is manifested

Semester –V Animal Physiology

Outline the basic control process of the nervous system and explains how it drives the muscle movement and sensory perceptions.

- Recognize structural peculiarities of aquatic and terrestrial respiratory organs, mechanism of physical basis of gaseous exchange and physiological adjustments to enhance ability of blood to transport respiratory gases culminating in release of the latter at their destination sites

- Measure and interpret experimental data and demonstrate laboratory skills in haematological experiments

- Communicate experimental data and a theoretical understanding of animal physiology

- Understand the types of animal tissue and architecture of different organs.

Semester –V Economic Zoology

- Develop an understanding with reference to insect pests, beneficial insects, aquaculture, integrated fish farming, etc

- Students begin to explore the possibility of setting up their own small scale industry by utilizing the knowledge gained through economic zoology so that they become job givers instead of job seekers

Semester – VI Molecular Biology and Biotechnology

- Understood the blue print of life i.e. DNA, its types, its experimentation and its importance in conducting molecular biology experiments

- Comprehensive understanding of the chemical basis of heredity

- Develop an insight into how information flows from genes to proteins leading to regulation of cellular processes

- Able to understand recombinant DNA technology along with other techniques in biotechnology

- Gain knowledge about immunity and its different aspects like production of antibodies, complement system and their interactions.

B. A. (COMPULSORY ENGLISH)   Course Outcomes (CO's)

B. A. I, B. A. II, B. A. III (English Compulsory)

After successful completion of the course, a student will learn following skills-

1.   Spoken communication and written communication.

2.   Writing   of   Resume,   letters of   application,   business   letters.

3.   Writing News-report, Essay, paragraph, review, etc.

4.   Narration of experience, daily routine.

5.   Interview Techniques.

6.   Understanding and interpretation of poem, prose, essay, short stories, etc.

B. Com. (COMPULSORY ENGLISH) Course Outcomes (CO's)

B. Com. I, B. Com. II, B. Com. III (Compulsory English)

After successful completion of the course, a student will learn following skills-

1.   Spoken communication and written communication.

2.   Writing of Resume, letters of application, business letters.

3.   Writing News-report, Essay, paragraph, Review, etc.

4.   Communication and its types.

5.   Interview Techniques, Presentations and Leadership.

6.   Understanding and interpretation of poem, prose, essay, short stories, et

B. Sc. (COMPULSORY ENGLISH)   Course Outcomes (CO's)

B. Sc. I (Compulsory English)

After successful completion of the course, a student will learn following skills-

1.   Use correct English in oral as well as written form.

2.   Inculcate the human values for one's transformation of behaviour.

3.   Interpret the literary works by critical analysis.

4.   Compare literary works of the great writers and philosophers by using their logic and literary competency.

5.   Nurture themselves in soft skills and develop research aptitude.

6.   Apply the study of English Language & Grammar in their practical life.

PROGRAM OUTCOME/MARATHI

Students completing Graduation with Marathi, Subject will get knowledge about

PO1: Our rich and everlasting cultural heritage.

PO2: Valued knowledge traditions, esoteric philosophical systems, esteemed ethical and value system.

PO3: Great contributions made in different fields of knowledge by ancient Indians.

PO4: Uniqueness and greatness of Marathi language and literature. PO5: Desire to acquire knowledge in and about Marathi, our heritage, traditions and culture.

PROGRAM SPECIFIC OUTCOME/ Marathi

PSO1: Create an interest in literature.

PSO2: Availing the job opportunities in translation, transformation and Media.

PSO3: Developing the language.

PSO4: Increasing the critical attitude about literature studies.

PSO5: Understand the interrelation between literature and society.

PSO 6: Understand the nature of language and literature.

PSO 7: Contemporary writers, poets understand the flow of thought.

PSO8: Information about phonetics.

PROGRAM SPECIFIC OUTCOME

SO1:Students should be introduced to this literary type of ideological essay poetry.

PSO2:The rules of Marathi writing should be understood from this study. PSO3:It is expected that they will be able to print.

PSO4: It is expected that the students will be able to study the literary genres of novels and poems in a meticulous manner, be able to express themselves, take notes, write essays and evaluate literary works.

Course Outcomes/ Marathi B.A I (Semester I)

Co1: Knowledge about Walking.

Co2: To know the importance of Education.

Co3: Understand the features of Vinoba Bhave"s literature. Co4 : To know the importance of inspiration in life.

Co5 : To introduce a folk Literature .

Co6: To understand the life of Farmer and women . Co7 : To introduce poets & their works .

B.A I Year Sem II

Co1: To inform literature of Swami Vivekanand . Co2: Understand the importance of Marathi language. Co3: To Devolve Scientific View.

Co4: To know the importance of Mother. Co5: Understand the Letter Writing.

Co6: To introduce poets & their works.

B.A II Year Sem III

Co1: To inform literature of Sant Literature .

Co2: Understand the importance of Marathi language. Co3: To know the importance of Science.

Co4: To know the importance of Animals & Birds

Co5: Understand the honor of women. Co6: To introduce poets & their works.

B.A II Year Sem IV

Co1: To know the importance of land.

Co2: To know the Comparison of Man and Women . Co3: To know about Science.

Co4: To know the importance of Mirror

Co5: To introduce the thoughts of Sant Gadge baba. Co6: To understand the sensivity about urban life.

Co7: To know the speciality of the poet like Sant Ekanath, Sant Kanhopatra , Rajesh Mahalle, Shanta Shelake,Mirza Beg, Anil, Parsawale"s literature.

B. A. III Year Sem V

Co1: To understand humanity. Co2: To know the Power of Mind.

Co3: To introduce the speciality of Mahatma Fule"s literature. Co4: To know the importance of water.

Co5: To know the importance of trees ,nature in our life. Co6: To understand the value of Urban aria.

Co7: To understand the value of life.

Co8: To know the speciality of poet and their poems like Tukaram ,Rramdas, Balkavi, Gres, wahru Sonavane ,Sukhdev Dhanke literature.

B. A. III Year Sem VI

Co1: To understand the thought of Dr. Panjabrao Deshmikh, rajrshi Shahu Maharaj,and Rajmata Jijau .Co2: To know the importance of food taste in our daily life and our happiness. Co3: To introduce the spectacles and its uses.

Co4: To know the special character of Arani. Co5: To know factual picture of human life.

Co6: To understand the comic events in the story.

Co7: To know the speciality of poet and their poems like Sant Shekh Mahamd, Father Stifan, Mardhekar, Narayan surve ,dahake,Kavathkar, and Baban Saradkar.

B. A. (SANSKRIT) Programme Specific Outcomes

B. A. I, B. A. II, B. A. III (SANSKRIT LITERATURE)

1. Students graduating in this course can understand the linguistic features and literary aspects of Sanskrit Language.

2. Students will understand the moral and social values in ancient Sanskrit literature.

3. Students can develop their interest in Sanskrit and thus work to rejuvenate the language.

4. They can go for Post Graduate Couse in Sanskrit.

B. A. (SANSKRIT) Course Outcomes (CO's)

B. A. 1st Year (Sem. I)

A.   Natakam

B.   Information about poets and writers

1.   Students will develop interest in Sanskrit Natakas.

2.   Students will capture the good knowledge of ancient writers and their literature.

B. A. 1st Year (Sem. II)

A.   Nitishatakam

B.   Grammar of Ashtadhyee (According to Paniniya)

1.   Students   can   understand   that   moral values   to reflect in Sanskrit literature.

2.   Students will understand the grammar rules of   Sanskrit Language.

3.   Students   will   become   a   capable   to   speak in Sanskrit.

B. A. 2nd Year (Sem. III)

A.   Natakam (Kalidasa's)

B.   Grammar based on Ashtadhyee

C.   Information about writers

1. Traditional Knowledge provides the students

2. Students will understand the ethics and values in Sanskrit literature.

3. Students will gain the knowledge about cultural, religion & personality development.

B. A. 2nd Year (Sem. IV)

A. Kavyaprakash (Mammath's)

B. Suryashatakam

C. Information about writers

1. It aims to provide subject related knowledge skills.

2. To build the ability of students to clearly express their thoughts and feelings.

3. Students will be acquainted with the ideological and philosophical tradition and thinking.

B. A. 3rd Year (Sem. V)

A. Natakam (Kalidas's)

B. Grammar based on Ashtadhyee

C. Information about writers

1. This information makes changes in their personal and professional behaviour.

2. They can achieve their career by acquire these knowledge.

B. A. 3rd Year (Sem. VI)

A. Harshacharitam
B. Alankar (Kavyaprakash – 10th Ullas)
C. Information about writers and poets
1. After completion of bachelor's degree with Sanskrit Literation, changes are reflecting on their behaviour.
2. At the resultant, human learned and proved himself/herself as wise person in the society.
3. Computer language develops the logical thinking, programming in the Sanskrit.

I.   Program Outcome of Bachelor of Arts (B.A.)

Student seeking admission for B.A. programme is expected to imbue with following quality which help them in their future life to achieve the expected goals.

1. The students after completion of B.A. programme in Economics will develop understanding of the major concepts and principles in Economics.

2. The program also empowers the graduates to appear for various competitive examinations or choose the post graduate program of their choice.

3. The B. A. program enables the students to acquire the knowledge with human values framing the base to deal with various problems in life with courage and humanity.

4. The students will be ignited enough to think and act over for the solution of various issues prevailed in the human life to make this world better than ever.

5. Understand the issues of environmental contexts and sustainable development.

6. To make student able to realize the importance of human values.

7. To make student aware regarding social service.

8. To provide the students a well-founded education in Economics.

9. To provide the students with the opportunity to pursue courses that emphasize quantitative and theoretical aspects of Economics.

10. To provide a well-resourced learning environment for Economics

II.   Programme Specific Outcomes of Economics

1. •   Understanding the   efficiency   and   equity implications of   market interference, including government policy.

2. Developing research knowledge in economics.

3. Developing the skill of data collection & use of sampling techniques in research.

4. Creating   awareness about changing macro-economic policies and theories.

5. To provide students a well-founded education in Economics.

6. Students have the knowledge of Financial Institutions and Markets, and understand the structure and functions of banking.

7. They secure employment in various services of Economics, Statistics and Banking

8. They have effective oral communication and writing skills for clearly expressing economic point of view.

9. They will be able to analyses economic behavior in practice.

10. Economics students in general will be able to pinpoint and understand the past, present economic conditions of the country.

III.   Course Outcomes of Economics

B.A.-I-SEM-I Micro Economics

1) It will help students in understanding the behaviour of individuals and small organizations in making decisions on the allocation of limited resources..

2) Judging the factor pricing.

3) Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.

4) Students will understand and demonstrate core micro-economic terms, concepts, and theories.

B.A.-I-SEM-II -ECONOMY OF MAHARASHTRA

1) It will result in comprehensive understanding of Maharashtra Economy

2) Student will be able to understand govt. policies and programs

3) Student will be able to understand the landscape of Maharashtra economy

4) Students will be able to understand how planning and infrastructure support can develop an economy.

B.A.-II-SEM-III- MACRO ECONOMICS

1) To make student aware of the basic theoretical framework underlying the field of macroeconomics.

2) It helps students to study the aggregates and to provide overall idea about national economic policies and its implications.

3) Explain and anticipate the consequences of changes in the quantity of money on such economic variables as interest rates, inflation, the exchange rate, and unemployment

4) Understand various concepts of money and money substitutes

B.A.-II-SEM-IV- BANKING

1) •It is designed as a contemporary, rigorous, innovative and practical course   that aims to infuse the participants with the relevant banking knowledge and skills.

2) To give in-depth knowledge of Banking & Finance to the students of economics with practical inputs and prepares them as a responsible customer.

3) Students will be able to understand the nature of financial instruments and their usage.

B.A.-III-SEM-V- INDIAN ECONOMY

1) It will result in comprehensive understanding of Indian Economy
2) Student will be able to understand govt. policies and programs
3) To give in-depth knowledge of Banking & Finance to the students of economics
4) A little understanding of India and Global economy will also be included.

B.A.-III-SEM-V- DEMOGRAPHY

1) To make the students aware of the importance of population in economic development and the various theories that explain the growth of population in a country.
2) Students will learn how to think critically about public policy issues.
3) Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.
4) Understand demographic measurements like fertility and mortality rates
5) Describe a variety of demographic theories such as Malthusian, cornucopian, zero population growth, and demographic transition theories.

Program Specific Outcomes

1] Students will have the ability to apply historical methods to evaluate critically the past and how historians and others have interpreted it.

2] Students will be able to acquire basic historical research skills, including the effective use of libraries, archives and data bases.

3] Being a subject of social science, history has its own value in society and human life.

4] Understand background of our religion, customs institutions, administration and so on.

5] Understand the present existing social, political, religious and economic conditions of the people.

6] Students will be able to recognise how different individuals, groups, organisations, societies, cultures, countries and nations have affected history. History gave the students wisdom and foresight for the future.

7] Analyze relationship between the past and the present is lively presented in the   history.

8] Develop practical skills helpful in the study and understanding of historical events. They:

(a) Draw historical maps, charts, diagrams etc.

(b) Prepare historical models, tools etc.

9] Develop interests in the study of history and activities relating to history. They:

(a) Collect ancient arts, old coins and other historical materials.

(b) Participate in historical drama and historical occasions;

(c) Visit places of historical interests, archaeological sites, museums, and archives.

(d) Read historical documents, maps, charts etc.

(e) Play active roles in activities of the historical organizations and associations; and

(f) Write articles on historical topics.

10] A history student may choose his or her career in journalism or any other editorial board. They may get job in museum, archives and libraries. Beside those, in the field of research and archaeology they may proceed.

Course Outcomes

B.A. - SEM I : History of India , From Earliest Times to 1206 AD

1)   Students will be able to examine institutional basis of Ancient Ind

2)   Students will be able to illustrate the development of empire

3)   Students will be able to explain our heritage through cultural aspects of Ancient India.

4)   Students will be able to indicate multiple cultures (Vaidic , Jain , Bouddha, Mourya , Vakatak etc) of Ancient India

5)   They take interest to visit historical place and understand ancient India through caves, Temple, Art Architecture.

6)   They collect Art ,coins, other material related to Ancient History

7)   They knowing the importance of Sources of History.

B. A. - SEM II : History of India , From 1206 AD to 1525 AD

1)   To study and Analyze Administration of Qutubuddin Aibak , Allutmish, Razia, Balban

2)   To understand Political and Administrative Policy of Allauddin Khialaji

3)   To Comrehend the Social, Economical and Relegious Condition of Bahamini Vijaynagar Kingdom.

4)   To Evaluate the Political structure during Sultanate Period.

5)   To understand the economical and Technological Development during Sultanate Period.

6)   To understand the social status of Women during Sultanate Period.

B.A.- SEM III :History of India, From 1526 AD to 1756 AD

1)   To study and Analyze Sources of Medieval Indian History.

2)   To know economical , social, religious and cultural conditions of Mugal Periods

3)   To understand Political Admistration , Military system , Judicial administration and religious policy of Maratha.

4)   Students will be able to demonstrate by analyzing and evaluating historical information from multiple sources of Maratha History

5)   Students will be able to examine the difference between fact and fiction of Maratha History

6)   Students will be able to discuss the religious policies of Chhatrapati Shivaji Maharaj and background of healthy Nationalism in India

B,A,- SEM IV: History of India , From 1757 AD to 1947 AD

1)   To understand the advent of Portuguese , French and British.

2)   To study and analyze the revolt 1857 AD.

3)   To understand the concept of Nationalism.

4)   To study the various concept of Mahatma Gandhi

B.A.- SEM V: History of Modern Europe 1780 AD to 1920 AD

1)   To study and analyze French Revoluation

2)   To know making of nation.

3)   To acquire knowledge of Ruse-French pact

4)   To know about first world war.

5)   To understand paris peace conference and Varsaya pact.

B.A.- SEM VI: History of Modern World From 1921AD to 1965 AD

1)   To understand the concept of Fasicam and Nazism

2)   To know about the second world war.

3)   To study and analyze united nation organization.

4)   To acquire knowledge of the cold war and different Military Alliances.

5)   To know about the suez crisis,

6)   To understand Alligned movement.

Program Outcomes

• The program under Arts faculty are broadly categorized into Languages and Social Sciences.

• The students acquire knowledge in the field of social sciences, literature and humanities which make them sensitive and sensible enough.

• The B.A. graduates will be acquainted with the social, economical, historical, political, ideological and tradition and thinking.

• The program also empowers the graduates to appear for various competitive examinations or choose the post graduate program of their choice.

• The B. A. program enables the students to acquire the knowledge with human values framing the base to deal with various problems in life with courage and humanity.

• The students will be ignited enough to think and act over for the solution of various issues prevailed in the human life to make this world better than ever.

• Understand the issues of environmental contexts and sustainable development.

• To make student able to realize the importance of human values.

• To make student aware regarding social service.

Program Specific Outcomes

1) Acquiring knowledge of Constitution of India.

2) Understanding the political system of our Nation.

3) Understanding the Government mechanism from Gram Panchyat to Parliament- its functions, duties & responsibilities.

4) Acquiring knowledge of political Law.

5) Study from competitive examination point of view.

6) Knowledge about the Indian and Foreign Politics.

7) Knowledge about Political Thought.

8)   Knowledge about Comparative constitutional System.

Course outcomes

B. A. I Sem. Course : Indian Constitutional Provisions and Local self Government :

1)   Understand the Salient features of the Indian Constitution.

2)   To acquire knowledge of Preamble its Objectives, Nature and Importance.

3)   Understand the Structure and Powers of Parliament.

4)   To comprehend the Structure of Indian Judiciary.

B.A. II Sem. Course : Indian Constitutional Provisions and Local self Government :

1)   Understand The Election Commission of India its structure, Function and Powers.

2)   To know about the Eligibility of voters in Loksabha, Vidhansabha and Vidhan Perished Election.

3)   To identify the Structure, Power and Function of Municipal Corporation, Gram Panchayat and Gram Sabah.

4)   To evaluate Women's Participations in Panchayat Raj of Maharashtra.

B.A. III Sem. Course : Selected Constitutions and International Relations)(U.K.,U.S.A. & China)

1)   Understand Salient Features of the Constitution of U.K. and U.S.A.

 2)   To study and analyze Historical Background of Crown and its power.

3)   To evaluate the process of Prime Minister's Appointment, Role and Function.

4)   To compare Parliamentary System of U.K.

5)   Understand Judiciary and the Election Process, Powers and Function of U.S.A. President.

B.A. IV Sem. Course : Selected Constitutions and International Relations)(China, UNO) :

1)   Understand Salient Features of the Constitution of China.

2)   To Comprehend Composition, Powers and Functions of National People Congress.

3)   To study and analyze Composition, Powers and functions of Standing Committee.

4)   To evaluate the process of Appointment, Function and Role of President of China.

5)   To study and analyze Charter, Aims and Basic Principles of United Nation Organization.

B.A. V Sem. Course : Modern Concepts and Policy in Politics :

1)   Understand Meaning, Factors and Role of Leadership.

2)   To comprehend Meaning and Nature of Indian Reservation Policy.

3)   To study and analyze Meaning and nature of Nationalism.

4)   Understand Meaning and Role of Communalism.

5)   Understand Meaning and Definition of Terrorism.

B.A. VI Sem. Course : Concepts of Western and Indian Thinkers :

1)   To study and analyze Aristotle's Classification of state.

2)   Comprehend M.K. Gandhi's Concept of Ramrajya.

3)   Understand Walter Bagehot's, and Abraham Lincoln's Concept of Democracy.

4)   Understand Dr. B. R. Ambedkar's Parliamentary Democracy.

5)   To study and analyze Karl Marx's concept of Socialism.

Programme Outcome:

- To provide well versed and trained human resource to meet the requirements of the industry in the fields of Accountancy, Taxation, Banking, Insurance, marketing, e-commerce, international economics & research.

- To impart and develop the oral and written communication, Information Technology, statistical skills & legal knowledge.

- To develop and inculcate entrepreneurial skills among the students.

- To prepare students to adapt latest trends by engaging lifelong learning to pursue higher studies / succeed in employment in the field of business.

Programme Specific Outcome:

- After successful completion of B.Com. Degree, a student should have-

- Knowledge and set of skills to meet the challenges of industry with an ease.

- Understanding and the knowledge applying mathematical tools and techniques for research in field of Commerce.

- Mastered practical skills to work as accountant, audit assistant, tax consultant, and computer operator. As well as other financial supporting services.

- Ability to used communication skills in the field of business.

- An understanding of professional & ethical responsibility.

Course Outcomes

B. Com First Year Semester I

Course/ Subject : Advance Accountancy

CO1   To understand Basis Terms and Concept of Book Keeping and Accounting

CO2   To understand Accounting cycle and primary and secondary books of Account

CO3   To understand, how to prepare the trial balance & Final Account

CO4   To understand various types of error and its rectification

CO5   To understand How to prepare the Final Account of Individuals

CO6   To understand concept of Depreciation, it's types and Accounting

CO7   To understand concept of Bank Reconciliation Statement and How to prepare the Bank Reconciliation Statement

Course/ Subject: PRINCIPLES OF ECONOMICS

CO1   To Understand the concepts of economics and its usefulness in real life situation.

CO2   To Understand the importance of Law of Demand, Theory of Utility in business.

CO3   To understand the concepts, nature of production and its relationship to Industry.

C04   To Understand the various concepts of cost and its application in industry.

Course/ Subject: PRINCIPLES TO BUSINESS ORGANISATION

CO1   On successful completion of this subject the learners would acquire the knowledge about the various facets of business.

CO2   To know the Meaning, Scope and Evolution of Commerce and Industry, Industrial Revolution- Its Effects

CO3   The learners would gain in-depth insights of conduct of business & basics of business management.

C04   To learn the procedure of Import – Export Trade

C05   To understand the concept of BPO's and KPO's, Patents, Trademarks, Copyrights, Networking of Business

Course/ Subject: COMPUTER FUNDAMENTAL AND OPERATING SYSTEM

CO1   To provide computer skills and knowledge for commerce students

CO2   To make students familiar with computer environment & operating systems

CO3   To provide understanding of the principles and working of the hardware and software aspects of computer systems.

CO4   To provide the basic knowledge of MS Word, Windows

Course/ Subject : FINANCIAL ACCOUNTANCY

CO1   To understand concept of Non-Profit organization , Receipts & Payment Account, Income & Expenditure Account & Balance Sheet

CO2   To understand concept of Cooperative Society & Prepare Final Account of Cooperative Society as per Maharashtra State Cooperative Society Act 1960.

CO3   To understand concept of Agriculture Farm Accounting and Preparation of Final Account of Agriculture Farm

CO4   To understand concept of Hire Purchase and Installment &difference between Hire Purchase & Installment and its Accounting Procedure

CO5   To understand various concept of Insolvency , Law of Insolvency, Procedure of Insolvency

Course/ Subject: BUSINESS ECONOMICS

CO1   To Understand the application of economics theory & principles in the field of business.

CO2   To understand the various market structure and their working mechanism.

CO3   To Understand the used of price determination under various market structure.

C04   To understand the factor pricing theories and its application in business.

Course/ Subject: PRINCIPLES TO BUSINESS MANAGEMENT

CO1   The students will come to know the concept & importance of Management.

CO2   To understand the Concept, Nature and Importance of Planning

 CO3   To know the Concept, Nature & Principles of Organization.

C04   To learn the Concept, Meaning and Importance of Motivations

C05   To apply the Tools, techniques & Process of Controlling

B. Com Second Year Semester III

Course/ Subject : Business Mathematics and Statistics

CO1   To develop Quantitative Aptitude among the students

CO2   To develop Competitive Examination Awareness through Minimum Knowledge of Mathematics

CO3   To Provide basic knowledge of day to day business activity through Discount, Commission and Brokerage, Average, Profit & Loss, Simple Interest Problems

CO4   To understand meaning of Statistics in various Aspects.

CO5   To understand concept of Presentation of Data & it's Methods

Course/ Subject: Monetary System

CO1   To understand the money and its various types & importance of money in the economy.

CO2   To Explain the value of money and its importance.

CO3   To understand the concepts of inflation and deflation & various phases of Trade cycle.

C04   Explain the functions money market, capital market and stock market

Course/ Subject: Company Accounting

CO1   Understanding and implementation of business transactions of business into practical accounting.

CO2   To understand the concept of Issue, forfeiture and Re-issue of Shares.

CO3   To provide knowledge about the practical Final Accounts of company comprising Trading, Profit & Loss Account & Balance sheet.

CO4   To learn the Amalgamation, absorption of Company

Course/ Subject: Auditing

CO1   Apply critical thinking skills and solve auditing problems.

CO2   To understand the Concepts of dividend and types of dividend

CO3   To articulate knowledge of Fundamental Audit concepts

CO4   To understand the concept of Internal Check System, Audit Program, Routine Checking and Vouching Verification and Valuation of Asset and Liabilities

Course/ Subject: INFORMATION TECHNOLOGY AND BUSINESS DATA PROCESSING

CO1   To enhance the students' understanding of usefulness of information technology tools for business operations

CO2   To Discuss the System, Design and Database Management in MIS.

CO3   To learn the basics of Spreadsheet, how to use and apply Excel and Excel add-ins to solve business problems:

CO4   Apply formulas and functions in Spreadsheet for Accounting, Statistical and Business purposes.

CO5   Use Spreadsheet in business reporting which will assist in decision making

CO6   To Provide basic knowledge of Tally to handle business transaction

B. Com Second Year Semester IV

Course/ Subject : Income Tax

CO1   To articulate knowledge of Fundamental Income Tax concepts

CO2   To apply critical thinking skills and solve Income Tax Problems

CO3   To apply knowledge of tax for computation of income from salary, house property and from other source and e-filling Procedure of Return of Income

CO4   To enhance understanding Tax Planning, Advance Tax, Permanent   Account   Number (PAN) & Tax Deduction at source (TDS)

CO5   To gain knowledge about Structure of income Tax Authority & their powers

Course/ Subject: Indian Financial System

CO1   To understand the Indian financial system and importance in Indian economy.

CO2   To understand the Indian banking and various concepts of banking.

CO3   To explain various function of central bank, commercial bank and there importance in the economy.

C04   To explain functions of stock market & its importance in the economy.

Course/ Subject: Corporate Accounting

CO1   To understand the concepts of Final Accounts of Banking Company (including Profit & Loss Account & Balance Sheet)

CO2   To understand the concept of share, need, & various method of valuation of Shares

CO3   To understand the need, characteristics, method of valuation of goodwill. Including Average Profit Method, Super Profit Method & Capitalization Method

CO4   To enable the accounting.   students   to develop   awareness   about   corporate

Course/ Subject: Auditing

CO1   Apply critical thinking skills and solve auditing problems.

CO2   To understand the Concepts of dividend and types of dividend

CO3   To articulate knowledge of Fundamental Audit concepts

CO4   To understand the concept of Internal Check System, Audit Program, Routine Checking and Vouching Verification and Valuation of Asset and Liabilities

B. Com Final Year Semester V & VI

Course/ Subject: Business Environment

CO1   To provide knowledge and interpret sector wise Business Environment of India

CO2   To understand Indian Agriculture Environment and agriculture economy of India

CO3   To gain knowledge about Indian Industrial   environment and various industrial policies

CO4   To Understand about role and importance of service sector in Indian economy

 CO5   To learn about foreign and international trade and its various tools and techniques

Course/ Subject: Business law

CO1   The student will well verse in basic provisions regarding legal frame work governing the business world.

CO2   To know the students with the basic concepts, terms & provisions of Mercantile and Business Laws.

CO3   To develop the awareness among the students regarding these laws affecting trade business, and commerce.

CO4   To inculcate knowledge on various laws relating to business such as law of contract, law of sale of goods, law of agency, Negotiable Instruments Act.

Course/ Subject: Cost & Management Accounting I and II

Semester V & VII

CO1   The students will be capable of applying and handling the accounting treatment of Cost accounting of company.

CO2   Understanding application   of   practice   tools   and   methods   in management accounting.

CO3   It will help to recognize commonly used financial statements, their components and how information from business transactions flows into these statements.

CO4   To understand the application of costing to apply for tender or quotation

CO5   To understand the Techniques of Ratio Analysis, Breakeven Point & Fund flow statement

Course/ Subject: E-commerce I and II

Semester V & VII

CO1   To understand the working of e

CO2   To explain the growth & future of e

CO3   To understand the e

CO4   To understand the Internet based various e-commerce business models and its applications.

CO5   To explain the internet marketing and its importance in online business.

CO6   To understand and analysis e-governance various models ,application and importance

Course/ Subject: Internet and World Wide Web I and II

Semester V & VII

CO1   To gives a deeper understanding of Internet and Network Technology

CO2   To familiarize the student with various applications of internet technologies in business

CO3   To provide skills and knowledge to create and maintain a website for business

CO4   To prepare students in web designing using various web tools.

CO5   To develop skill and knowledge among students in applications of internet in education of commerce.

Course/ Subject: Economics of Development Semester VI

CO1   To interpret various growth model and applicability in present scenario

CO2   To understand the concept of economic development and growth

CO3   To understand various growth model and their applications

CO4   To understand concept and importance of special economic zone (SEZ)

CO5   To understand the importance of human resource development and quality of human capital

Course/ Subject: Company Act 2013 Semester VI

CO1   To impart basic knowledge of the provisions of the Companies Act

CO2   To impart students with the knowledge of fundamentals of Company Law and provisions of the Companies Act of 2013.

CO3   To apprise the students of new concepts involving in company law regime.

CO4   To acquaint the students with the duties and responsibilities of Key Managerial Personnel.

CO5   To explain the meaning and nature of share, debenture, capital and their type.

ADARSHA MAHAVIDYALAYA, DHAMANGAON RAILWAY
DEPARTMENT OF COMMERCE (M.Com.)
PROGRAMME OUTCOME, PROGRAMME SPECIFIC OUTCOME, COURSE OUTCOME

Program Outcome: -

1.   Impart the students with conventional and contemporary trends in commerce field.

2.   To make aware a student about the national as well as international trends in the field of industry.

3.   To empower the students for self-employment, accounting and auditing practices, role of regulatory bodies in corporate and financial sectors nature of various financial instruments.

4.   Sensitizing Professional ethics and societal needs with their holistic development

5.   Prepare for pursue career in the field of academics and research.

Program Specific Outcomes: -

1.   For pursuing PhD in their chosen research area.

2.   To enhance the horizon of knowledge in various field of commerce through advertising and sales promotion, finance and entrepreneurial development.

3.   To enhance the computer skills and its applicability in business through e-commerce principles.

4.   Train the students on teamwork, lifelong learning and continuous professional development.

5.   Prepare the students to apply Statistical methods and proficient use of tools for modeling and analysis of business data.

6. Equip the students to evaluate environmental factors that influence business operation with the conceptual requirements and skills on preparation and interpretation of financial statements.

Course Outcome

Semester I

Managerial Economics

1. Ability to forecast demand considering changing circumstances and to formulate business plans.

2. Ability to chalk out Business Policies.

3. Knowledge about Profit Planning and control.

4. Skill to analyze effects of Government Policies.

Services Marketing & Customer Relationship Management

1. To know the services vision and mission

2. To study services positioning and differentiation

3. To familiarize service marketing mix

4. To analyze the customer focused services

5. To study the specific service marketing

Advanced Financial and Cost Accounting Course Outcome

1. Ability to calculate Goodwill, evaluate shares adopting different methods and preparation of final accounts of Indian Companies.

2. To analyse the internal or external reconstructions of companies

3. To study the costing concept and methods

4. To analyse the unit cost and job costing

5. To know the process costing with normal and abnormal loss

6. To update the standard costing methods

7. To prepare the reconciliations statements.

Banking and Insurance Services Course Outcome

1. Understanding the operations and working of insurance companies in India.

2. To familiarize the banking sector reforms

3. Capability to assess the significance of online banking.

4. Understanding the functions and significance of RBI in India.

5. Knowledge regarding different models of bancassurance in India.

6. Understanding of the different techniques of risk management

Semester II

Accounting for Managerial Decisions Course Outcome

1. To know the basics of management accounting

2. To study the financial statement analysis

3. To familiarize fund flow cash flow statement

4. To analyze various budget

5. To familiarize with marginal costing

Strategic Management Course Outcome

1. Familiarization with the strategic management process.

2. Understanding about the techniques to scan an environment and the role of environment scanning in hurdle less strategic management of an organization.

3. Understanding about the equal importance of strategy formulation and strategy implementation.

4. Clarity about the strategies followed by different companies in the corporate world.

Management Concept & Organizational Behavior Course Outcome

1. Evolution of Management and contribution of Management thinkers

2. the relevance of environmental scanning, planning and to take decisions,

3. Organizing and controlling

4. Individual and group Behavior

5. Leadership and Motivation.

Computer Applications in Business Course Outcome

1. Gain familiarity with the concepts and terminology used in the development, implementation and operation of business application systems.

2. Explore various methods that Information Technology can be used to support existing businesses and strategies.

3. Investigate emerging technology in shaping new processes, strategies and business models.

4. Achieve hands-on experience with productivity/application software to enhance business activities.

5. Accomplish projects utilizing business theories, Internet resources and computer technology.

6. Work with simple design and development tasks for the main types of business information systems

Semester III

Research Methodology Course Outcome

1. To fulfill the bank requirement of business research

2. To evaluate various research decisions

3. To know the methods of data collection

4. To study the analysis and interpretation of data

5. To familiarize report writing

Statistical analysis Course Outcome

1. To update basis of statistics

2. To analyse the various methods of theoretical probability distribution

3. To know the advanced statistical tools for analysis T,Z and d

4. To familiarize the correlation methods and regression analysis

5. To study the advanced application oriented tests – F , test and Anova

Corporate Tax & Management Course Outcome

1. To update the current finance tax planning

2. To know the provisions of Income tax act

3. To study various heads of incomes

4.   To analyze the profit and gain from business or profession

5.   To identify the various other serious of income and capital gain

6.   To understand tax planning and management for business.

E-Commerce & Legal Security Course Outcome

1.   Ability to start up and operate e-commerce website.

2.   Familiarization with online payment services and different cyber laws.

3.   Ability to understand customer relationship life.

4.   Knowledge of cyber world and scope of cyber laws in E-commerce.

5.   To study the application of Electronic Data Interchange

Semester IV

Entrepreneurship & Skill Development Course Outcome

1. Students will be able to define, identify and/or apply the principles of entrepreneurial and family business;

2. Students will be able to define, identify and/or apply the principles of viability of businesses, new business proposals, and opportunities within existing businesses;

3. Students will be able to define, identify and/or apply the principles of entrepreneurial management and growth through strategic plans, consulting projects and/or implementing their own businesses;

4. Students will be able to define, identify and/or apply the principles of preparing a start-up business plan emphasizing financing, marketing, and organizing;

5. Students will be able to define, identify and/or apply the principles of creating and defending an entrepreneurial marketing plan;

6. Students will be able to define, identify and/or apply the principles of developing pro forma financial statements;

Sales & Distribution Management Course Outcome

1.   Understand the roles and responsibilities of the Sales Managers

2.   Manage and enhance the sales force productivity and performance

3.   Plan and implement an effective sales strategy for their organizations.

4.   Design and implement distribution channel strategy.

5.   Manage the Channels efficiency and effectiveness; wholesaling, and retailing.

Co-operative Management Course Outcome

1.   Communicate Concept and Characteristics of Cooperatives,

2.   Explain Functional and Management aspects of Cooperatives

3.   Organize a cooperative institution based upon grassroots level after analyzing market condition

International Financing Course Outcome

1.   Knowledge about IMF, World Bank, European Monetary System and their role in international financial management.

2.   Clarity about the role of central bank in international financial management.

3.   Ability to use various scanning techniques to scan the environment of host country.

4.   Understanding of the manner of management of exposures involved in international transactions.

Dhamangaon Education Society's
(Hindi Linguistic Minority Educational Institution)

Adarsha Science, J.B. Arts & Birla Commerce Mahavidyalaya Dhamangaon Rly., Dist. Amravati, Maharashtra, India-444709

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NAAC RE-ACCREDITED 'B++' GRADE (CGPA 2.81)
e-mail: amvdmn2010@gmail.com

2.6.2 Attainment of program outcomes, program-specific outcomes, and course outcomes: -

Outcome-based education system being practiced from 2020-21 for the undergraduate & postgraduate courses in the college. Course outcomes mean how students will be able to demonstrate knowledge and values after completion of the course. At the end of every semester course, outcome attainment is measured with PO/PSO. Each course has well-defined course outcomes evaluation criteria. The course outcomes are mapped to the program outcomes which are useful to provide the quantitative measurement of the program outcome achieved. The process of Program outcome assessment is based on the following methods: - Unit test, common test examination, University exam performance, Assignment, Projects, Practical performance, Internship, Field study, Group discussion, Seminar, Debate Competition, Sports Competition, Participation in college level or university level competition, Student participation in various social activities like tree plantation, NCC, NSS related activities consider in PSO & CO attainment by the students. Alongside these various methods, our college students are evaluated regularly based on their behavior in class, participation in college activities, class discussion, and overall class conduct. & Student feedback on Learning Outcome.

Program Outcome Attainment

Program outcome attainment measurements are identified to measure the progress of the students. The Assessment methods include Direct & Indirect methods. The process of Program outcome assessment is based on the following methods: - Unit test, common test examination, University exam performance, Assignment, Projects, Practical performance, Internship, Field study, Group discussion, Seminar, Debate Competition, Sports Competition, Participation in college level or university level competition, Student participation in various social activities like tree plantation, NCC, NSS related activities consider in PSO & CO attainment by the students. Alongside these various methods, our college students are evaluated regularly based on their behavior in class, participation in college activities, class discussion, and overall class conduct.

Parameter: - I (Final Year Examination)

4 (Very Good): -   75-100 % of students successfully passed their respective courses in the Final Year Examination.
3 (Good): -   50-74 % of students successfully pass their respective courses in the Final Year Examination.
2 (Satisfactory): - 26-49 % of students successfully pass their respective courses in the Final Year Examination.
1 (Unsatisfactory): - 0-25 % of students successfully passed their respective courses in the Final Year Examination.

Program Outcome Attainment

S.N.	Name of the Examination	No. of Students Appear for Exam	No. of Students Passed in the Exam	Result Percentage (%)	PO Attainment Level

Program Specific Outcome Attainment

Program-specific outcome attainment measurements are identified to measure the progress of the students. The Assessment methods include Direct & Indirect methods. The process of PSO assessment is based on the following methods: - Unit test, common test examination, University exam performance, Assignment, Projects, Practical performance, Internship, Field study, Group discussion, Seminar, Debate Competition, Sports Competition,

Participation in college level or university level competition, Student participation in various social activities like tree plantation, NCC, NSS related activities consider in PSO & CO attainment by the students. Alongside these various methods, our college students are evaluated regularly based on their behavior in class, participation in college activities, class discussion, and overall class conduct.

According to the below parameters, the attainment of Program Specific Outcome of the various courses offered by the college is measured.

Parameter: - I (Students Passing Rate)

4 (Very Good): -	**75-100 % of students successfully passed the Year End Examination.**
3 (Good): -	**50-74 % of students successfully passed the Year End Examination.**
2 (Satisfactory): -	**26-49 % of students successfully passed the Year End Examination.**
1 (Unsatisfactory): -	**0-25 % of students successfully passed the Year End Examination.**

Parameter: - II (Students Distinction Rate)

4 (Very Good): -	**75-100 % of students successfully passed in the Year End Examination with distinction.**
3 (Good): -	**50-74 % of students successfully passed in the Year End Examination with distinction.**
2 (Satisfactory): -	**26-49 % of students successfully passed in the Year End Examination with distinction.**
1 (Unsatisfactory): -	**0-25 % of students successfully passed in the Year End Examination with distinction.**

Parameter: - III (Students First Class Rate)

4 (Very Good): -	**75-100 % of students successfully passed in the Year End Examination with First class.**
3 (Good): -	**50-74 % of students successfully passed in the Year End Examination with First class.**
2 (Satisfactory): -	**26-49 % of students successfully passed in the Year End Examination with First class.**
1 (Unsatisfactory): -	**0-25 % of students successfully passed in the Year End Examination with First class.**

Parameter: - IV (Students Second Class Rate)

1 (Unsatisfactory): -	**75-100 % of students successfully passed in the Year End Examination with the Second class.**
2 (Satisfactory): -	**50-74 % of students successfully passed in the Year End Examination with the Second class.**
3 (Good): -	**26-49 % of students successfully passed the Year End Examination with the Second class.**
4 (Very Good): -	**0-25 % of students successfully passed the Year End Examination with the Second class.**

Parameter: - V (Students Third Class Rate)

1 (Unsatisfactory): -	**75-100 % of students successfully passed in the Year End Examination with Third Class.**
2 (Satisfactory): -	**50-74 % of students successfully passed in the Year End Examination with Third Class.**
3 (Good): -	**26-49 % of students successfully passed in the Year End Examination with Third Class.**
4 (Very Good): -	**0-25 % of students successfully passed in the Year End Examination with Third Class.**

According to the below parameters, the attainment of the Program Outcome of the various courses offered by the college is measured.

Program Spacific Outcome Attainment																	
S.N.	Name of the Examination	No.of Students Appread For Exam	No.of Students Passed in the Final Year Exam	Result Percentage(%)	No.of Students Passed In First Class	No.of Students Passed In Second Class	No.of Students Passed In Third Class	No.of Students in Passed In Distinction	No.of Students in Passed First Class (%)	No.of Students in Passed Second Class (%)	No.of Students in Passed Third Class (%)	No.of Students in Passed Distinction (%)	Parameter I	Parameter II	Parameter III	Parameter IV	Average Attainment (Parameter I+II+III+IV/4)

Course Outcome Attainment

Course outcome attainment measurements are identified to measure the progress of the students. The Assessment methods include Direct & Indirect methods. The process of course outcome assessment is based on the following methods: - Unit test, common test examination, University exam performance, Assignment, Projects, Practical performance, Internship, Field study, Group discussion, Seminar, Debate Competition, Sports Competition, Participation in college level or university level competition, Student participation in various social activities like tree plantation, NCC, NSS related activities consider in PSO & CO attainment by the students.

Alongside these various methods, our college students are evaluated regularly based on their behavior in class, participation in college activities, class discussion, and overall class conduct.

4 (Very Good): -   **75-100 % of students successfully passed their respective courses each semester.**

3 (Good): -   **50-74 % of students successfully passed their respective course each semester.**

2 (Satisfactory): -   **26-49 % of students successfully passed their respective course at each semester.**

1 (Unsatisfactory): -   **0-25 % of students successfully passed their respective courses each semester.**

According to the below parameters, the attainment of the Course Outcome of the various courses offered by the college is measured.

Course Outcome Attainment					
S.N.	Name of Subject	No. of Students Appear for Exam	No. of Students Passed in the Subject	Passed Percentage (%)	CO Attainment Level

PROGRAM ATTAINMENT -2020-2021

PROGRAM OUTCOME ATTAINMENT

S.N.	Name of the Examination	No. of Students Appeared for Exam	No. of Students Passed in the Exam	Result Percentage (%)	PO Attainment Level	Grade
1	B.COM PART III SEM VI	149	148	99.32	4	VERY GOOD
2	B.A. III SEM VI S 2022	76	69	90.78	4	VERY GOOD
3	B.Sc. III SEM VI S 2022	109	109	100	4	VERY GOOD
4	B.C.A. Sem VI	44	44	100	4	VERY GOOD
5	M.Sc. II SEM IV MATHEMATICS	60	60	100	4	VERY GOOD
6	M.Sc. II Sem IV ELECTRONICS	20	20	100	4	VERY GOOD
7	M.SC.SEM IV MICROBIOLOGY	26	22	84.62	4	VERY GOOD
8	M.COM PART II SEM IV	7	6	86	4	VERY GOOD
9	M.A.II SEM IV S 2022	50	48	96	4	VERY GOOD

PROGRAM OUTCOME ATTAINMENT 2020-21

	B.COM PART III SEM VI	B.A. III SEM VI S 2022	B.Sc. III SEM VI S 2022	B.C.A. Sem VI	M.Sc II SEM IV MATHEMATICS	M.Sc. II Sem IV ELECTRONICS	M.SC.SEM IV MICROBIOLOGY	M.COM PART II SEM IV	M.A.II SEM IV S 2022
Result Percentage(%)	99.32	90.78	100	100	100	100	84.62	86	96

PROGRAM SPECIFIC OUTCOME 2020-21

Program Spacific Outcome Attainment

S.N.	Name of the Exami0tion	No.of Students Appread For Exam	No.of Students Passed in the End Year Exam	Result Percentage (%)	No.of Students Passed In First Class	No.of Students Passed In Second Class	No.of Students Passed In Third Class	No.of Students in Passed In Distinction	No.of Students in Passed First Class (%)	No.of Students in Passed Second Class (%)	No.of Students in Passed Third Class (%)	No.of Students in Passed Distinction (%)	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
1	B.COM PART I SEM II	144	136	94.44	0	0	0	136	0	0	0	100	4	4				4.00	VERY GOOD
2	B.COM PART I ISEM IV	138	135	97.82	0	0	0	135	0	0	0	100	4	4				4.00	VERY GOOD
3	B.COM PART III SEM VI	149	148	99.32	0	0	0	148	0	0	0	100	4	4				4.00	VERY GOOD
4	M.COM PART I SEM II	35	34	97.14	21	0	0	13	61.76	0	0	38	4	2	3			3.00	GOOD
5	M.COM PART II SEM IV	7	6	86	4	0	0	2	66.67	0	0	33	2	3				3.00	GOOD
6	B.A.Part-I (Sem. II)	120	113	94.16	21	3	Nil	89	18.58	2.65	0	78.76	4	1		4		3.25	GOOD
7	B.A. Part-II (Sem. IV)	139	135	97.12	12	1	Nil	122	8.88	0.7	0	90.37	4	1	1	4		3.25	GOOD
8	B.A. Part-III (Sem. VI)	76	69	90.78	3	1	Nil	65	4.34	1.44	0	94.37	4	1	1	4		3.25	GOOD
12	M.A. ECO Part-I (Sem. II)	79	79	100	4	NIL	Nil	75	5.06	0	0	94.93	4	1	1	4		3.00	GOOD
13	M.A. ECO Part-II (Sem. IV)	50	48	96	Nil	2	NIL	46	0	4.34	0	95.83	4	1	1	4		3.25	GOOD
14	B.Sc. I SEM II	105	105	100	1	0	0	104	0.95	0	0	99.05	4	4	1			3.00	GOOD
15	B.Sc. II SEM IV	118	116	98.3	2	0	0	114	1.72	0	0	96.61	4	4	1			3.00	GOOD
16	B.Sc. III SEM VI	109	109	100	0	0	0	109	0	0	0	100	4	4	1			3.00	GOOD
9	B.C.A. Sem II	26	26	100	0	0	0	26	0	0	0	100	4	4				4.00	VERY GOOD
10	B.C.A. Sem IV	29	29	100	0	0	0	29	0	0	0	100	4	4				4.00	VERY GOOD
11	B.C.A. Sem VI	44	44	100	32	0	0	12	72.72	0	0	27.27	4	2	3			4.00	VERY GOOD
17	M.Sc SEM II MATHEMATICS	53	53	100	0	0	0	53	0	0	0	100	4	4				4.00	VERY GOOD
18	M.Sc SEM IV MATHEMATICS	60	60	100	2	1	0	57	3.3	1.67	0	95	4	4	1			3.25	GOOD
19	M.Sc. I Sem II ELECTRONICS	25	25	100	0	0	0	25	0	0	0	100	4	4				4.00	VERY GOOD
20	M.Sc. II Sem IV ELECTRONICS	20	20	100	0	0	0	20	0	0	0	100	4	4		4		4.00	VERY GOOD
21	M.SC.SEM II MICROBIOLOGY	29	29	100	0	0	0	29	0	0	0	100	4	4				4.00	VERY GOOD
22	M.SC.SEM IV MICROBIOLOGY	26	22	84.62	1	0	0	21	4.55	0	0	95.45	4	4				4.00	VERY GOOD

COMMERCE DEPARTMENT

Name of the Examination	Parameter I (Result %)	Parameter II (Passed in Distinction)	Parameter III (Passed in First Class)	Parameter IV (Passed in Second Class)	Parameter V (Passed in Third Class)
B.COM PART I SEM II	4	4	NIL	NIL	NIL
B.COM PART IISEM IV	4	4	NIL	NIL	NIL
B.COM PART III SEM VI	4	4	NIL	NIL	NIL
M.COM PART I SEM II	4	2	3	NIL	NIL
M.COM PART II SEM IV	4	2	3	NIL	NIL

PARAMETER WISE PROGRAM SPACIFIC OUTCOME ATTAINMENT(PSO)
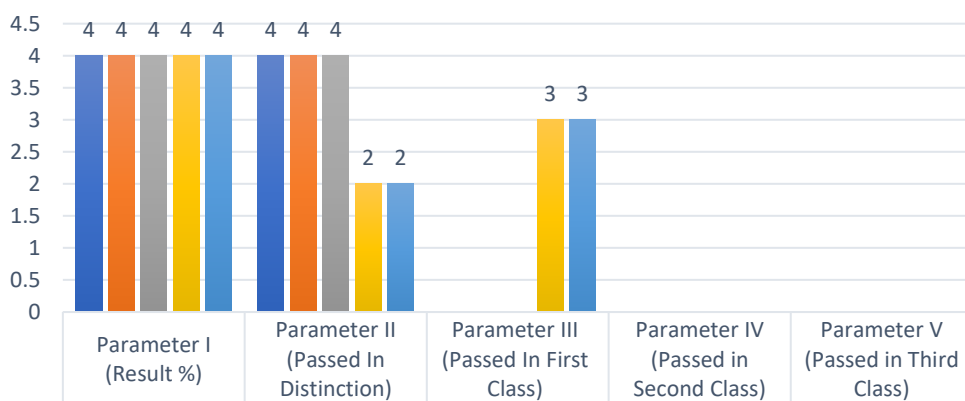
	Parameter I (Result %)	Parameter II (Passed In Distinction)	Parameter III (Passed In First Class)	Parameter IV (Passed in Second Class)	Parameter V (Passed in Third Class)
B.COM PART I SEM II	4	4			
B.COM PART IISEM IV	4	4			
B.COM PART III SEM VI	4	4			
M.COM PART I SEM II	4	2	3		
M.COM PART II SEM IV	4	2	3		

B.COM PART I SEM II   B.COM PART IISEM IV   B.COM PART III SEM VI

M.COM PART I SEM II   M.COM PART II SEM IV

COMMERCE DEPARTMENT

Name of the Examination	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
B.COM PART I SEM II	4	4				4	VERY GOOD
B.COM PART IISEM IV	4	4				4	VERY GOOD
B.COM PART III SEM VI	4	4				4	VERY GOOD
M.COM PART I SEM II	4	2	3			3	GOOD
M.COM PART II SEM IV	4	2	3			3	GOOD

Average Attainment (Parameter I+II+III+IV+V/5)

	B.COM PART I SEM II	B.COM PART IISEM IV	B.COM PART III SEM VI	M.COM PART I SEM II	M.COM PART II SEM IV
■ Average Attainment (Parameter I+II+III+IV+V/5)	4	4	4	3	3

ARTS DEPARTMENT

Name of the Examination	Parameter I (Result %)	Parameter II (Passed In Distinction)	Parameter III (Passed In First Class)	Parameter IV (Passed in Second Class)	Parameter V (Passed in Third Class)
B.A.Part-I (Sem. II)	4	4	1	4	NIL
B.A. Part-II (Sem. IV)	4	4	1	4	NIL
B.A. Part-III (Sem. VI)	4	4	1	4	NIL
M.A. ECO Part-I (Sem. II)	4	4	1	NIL	NIL
M. A. ECO Part-II (Sem. IV)	4	4	1	4	NIL

PARAMETER WISE PROGRAM SPACIFIC OUTCOME ATTAINMENT(PSO)
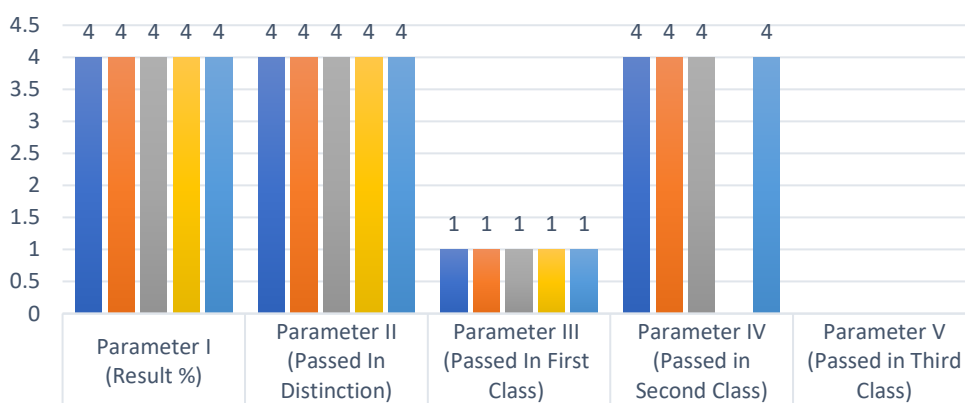
	Parameter I (Result %)	Parameter II (Passed In Distinction)	Parameter III (Passed In First Class)	Parameter IV (Passed in Second Class)	Parameter V (Passed in Third Class)
B.A.Part-I (Sem. II)	4	4	1	4	
B.A. Part-II (Sem. IV)	4	4	1	4	
B.A. Part-III (Sem. VI)	4	4	1	4	
M.A. ECO Part-I (Sem. II)	4	4	1		
M. A. ECO Part-II (Sem. IV)	4	4	1	4	

ARTS DEPARTMENT

Name of the Examination	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
B.A. Part-I (Sem. II)	4	4	1	4		3.25	GOOD
B.A. Part-II (Sem. IV)	4	4	1	4		3.25	GOOD
B.A. Part-III (Sem. VI)	4	4	1	4		3.25	GOOD
M.A. ECO Part-I (Sem. II)	4	4	1			3.00	GOOD
M. A. ECO Part-II (Sem. IV)	4	4	1	4		3.25	GOOD

Average Attainment (Parameter I+II+III+IV+V/5)
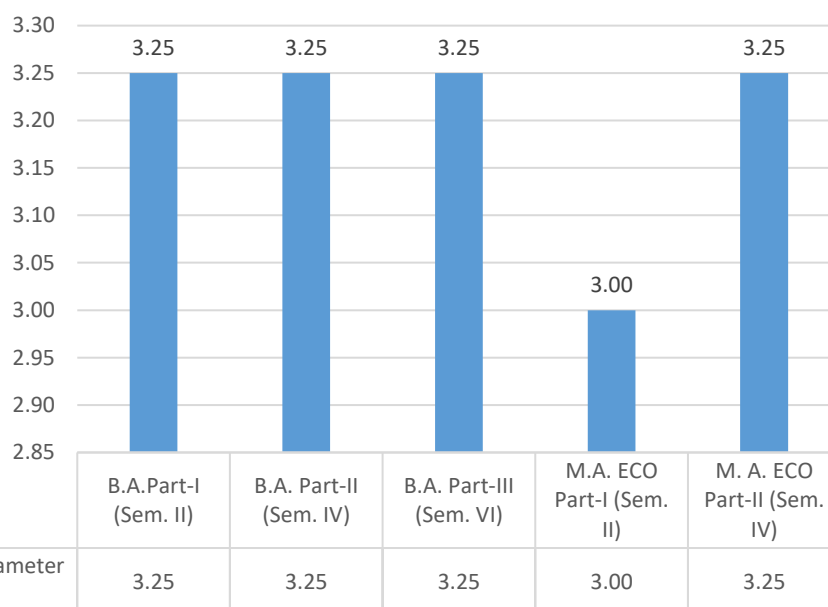
	B.A.Part-I (Sem. II)	B.A. Part-II (Sem. IV)	B.A. Part-III (Sem. VI)	M.A. ECO Part-I (Sem. II)	M. A. ECO Part-II (Sem. IV)
■ Average Attainment (Parameter I+II+III+IV+V/5)	3.25	3.25	3.25	3.00	3.25

SCIENCE DEPARTMENT

Name of the Examination	Parameter I (Result %)	Parameter II (Passed In Distinction)	Parameter III (Passed In First Class)	Parameter IV (Passed in Second Class)	Parameter V (Passed in Third Class)
B.Sc. I SEM II	4	4	1	NIL	NIL
B.Sc. II SEM IV	4	4	1	NIL	NIL
B.Sc. III SEM VI	4	4	1	NIL	NIL
B.C.A. Sem II	4	4	NIL	NIL	NIL
B.C.A. Sem IV	4	4	NIL	NIL	NIL
B.C.A. Sem VI	4	2	3	NIL	NIL
M.Sc I SEM II MATHEMATICS	4	4	NIL	NIL	NIL
M.Sc I SEM IV MATHEMATICS	4	4	1	4	NIL
M.Sc. I Sem II ELECTRONICS	4	4	NIL	NIL	NIL
M.Sc. II Sem IV ELECTRONICS	4	4	NIL	NIL	NIL
M.SC.SEM II MICROBIOLOGY	4	4	NIL	NIL	NIL
M.SC.SEM IV MICROBIOLOGY	4	4	NIL	NIL	NIL

PARAMETER WISE PROGRAM SPACIFIC OUTCOME ATTAINMENT(PSO)
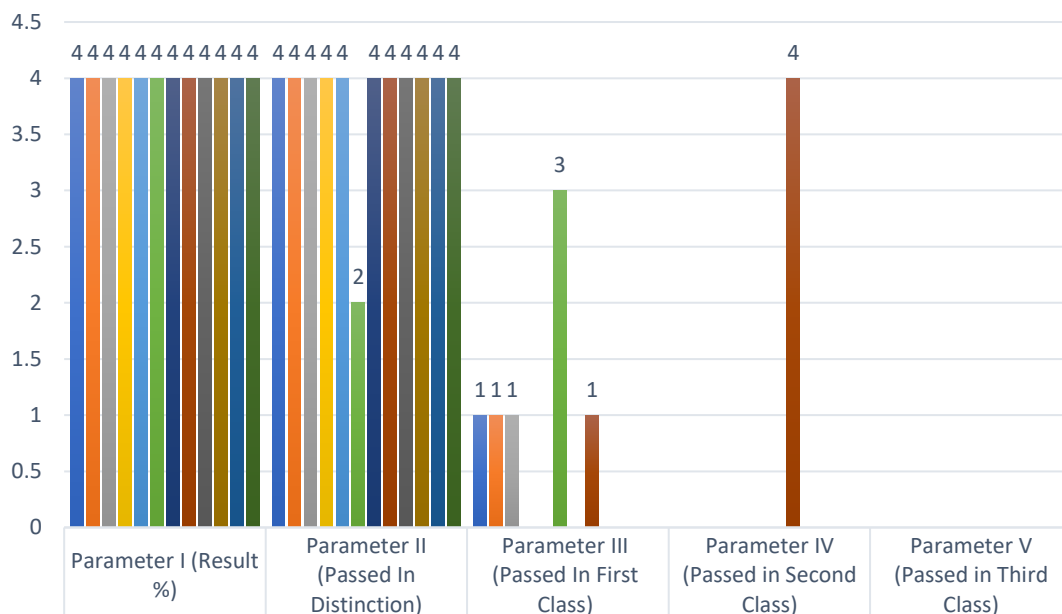
	Parameter I (Result %)	Parameter II (Passed In Distinction)	Parameter III (Passed In First Class)	Parameter IV (Passed in Second Class)	Parameter V (Passed in Third Class)
B.Sc. I SEM II	4	4	1		
B.Sc. II SEM IV	4	4	1		
B.Sc. III SEM VI	4	4	1		
B.C.A. Sem II	4	4			
B.C.A. Sem IV	4	4			
B.C.A. Sem VI	4	2	3		
M.Sc I SEM II MATHEMATICS	4	4			
M.Sc I SEM IV MATHEMATICS	4	4	1	4	
M.Sc. I Sem II ELECTRONICS	4	4			
M.Sc. II Sem IV ELECTRONICS	4	4			
M.SC.SEM II MICROBIOLOGY	4	4			
M.SC.SEM IV MICROBIOLOGY	4	4			

B.Sc. I SEM II   B.Sc. II SEM IV   B.Sc. III SEM VI
B.C.A. Sem II   B.C.A. Sem IV   B.C.A. Sem VI
M.Sc I SEM II MATHEMATICS   M.Sc I SEM IV MATHEMATICS   M.Sc. I Sem II ELECTRONICS
M.Sc. II Sem IV ELECTRONICS   M.SC.SEM II MICROBIOLOGY   M.SC.SEM IV MICROBIOLOGY

SCIENCE DEPARTMENT

Name of the Examination	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
B.Sc. I SEM II	4	4	1			3.00	GOOD
B.Sc. II SEM IV	4	4	1			3.00	GOOD
B.Sc. III SEM VI	4	4	1			3.00	GOOD
B.C.A. Sem II	4	4				4.00	VERY GOOD
B.C.A. Sem IV	4	4				4.00	VERY GOOD
B.C.A. Sem VI	4	2	3			3	GOOD
M.Sc I SEM II MATHEMATICS	4	4				4	VERY GOOD
M.Sc I SEM IV MATHEMATICS	4	4	1	4		3	GOOD
M.Sc. I Sem II ELECTRONICS	4	4				4	VERY GOOD
M.Sc. II Sem IV ELECTRONICS	4	4				4	VERY GOOD
M.SC.SEM II MICROBIOLOGY	4	4				4	VERY GOOD
M.SC.SEM IV MICROBIOLOGY	4	4				4	VERY GOOD

Average Attainment (Parameter I+II+III+IV+V/5)

	B.Sc. I SEM II	B.Sc. II SEM IV	B.Sc. III SEM VI	B.C.A. Sem II	B.C.A. Sem IV	B.C.A. Sem VI	M.Sc I SEM II MATHEMATICS	M.Sc I SEM IV MATHEMATICS	M.Sc. I Sem II ELECTRONICS	M.Sc. II Sem IV ELECTRONICS	M.SC.SEM II MICROBIOLOGY	M.SC.SEM IV MICROBIOLOGY
Average Attainment (Parameter I+II+III+IV+V/5)	3.00	3.00	3.00	4.00	4.00	3	4	3	4	4	4	4

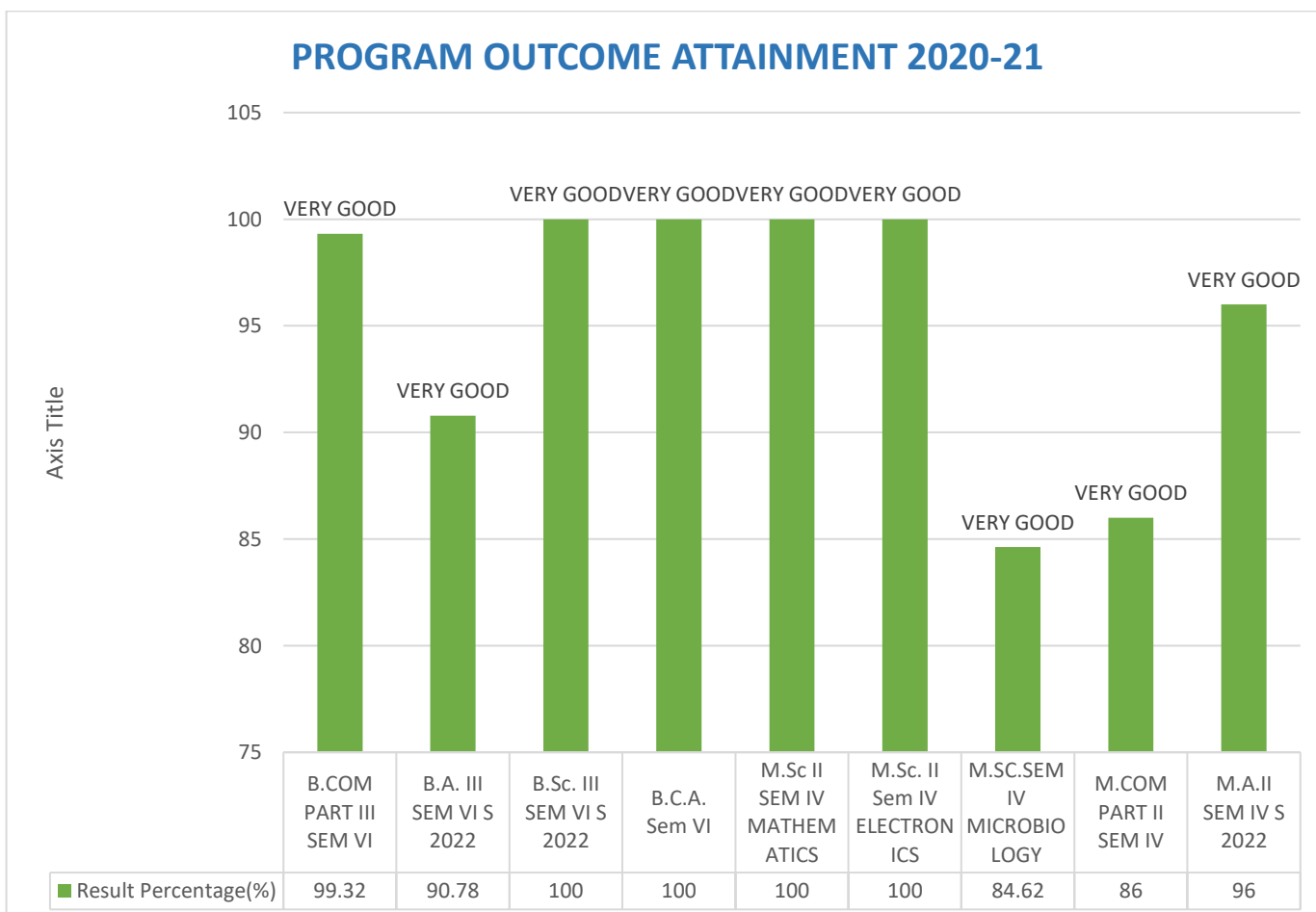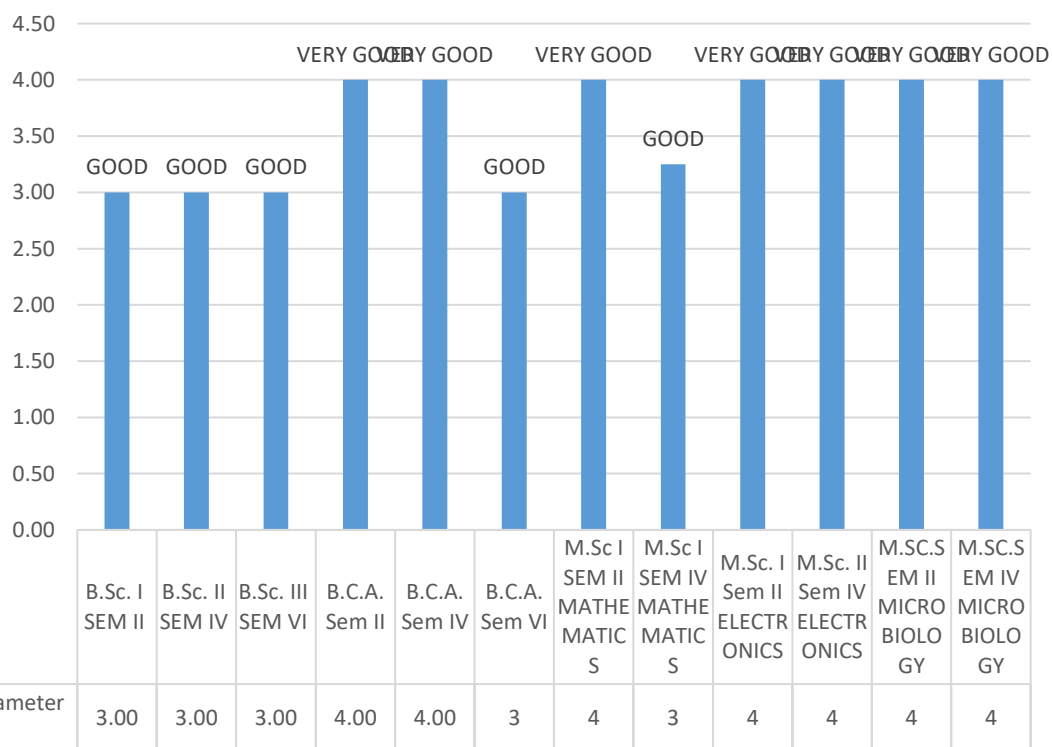# COURSE OUTCOME ATTAINMENT 2020-2021

Course Outcome Attainment

S.N.	Name of Subject	No.of Students Appread For Exam	No.of Students Passed in the Subject	Passed Percentage (%)	CO Attainment Level	GRADE
B.COM PART I SEM I	ENGLISH	142	141	99.3	4	VERY GOOD
	MARATHI	142	140	98.59	4	VERY GOOD
	PRINCIPLES OF ECONOMICS	142	140	98.59	4	VERY GOOD
	ADVANCED ACCOUNTANCY	142	140	98.59	4	VERY GOOD
	PRINCIPLES OF BUSINESS ORGANISATION	142	141	99.3	4	VERY GOOD
	COMPUTER FUNDAMENTALS & OPERATING SYSTEM-1	142	141	99.3	4	VERY GOOD
B.COM PART I SEM II	ENGLISH	144	136	94.44	4	VERY GOOD
	MARATHI	144	136	94.44	4	VERY GOOD
	BUSINESS ECONOMCS	144	136	94.44	4	VERY GOOD
	FINANCIAL ACCOUNTING	144	136	94.44	4	VERY GOOD
	PRINCIPLES OF BUSINESS MANAGEMENT	144	136	94.44	4	VERY GOOD
	COMPUTER FUNDAMENTALS & OPERATING SYSTEM-2	144	138	95.83	4	VERY GOOD
B.COM PART II SEM III	ENGLISH	139	139	100	4	VERY GOOD
	MARATHI	139	138	99.28	4	VERY GOOD
	COMPANY ACCOUNT	139	139	100	4	VERY GOOD
	BUSINESS MATHEMATICS	139	138	99.28	4	VERY GOOD
	AUDITING	139	138	99.28	4	VERY GOOD
	MONITORY SYSTEM	139	138	99.28	4	VERY GOOD
	INFORMATION TECHNOLOGY & BUSINESS DATA PROCESSING -1	139	138	99.28	4	VERY GOOD
B.COM PART IIISEM IV	ENGLISH	138	135	97.83	4	VERY GOOD

	MARATHI	138	135	97.83	4	VERY GOOD
	CORPORATE ACCOUNTING	138	135	97.83	4	VERY GOOD
	BUSINESS STATISTICS	138	135	97.83	4	VERY GOOD
	INCOME TAX	138	135	97.83	4	VERY GOOD
	INDIAN FINANCIAL SYSTEM	138	135	97.83	4	VERY GOOD
	INFORMATION TECHNOLOGY & BUSINESS DATA PROCESSING -12	138	138	100	4	VERY GOOD
B.COM PART III SEM V	ENGLISH	149	148	99.33	4	VERY GOOD
	MARATHI	149	141	94.63	4	VERY GOOD
	COST ACCOUNTING	149	148	99.33	4	VERY GOOD
	BUSINESS ENVIRONMENT	149	148	99.33	4	VERY GOOD
	BUSINESS REGULATORY	149	147	98.65	4	VERY GOOD
	INTERNET & WORLD WIDE WEB-1	149	148	99.33	4	VERY GOOD
	E-COMMERCE-1	149	148	99.33	4	VERY GOOD
B.COM PART III SEM VI	ENGLISH	149	149	100	4	VERY GOOD
	MARATHI	149	148	99.33	4	VERY GOOD
	MANAGEMENT ACCOUNTING	149	149	100	4	VERY GOOD
	ECONOMICS OF DEVELOPMENT	149	148	99.33	4	VERY GOOD
	COMPANY LAW	149	148	99.33	4	VERY GOOD
	INTERNET & WORLD WIDE WEB-2	149	148	99.33	4	VERY GOOD
	E-COMMERCE-2	149	149	100	4	VERY GOOD
M.COM I SEM I	MANAGERIAL ECONOMICS	37	35	94.59	4	VERY GOOD
	SERVICES MARKETING & CRM	37	35	94.59	4	VERY GOOD
	ADVANCED FINANCIAL ACCOUNTING	37	35	94.59	4	VERY GOOD
	BANKING & INSURANCE	37	35	94.59	4	VERY GOOD
M.COM I SEM II	ACCOUNTING FOR MANAGEMENT	35	34	97.14	4	VERY GOOD
	STRATEGIC MANAGEMENT	35	34	97.14	4	VERY GOOD

	MANAGEMENT CONCEPT & OB	35	34	97.14	4	VERY GOOD
	COMPUTER APPLICATION FOR BUSINESS	35	35	100	4	VERY GOOD
M.COM II SEM III	RESEARCH METHODOLOGY	7	7	100	4	VERY GOOD
	STATISTICAL ANALYSIS	7	7	100	4	VERY GOOD
	CORPORATE TAX & MANAGEMENT	7	6	87.71	4	VERY GOOD
	E-COMMERCE & LEGAL SECURITY	7	7	100	4	VERY GOOD
M.COM II SEM IV	ENTREPRENEURHIP AND SKILL DEVELOPMENT	6	7	87.5	4	VERY GOOD
	INTERRNATIONAL FINANCING	6	7	87.5	4	VERY GOOD
	SALES AND DISTRIBUTION MANAGEMENT	6	7	87.5	4	VERY GOOD
	COOPERATIVE MANAGEMENT	6	7	87.5	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-I)	119	112	94.12	4	VERY GOOD
	MARATHI (Sem-I)	119	110	92.44	4	VERY GOOD
	ECONOMICS (Sem-I)	110	103	93.64	4	VERY GOOD
	POLITICAL SCIENCE (Sem-I)	119	113	94.96	4	VERY GOOD
	HISTORY(Sem-I)	97	89	91.75	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-I)	22	19	86.36	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-II)	119	113	95	4	VERY GOOD
	MARATHI (Sem-II)	119	113	95	4	VERY GOOD
	ECONOMICS (Sem-II)	109	103	94.49	4	VERY GOOD
	POLITICAL SCIENCE (Sem-II)	119	113	95	4	VERY GOOD
	HISTORY(Sem-II)	101	95	94	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-II)	19	19	100	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-III)	138	134	97.1	4	VERY GOOD
	MARATHI (Sem-III)	138	127	92.03	4	VERY GOOD
	ECONOMICS (Sem-III)	138	125	90.58	4	VERY GOOD
	POLITICAL SCIENCE (Sem-III)	138	120	86.96	4	VERY GOOD

	HISTORY(Sem-III)	134	126	94.03	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-III)	4	3	75	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-IV)	135	135	100	4	VERY GOOD
	MARATHI (Sem-IV)	135	135	100	4	VERY GOOD
	ECONOMICS (Sem-IV)	135	135	100	4	VERY GOOD
	POLITICAL SCIENCE (Sem-IV)	135	135	100	4	VERY GOOD
	HISTORY(Sem-IV)	132	132	100	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-IV)	3	3	100	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-V)	76	75	98.68	4	VERY GOOD
	MARATHI (Sem-V)	76	76	100	4	VERY GOOD
	ECONOMICS (Sem-V)	74	74	100	4	VERY GOOD
	POLITICAL SCIENCE (Sem-V)	74	74	100	4	VERY GOOD
	HISTORY(Sem-V)	65	65	100	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-V)	9	9	100	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-VI)	76	74	97.37	4	VERY GOOD
	MARATHI (Sem-VI)	75	73	97.33	4	VERY GOOD
	ECONOMICS (Sem-VI)	75	71	94.67	4	VERY GOOD
	POLITICAL SCIENCE (Sem-VI)	75	73	97.33	4	VERY GOOD
	HISTORY(Sem-VI)	67	67	100	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-VI)	8	8	100	4	VERY GOOD
B.A.	ENGLISH LITERATURE (Sem-I)	9	9	100	4	VERY GOOD
	ENGLISH LITERATURE (Sem-II)	9	9	100	4	VERY GOOD
M.A.Part I Sem I	Microeconomics	80	74	92	4	VERY GOOD
	Macroeconomics	80	73	91	4	VERY GOOD
	Agriculture Economics	80	78	97	4	VERY GOOD
	Public Economics	80	79	98.75	4	VERY GOOD

M.A.Part I Sem II	Microeconomics	79	79	100	4	VERY GOOD
	Macroeconomics	79	79	100	4	VERY GOOD
	Industrial Economics	79	79	100	4	VERY GOOD
	Environmental Economics	79	79	100	4	VERY GOOD
M.A.Part II Sem III	Economics Growth Development & Planning	49	47	95	4	VERY GOOD
	Internatinal Trade & Finance	49	46	93.87	4	VERY GOOD
	Financial Institution & Market	49	47	95.91	4	VERY GOOD
	Labour Economics	48	45	91.83	4	VERY GOOD
M.A.Part II Sem IV	Economics Growth Development & Planning	51	51	100	4	VERY GOOD
	Internatinal Trade & Finance	51	51	100	4	VERY GOOD
	Indian Economics Policy	51	51	100	4	VERY GOOD
	Demography	51	51	100	4	VERY GOOD
B.Sc. I	B.Sc. I SEM I PHYSICS	77	77	100	4	VERY GOOD
	B.Sc. I SEM I CHEMISTRY	54	54	100	4	VERY GOOD
	B.Sc. I SEM I MATHEMATICS	47	47	100	4	VERY GOOD
	B.Sc. I SEM I ELECTRONICS	46	46	100	4	VERY GOOD
	B.Sc. I SEM I COMPUTER SCIENCE	50	50	100	4	VERY GOOD
	B.Sc. I SEM I MICROBIOLOGY	43	43	100	4	VERY GOOD
	B.Sc. I SEM I BOTANY	20	20	100	4	VERY GOOD
	B.Sc. I SEM I ZOOLOGY	23	23	100	4	VERY GOOD
B.Sc. I	B.Sc. I SEM II PHYSICS	69	69	100	4	VERY GOOD
	B.Sc. I SEM II CHEMISTRY	47	47	100	4	VERY GOOD
	B.Sc. I SEM II MATHEMATICS	44	44	100	4	VERY GOOD
	B.Sc. I SEM II ELECTRONICS	41	41	100	4	VERY GOOD
	B.Sc. I SEM II COMPUTER SCIENCE	42	42	100	4	VERY GOOD
	B.Sc. I SEM II MICROBIOLOGY	36	36	100	4	VERY GOOD

	B.Sc. I SEM II BOTANY	19	19	100	4	VERY GOOD
	B.Sc. I SEM II ZOOLOGY	17	17	100	4	VERY GOOD
B.Sc. II	B.Sc. II SEM III PHYSICS	70	68	97.14	4	VERY GOOD
	B.Sc. II SEM III CHEMISTRY	55	55	100	4	VERY GOOD
	B.Sc. II SEM III MATHEMATICS	50	50	100	4	VERY GOOD
	B.Sc. II SEM III ELECTRONICS	45	45	100	4	VERY GOOD
	B.Sc. II SEM III COMPUTER SCIENCE	33	33	100	4	VERY GOOD
	B.Sc. II SEM III MICROBIOLOGY	43	43	100	4	VERY GOOD
	B.Sc. II SEM III BOTANY	25	25	100	4	VERY GOOD
	B.Sc. II SEM III ZOOLOGY	18	18	100	4	VERY GOOD
B.Sc. II	B.Sc. II SEM IV PHYSICS	74	72	97.29	4	VERY GOOD
	B.Sc. II SEM IV CHEMISTRY	57	57	100	4	VERY GOOD
	B.Sc. II SEM IV MATHEMATICS	54	54	100	4	VERY GOOD
	B.Sc. II SEM IV COMPUTER SCIENCE	36	36	100	4	VERY GOOD
	B.Sc. II SEM IV ELECTRONICS	36	36	100	4	VERY GOOD
	B.Sc. II SEM IV MICROBIOLOGY	43	43	100	4	VERY GOOD
	B.Sc. II SEM IV BOTANY	25	25	100	4	VERY GOOD
	B.Sc. II SEM IV ZOOLOGY	18	18	100	4	VERY GOOD
B.Sc. III	B.Sc. III SEM V PHYSICS	83	83	100	4	VERY GOOD
	B.Sc. III SEM V CHEMISTRY	54	54	100	4	VERY GOOD
	B.Sc. III SEM V MATHEMATICS	70	70	100	4	VERY GOOD
	B.Sc. III SEM V ELECTRONICS	44	44	100	4	VERY GOOD
	B.Sc. III SEM V COMPUTER SCIENCE	37	37	100	4	VERY GOOD
	B.Sc. III SEM V MICROBIOLOGY	49	49	100	4	VERY GOOD
	B.Sc. III SEM V BOTANY	31	31	100	4	VERY GOOD
	B.Sc. III SEM V ZOOLOGY	18	18	100	4	VERY GOOD

B.Sc. III	B.Sc. III SEM V BOTANY	31	31	100	4	VERY GOOD
	B.Sc. III SEMVI PHYSICS	65	65	100	4	VERY GOOD
B.Sc. III	B.Sc. III SEMVI CHEMISTRY	54	54	100	4	VERY GOOD
	B.Sc. III SEMVI MATHEMATICS	52	52	100	4	VERY GOOD
	B.Sc. III SEMVI ELECTRONICS	37	37	100	4	VERY GOOD
	B.Sc. III SEMVI COMPUTER SCIENCE	29	29	100	4	VERY GOOD
	B.Sc. III SEMVI MICROBIOLOGY	44	44	100	4	VERY GOOD
	B.Sc. III SEMVI BOTANY	27	27	100	4	VERY GOOD
	B.Sc. III SEMVI ZOOLOGY	17	17	100	4	VERY GOOD
M.Sc. Mathematics I	REAL ANALYSIS	58	58	100	4	VERY GOOD
	ADVANCED ABSTRACT ALGEBRA	58	58	100	4	VERY GOOD
	COMPLEX ANALYSIS	58	58	100	4	VERY GOOD
	TOPOLOGY-I	58	58	100	4	VERY GOOD
	DIFFRENTIAL GEOMETRY	58	58	100	4	VERY GOOD
	MEASURE AND INTEGRATION THEORY	53	53	100	4	VERY GOOD
	ADVANCED LINEAR ALGEBRA &FIELD THEORY	53	53	100	4	VERY GOOD
	INTEGRAL EQUATIONS	53	53	100	4	VERY GOOD
	TOPOLOGY-II	53	53	100	4	VERY GOOD
	RIEMANNIAN GEOMETRY	53	53	100	4	VERY GOOD
	FUNCTIONAL ANALYSIS-I	58	58	100	4	VERY GOOD
	ADVANCED MECHANICS	58	58	100	4	VERY GOOD
	OPERATIONAL RESEACH	58	58	100	4	VERY GOOD
	GENERAL RELATIVITY	58	58	100	4	VERY GOOD
	DIFFERENCE EQUATIONS-I	58	58	100	4	VERY GOOD
	(I)FUNCTIONAL ANALYSIS-II	60	60	100	4	VERY GOOD
	(II)PARTIAL DIFFERENTIAL EQUATIONS	60	60	100	4	VERY GOOD

	(III)NUMERICAL ANALYSIS	60	60	100	4	VERY GOOD
	(IV)RELATIVISTIC &COSMOLOGY	60	60	100	4	VERY GOOD
	(V)DIFFERENCE EQUATIONS-II	60	60	100	4	VERY GOOD
M.Sc. Electronics	1ELE1-Fundamentals of Semiconductor Devices	25	25	100	4	VERY GOOD
	1ELE2-Instrumentation and Measurement Techniques	25	25	100	4	VERY GOOD
	1ELE3-Biomedical Instrumentation	25	25	100	4	VERY GOOD
	1ELE4-Optical Electronic Devices and Application	25	25	100	4	VERY GOOD
	2ELE1-Analog Circuit Dsign and Analysis	25	25	100	4	VERY GOOD
	2ELE2-Microprocessor and Microcontroller	25	25	100	4	VERY GOOD
	2ELE3-Digital IC'S and Design	25	25	100	4	VERY GOOD
	2ELE4-Mechatronics	25	25	100	4	VERY GOOD
	3ELE1-Antenna and Mobile Communications	20	20	100	4	VERY GOOD
	3ELE2-Power Electronics	20	20	100	4	VERY GOOD
	3ELE3-Advanced Microcontroller and Embedded System	20	20	100	4	VERY GOOD
	3ELE4-Computer Hardware and Interfacing	20	20	100	4	VERY GOOD
	4ELE1-VLSI Design and VHDL Programming	20	20	100	4	VERY GOOD
	4ELE2- Virtual Instrumentation	20	20	100	4	VERY GOOD
	4ELE3-Numerical Methods and C Programming	20	20	100	4	VERY GOOD
	4ELE4-Fuzzy Logic and Neural Network	20	20	100	4	VERY GOOD
M.Sc. Microbiology	M.SC.SEM I MICROBIOLOGY PAPER I	29	29	100	4	VERY GOOD
	M.SC.SEM I MICROBIOLOGY PAPER II	29	29	100	4	VERY GOOD
	M.SC.SEM I MICROBIOLOGY PAPER III	29	29	100	4	VERY GOOD
	M.SC.SEM I MICROBIOLOGY PAPER IV	29	29	100	4	VERY GOOD
	M.SC.SEM II MICROBIOLOGY PAPER V	29	29	100	4	VERY GOOD
	M.SC.SEM II MICROBIOLOGY PAPER VI	29	29	100	4	VERY GOOD
	M.SC.SEM II MICROBIOLOGY PAPER VII	29	29	100	4	VERY GOOD

	M.SC.SEM II MICROBIOLOGY PAPER VIII	29	29	100	4	VERY GOOD
	M.SC.SEM III MICROBIOLOGY PAPER IX	26	26	100	4	VERY GOOD
	M.SC.SEM III MICROBIOLOGY PAPER X	26	26	100	4	VERY GOOD
	M.SC.SEM III MICROBIOLOGY PAPER XI	26	26	100	4	VERY GOOD
	M.SC.SEM III MICROBIOLOGY PAPER XII	26	26	100	4	VERY GOOD
	M.SC.SEM IV MICROBIOLOGY PAPER XIII	26	26	100	4	VERY GOOD
	M.SC.SEM IV MICROBIOLOGY PAPER XIV	26	26	100	4	VERY GOOD
	M.SC.SEM IV MICROBIOLOGY PAPER XV	26	26	100	4	VERY GOOD
	M.SC.SEM IV MICROBIOLOGY PAPER XVI	26	22	84.62	4	VERY GOOD
B.C.A. Sem I	1ST 1- Computer Fundamentals	26	26	100	4	VERY GOOD
	1ST 2-C-Programming	26	26	100	4	VERY GOOD
	1ST 3 - Digital Techniques-	26	26	100	4	VERY GOOD
	1ST 4- Numerical Methods	26	26	100	4	VERY GOOD
	1ST 5- Mathematics (Discrete Mathematics)	26	23	88.46	4	VERY GOOD
	1ST 6- Communication Skills	26	26	100	4	VERY GOOD
B.C.A. Sem II	2ST 1- Operating System	26	26	100	4	VERY GOOD
	2ST 2-Advance C-Programming	26	26	100	4	VERY GOOD
	2ST 3 - Digital Techniques-II	26	26	100	4	VERY GOOD
	2ST 4- Numerical Methods-II	26	26	100	4	VERY GOOD
	2ST 5- Mathematics (Discrete Mathematics-II)	26	26	100	4	VERY GOOD
	2ST 6- Communication Skills-II	26	26	100	4	VERY GOOD
B.C.A. Sem III	3ST 1 - Data Structure	29	29	100	4	VERY GOOD
	3ST 2-0bject Oriented Programming with C++	29	29	100	4	VERY GOOD
	3ST 3 Data-Base Management System	29	29	100	4	VERY GOOD
	3ST 4- Advanced Operating System	29	29	100	4	VERY GOOD
	3ST 5- Electronics	29	29	100	4	VERY GOOD

B.C.A. Sem IV	4ST 1 - System Analysis Design & MIS	29	29	100	4	VERY GOOD
	4ST 2- Visual Basic	29	29	100	4	VERY GOOD
	4ST 3 - Web Designing and Office Automation	29	29	100	4	VERY GOOD
	4ST 4- Networking	29	29	100	4	VERY GOOD
	4ST 5- Advance Microprocessor and Microcontroller	29	29	100	4	VERY GOOD
B.C.A. Sem V	5 ST 1- Core Java	44	43	97.72	4	VERY GOOD
	5 ST 2 - Network Security	44	44	100	4	VERY GOOD
	5 ST 3 - Software Engineeing	44	42	95.45	4	VERY GOOD
	5 ST 4 - Computer GraphicCS	44	43	97.72	4	VERY GOOD
	5 ST 5-E-Commerce	44	44	100	4	VERY GOOD
B.C.A. Sem VI	6ST 1- .NET using ASP	44	44	100	4	VERY GOOD
	6ST 2 - Client Server Technology	44	44	100	4	VERY GOOD
	6ST 3 - Multimedia and it's Application	44	44	100	4	VERY GOOD
	6ST 4 - Software Testing	44	44	100	4	VERY GOOD
	6ST 5- Advance Database Management System	44	44	100	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-I)	119	112	94.12	4	VERY GOOD
	MARATHI (Sem-I)	119	110	92.44	4	VERY GOOD
	ECONOMICS (Sem-I)	110	103	93.64	4	VERY GOOD
	POLITICAL SCIENCE (Sem-I)	119	113	94.96	4	VERY GOOD
	HISTORY(Sem-I)	97	89	91.75	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-I)	22	19	86.36	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-II)	119	113	95	4	VERY GOOD
	MARATHI (Sem-II)	119	113	95	4	VERY GOOD
	ECONOMICS (Sem-II)	109	103	94.49	4	VERY GOOD
	POLITICAL SCIENCE (Sem-II)	119	113	95	4	VERY GOOD
	HISTORY(Sem-II)	101	95	94	4	VERY GOOD

	SANSKRIT LITERATURE (Sem-II)	19	19	100	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-III)	138	134	97.1	4	VERY GOOD
	MARATHI (Sem-III)	138	127	92.03	4	VERY GOOD
	ECONOMICS (Sem-III)	138	125	90.58	4	VERY GOOD
	POLITICAL SCIENCE (Sem-III)	138	120	86.96	4	VERY GOOD
	HISTORY(Sem-III)	134	126	94.03	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-III)	4	3	75	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-IV)	135	135	100	4	VERY GOOD
	MARATHI (Sem-IV)	135	135	100	4	VERY GOOD
	ECONOMICS (Sem-IV)	135	135	100	4	VERY GOOD
	POLITICAL SCIENCE (Sem-IV)	135	135	100	4	VERY GOOD
	HISTORY(Sem-IV)	132	132	100	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-IV)	3	3	100	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-V)	76	75	98.68	4	VERY GOOD
	MARATHI (Sem-V)	76	76	100	4	VERY GOOD
	ECONOMICS (Sem-V)	74	74	100	4	VERY GOOD
	POLITICAL SCIENCE (Sem-V)	74	74	100	4	VERY GOOD
	HISTORY(Sem-V)	65	65	100	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-V)	9	9	100	4	VERY GOOD
B.A.	ENGLISH (B.A. Sem-VI)	76	74	97.37	4	VERY GOOD
	MARATHI (Sem-VI)	75	73	97.33	4	VERY GOOD
	ECONOMICS (Sem-VI)	75	71	94.67	4	VERY GOOD
	POLITICAL SCIENCE (Sem-VI)	75	73	97.33	4	VERY GOOD
	HISTORY(Sem-VI)	67	67	100	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-VI)	8	8	100	4	VERY GOOD
B.A.	ENGLISH LITERATURE (Sem-I)	9	9	100	4	VERY GOOD

	ENGLISH LITERATURE (Sem-II)	9	9	100	4	VERY GOOD

DEPARMENT OF COMMERCE

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.COM PART III SEM VI	ENGLISH	100	4	VERY GOOD
	MARATHI	99.33	4	VERY GOOD
	MANAGEMENT ACCOUNTING	100	4	VERY GOOD
	ECONOMICS OF DEVELOPMENT	99.33	4	VERY GOOD
	COMPANY LAW	99.33	4	VERY GOOD
	INTERNET & WORLD WIDE WEB-2	99.33	4	VERY GOOD
	E-COMMERCE-2	100	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT

Subject	Value
E-COMMERCE-2	VERY GOOD
INTERNET & WORLD WIDE WEB-2	VERY GOOD
COMPANY LAW	VERY GOOD
ECONOMICS OF DEVELOPMENT	VERY GOOD
MANAGEMENT ACCOUNTING	VERY GOOD
MARATHI	VERY GOOD
ENGLISH	VERY GOOD

98.8   99   99.2   99.4   99.6   99.8   100   100.2
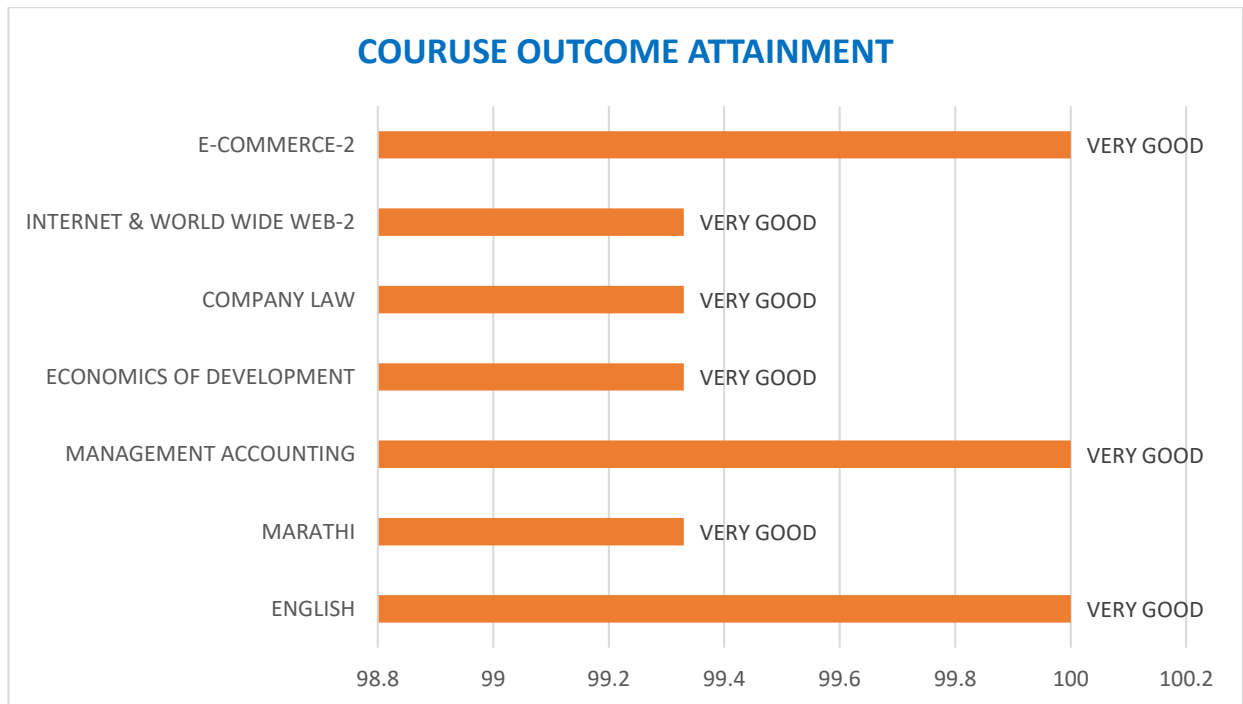
DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.COM PART II SEM IV	ENTREPRENEURHIP AND SKILL DEVELOPMENT	87.5	4	VERY GOOD
	INTERRNATIONAL FINANCING	87.5	4	VERY GOOD
	SALES AND DISTRIBUTION MANAGEMENT	87.5	4	VERY GOOD
	COOPERATIVE MANAGEMENT	87.5	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT
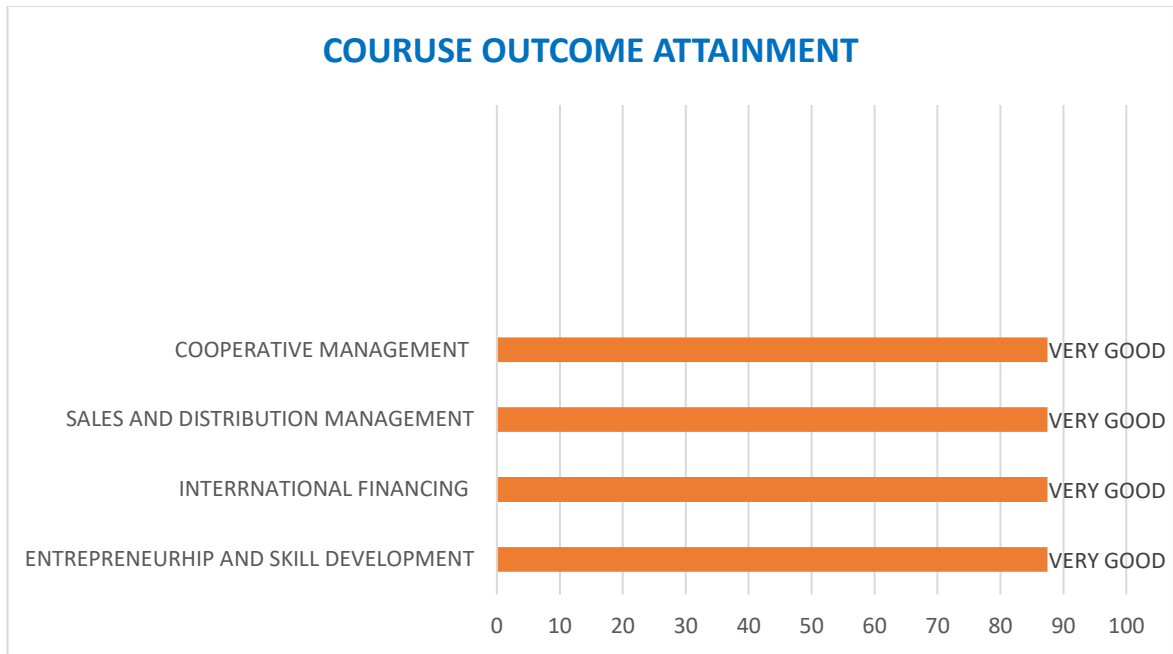
COURSE OUTCOME ATTAINMENT 2020-2021

DEPARMENT OF ARTS

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.A.	ENGLISH (B.A. Sem-VI)	97.37	4	VERY GOOD
	MARATHI (Sem-VI)	97.33	4	VERY GOOD
	ECONOMICS (Sem-VI)	94.67	4	VERY GOOD
	POLITICAL SCIENCE (Sem-VI)	97.33	4	VERY GOOD
	HISTORY(Sem-VI)	100	4	VERY GOOD
	SANSKRIT LITERATURE (Sem-VI)	100	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT

Subject	Value
SANSKRIT LITERATURE (Sem-VI)	VERY GOOD
HISTORY(Sem-VI)	VERY GOOD
POLITICAL SCIENCE (Sem-VI)	VERY GOOD
ECONOMICS (Sem-VI)	VERY GOOD
MARATHI (Sem-VI)	VERY GOOD
ENGLISH (B.A. Sem-VI)	VERY GOOD
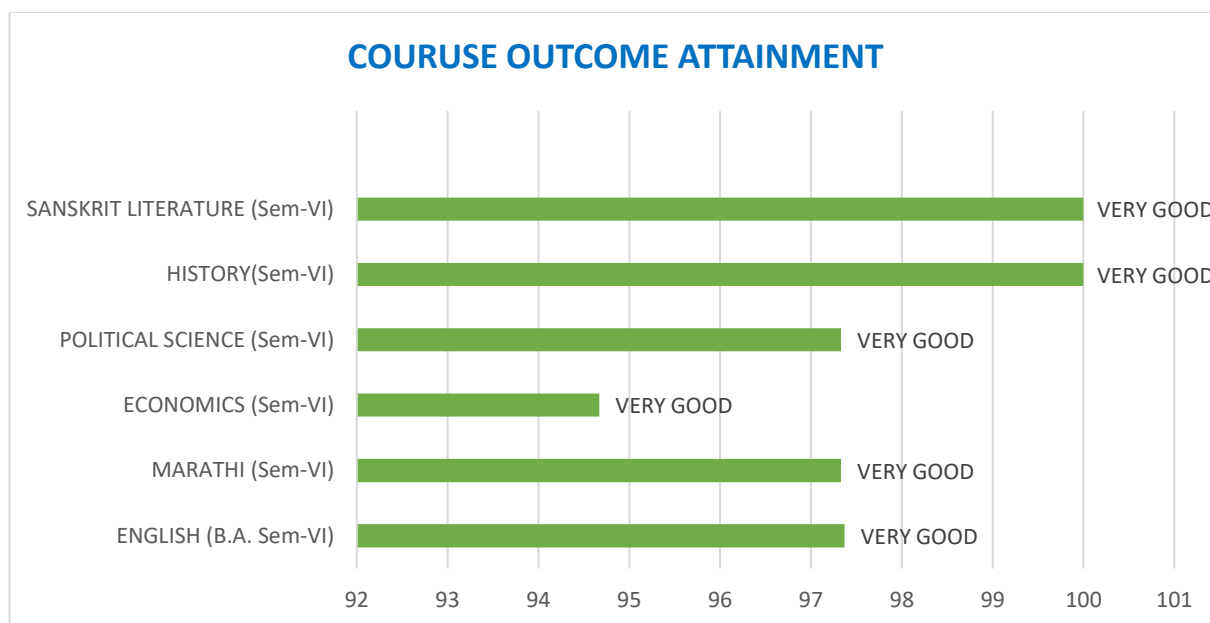
DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.A. Part II Sem IV	Economics Growth Development & Planning	100	4	VERY GOOD
	International Trade & Finance	100	4	VERY GOOD
	Indian Economics Policy	100	4	VERY GOOD
	Demography	100	4	VERY GOOD
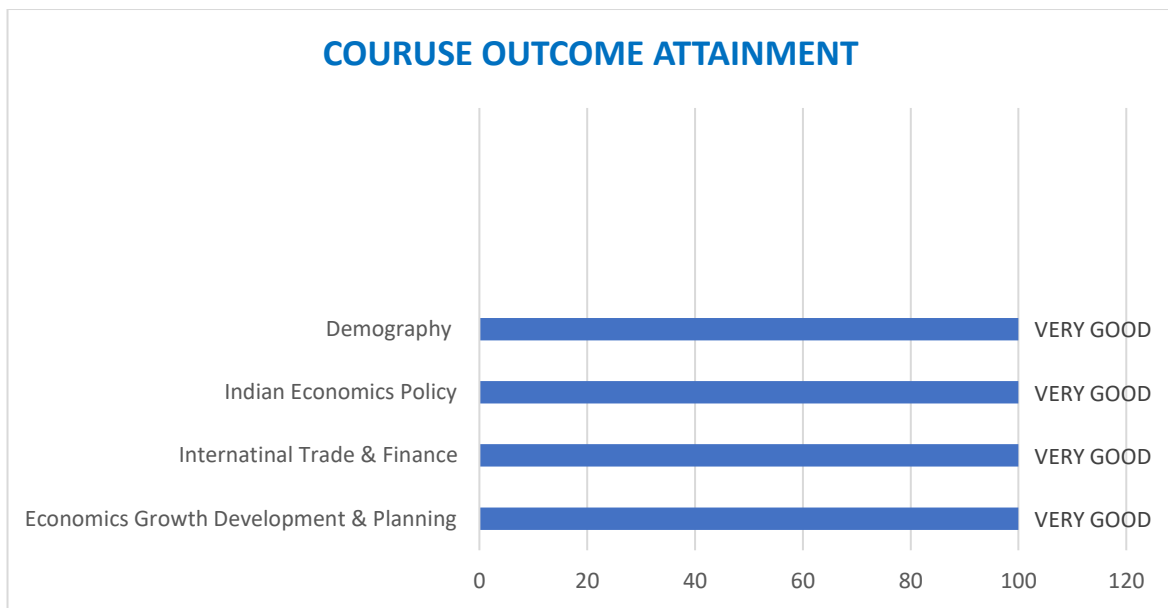
COURUSE OUTCOME ATTAINMENT

COURSE OUTCOME ATTAINMENT 2020-2021

DEPARMENT OF SCIENCE

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.Sc. III	B.Sc. III SEMVI CHEMISTRY	100	4	VERY GOOD
	B.Sc. III SEMVI MATHEMATICS	100	4	VERY GOOD
	B.Sc. III SEMVI ELECTRONICS	100	4	VERY GOOD
	B.Sc. III SEMVI COMPUTER SCIENCE	100	4	VERY GOOD
	B.Sc. III SEMVI MICROBIOLOGY	100	4	VERY GOOD
	B.Sc. III SEMVI BOTANY	100	4	VERY GOOD
	B.Sc. III SEMVI ZOOLOGY	100	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT

Subject	Value	Grade
B.Sc. III SEMVI ZOOLOGY	100	VERY GOOD
B.Sc. III SEMVI BOTANY	100	VERY GOOD
B.Sc. III SEMVI MICROBIOLOGY	100	VERY GOOD
B.Sc. III SEMVI COMPUTER SCIENCE	100	VERY GOOD
B.Sc. III SEMVI ELECTRONICS	100	VERY GOOD
B.Sc. III SEMVI MATHEMATICS	100	VERY GOOD
B.Sc. III SEMVI CHEMISTRY	100	VERY GOOD
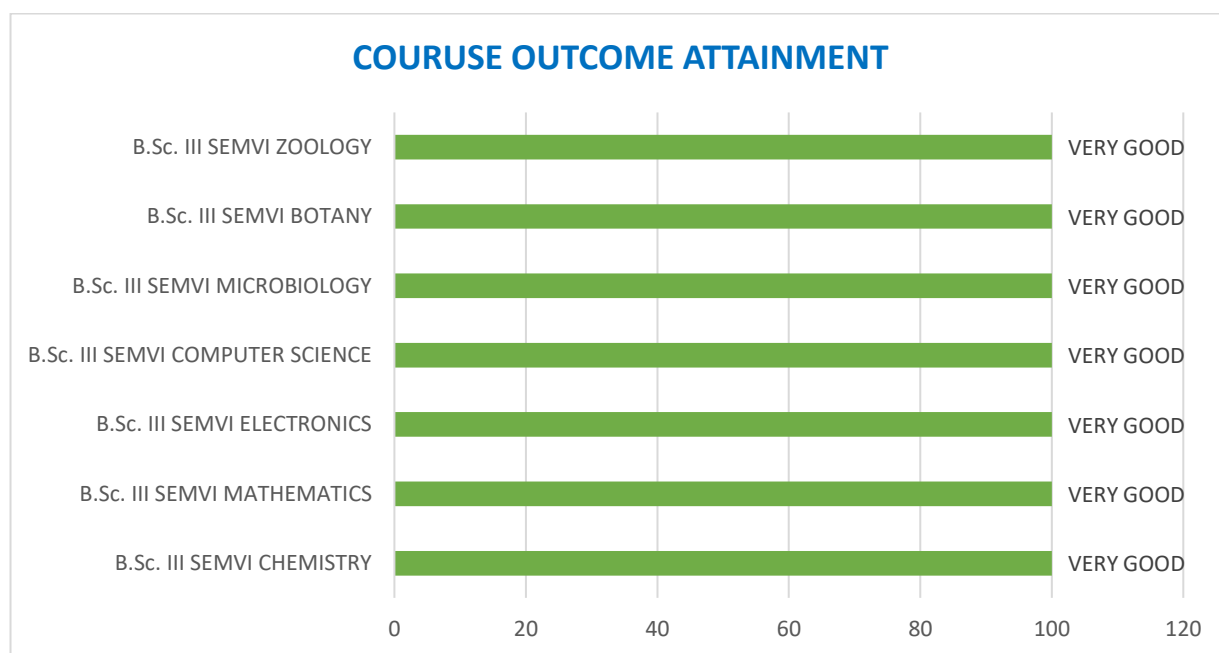
DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.Sc. Mathematics II SEM IV	(I)FUNCTIONAL ANALYSIS-II	100	4	VERY GOOD
	(II)PARTIAL DIFFERENTIAL EQUATIONS	100	4	VERY GOOD
	(III)NUMERICAL ANALYSIS	100	4	VERY GOOD
	(IV)RELATIVISTIC &COSMOLOGY	100	4	VERY GOOD
	(V)DIFFERENCE EQUATIONS-II	100	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT
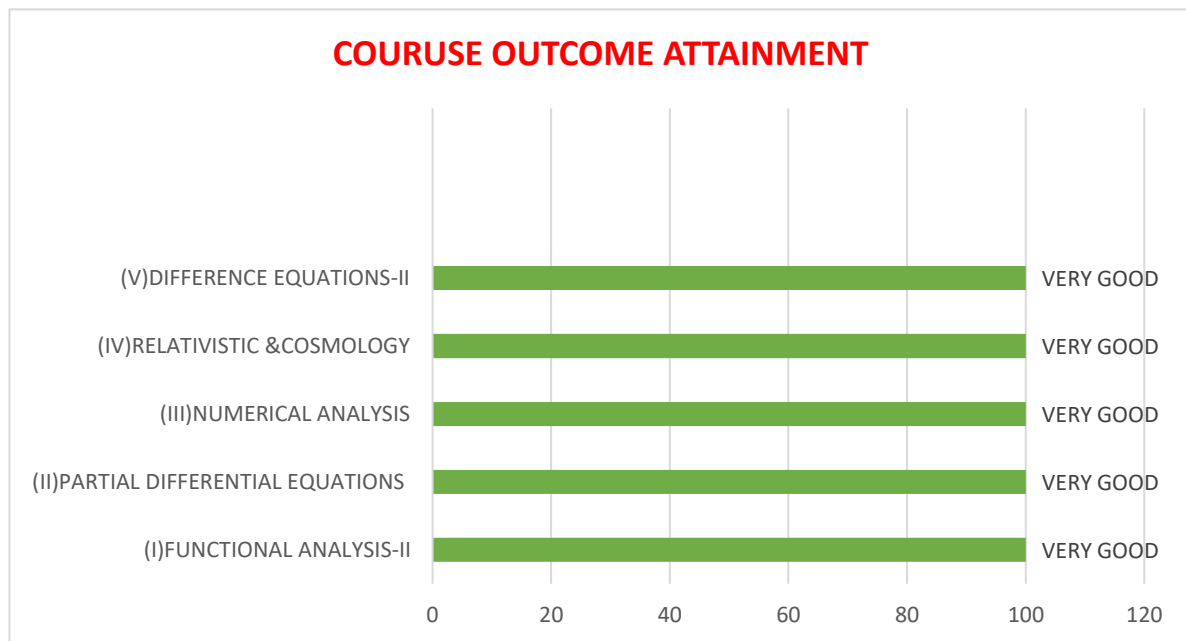
DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.Sc. Electronics II SEM IV	4ELE1-VLSI Design and VHDL Programming	100	4	VERY GOOD
	4ELE2- Virtual Instrumentation	100	4	VERY GOOD
	4ELE3-Numerical Methods and C Programming	100	4	VERY GOOD
	4ELE4-Fuzzy Logic and Neural Network	100	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT

4ELE4-Fuzzy Logic and Neural Network	VERY GOOD
4ELE3-Numerical Methods and C Programming	VERY GOOD
4ELE2- Virtual Instrumentation	VERY GOOD
4ELE1-VLSI Design and VHDL Programming	VERY GOOD
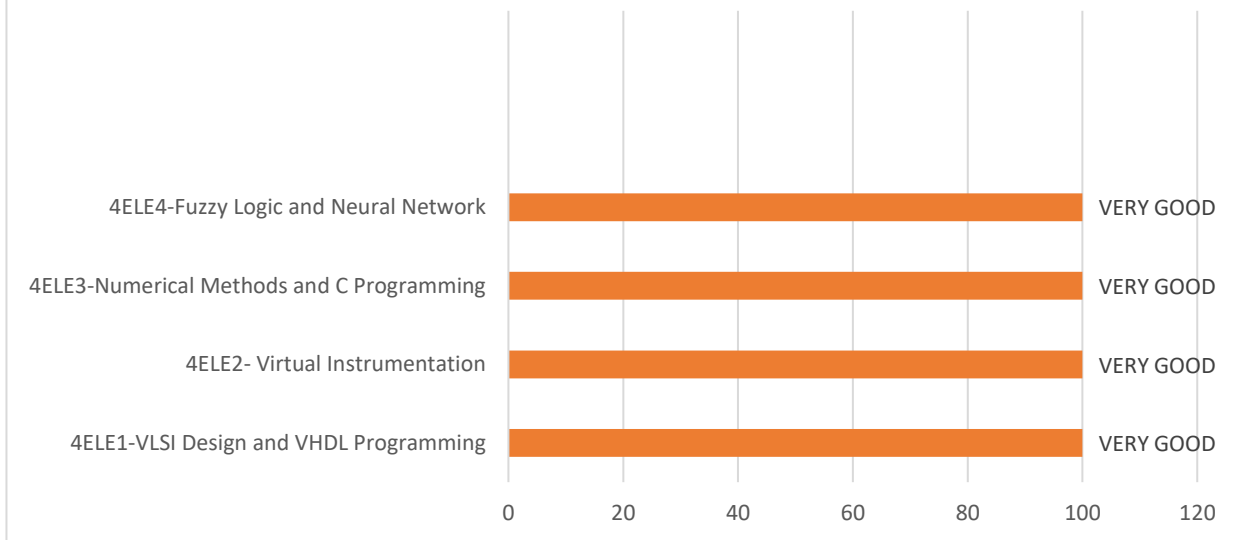
DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.Sc. Microbiology II SEM IV	M.SC.SEM IV MICROBIOLOGY PAPER XIII	100	4	VERY GOOD
	M.SC.SEM IV MICROBIOLOGY PAPER XIV	100	4	VERY GOOD
	M.SC.SEM IV MICROBIOLOGY PAPER XV	100	4	VERY GOOD
	M.SC.SEM IV MICROBIOLOGY PAPER XVI	84.62	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT
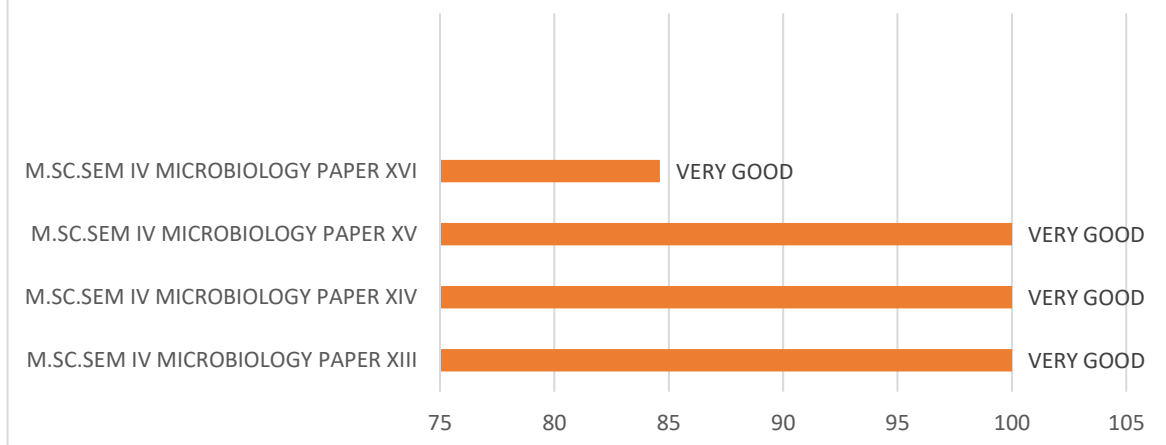
M.SC.SEM IV MICROBIOLOGY PAPER XVI	VERY GOOD
M.SC.SEM IV MICROBIOLOGY PAPER XV	VERY GOOD
M.SC.SEM IV MICROBIOLOGY PAPER XIV	VERY GOOD
M.SC.SEM IV MICROBIOLOGY PAPER XIII	VERY GOOD

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.C.A. Sem VI	6ST 1- .NET using ASP	100	4	VERY GOOD
	6ST 2 – Client Server Technology	100	4	VERY GOOD
	6ST 3 – Multimedia and it's Application	100	4	VERY GOOD
	6ST 4 – Software Testing	100	4	VERY GOOD
	6ST 5- Advance Database Management System	100	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT

Subject		
6ST 5- Advance Database Management System		VERY GOOD
6ST 4 - Software Testing		VERY GOOD
6ST 3 - Multimedia and it's Application		VERY GOOD
6ST 2 - Client Server Technology		VERY GOOD
6ST 1- .NET using ASP		VERY GOOD

0   20   40   60   80   100   120
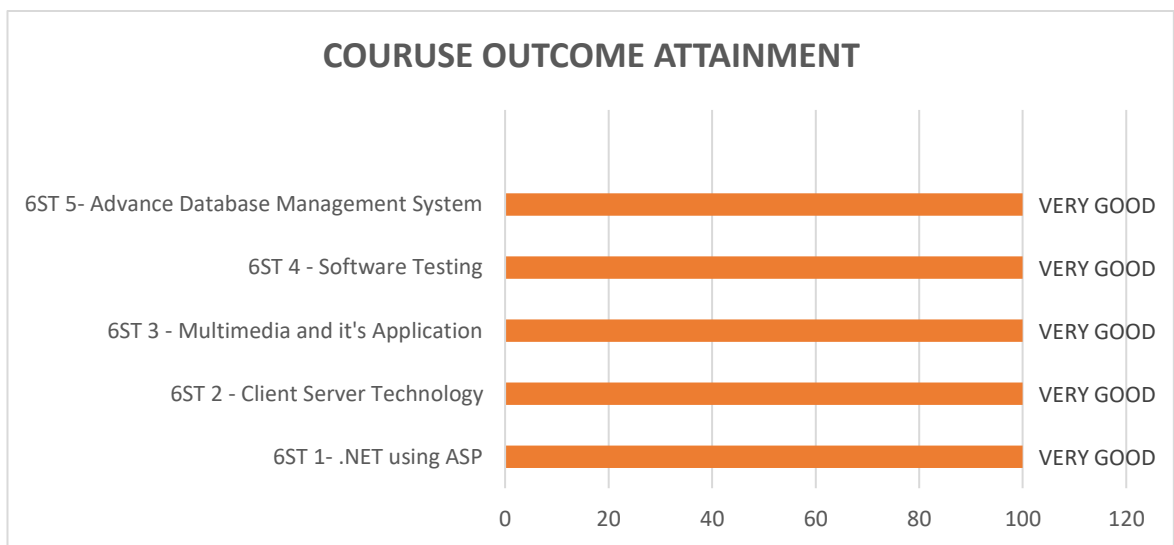
PROGRAM ATTAINMENT -2021-2022

YEAR	Name of the Examination	No. of Students Appeared for Exam	No. of Students Passed in the Exam	Result Percentage (%)	PO Attainment Level	Grade
	Program Outcome Attainment					
2021-22	**BACHELOR OF COMMERCE**	131	95	72.51	3	Good
	BACHELOR OF ARTS	120	43	35.83	2	Satisfactory
	BACHELOR OF SCIENCE	112	102	91.07	4	Very Good
	BACHELOR OF COMPUTER APPLICATION	29	23	79.31	4	Very Good
	MASTER OF SCIENCE IN MATHEMATICS	25	16	64.00	3	Good
	MASTER OF SCIENCE IN ELECTRONICS	55	30	54.55	3	Good
	MASTER OF SCIENCE IN MICROBIOLOGY	29	26	89.66	4	Very Good
	MASTER OF COMMERCE	27	15	53.57	3	Good
	MASTER OF ARTS IN ECONOMICS	75	22	29.33	3	Satisfactory

PROGRAM OUTCOME ATTAINMENT 2021-22

	B.COM PART III SEM VI	B.A. III SEM VI S 2022	B.Sc. III SEM VI S 2022	B.C.A. Sem VI	M.Sc II SEM IV MATHEMATICS	M.Sc. II Sem IV ELECTRONICS	M.SC.SEM IV MICROBIOLOGY	M.COM PART II SEM IV	M.A.II SEM IV S 2022
	1	2	3	4	5	6	7	8	9
Result Percentage(%)	72.51	35.83	91.07	79.31	64.00	54.55	89.66	53.57	29.33

Program Spacific Outcome Attainment

S.N.	Name of the Examination	No.of Students Appread For Exam	No.of Students Passed in the End Year Exam	Result Percentage(%)	No.of Students Passed In First Class	No.of Students Passed In Second Class	No.of Students Passed In Third Class	No.of Students in Passed In Distinction	No.of Students in Passed First Class (%)	No.of Students in Passed Second Class (%)	No.of Students in Passed Third Class (%)	No.of Students in Passed Distinction (%)	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
1	B.COM PART I SEM II	175	39	22.29	27	12	0	0	69.23	30.77	0	0	1		3	3	4	2.75	GOOD
2	B.COM PART IISEM IV	129	48	37.21	25	14	0	9	52.08	29.17	0	18.8	2	1	3	2	4	2.40	SATISFACTORY
3	B.COM PART III SEM VI	131	95	72.52	65	27	0	3	68.42	28.42	0	3.2	3	1	3	2	4	2.60	GOOD
4	M.COM PART I SEM II	41	23	56.10	7	16	0	0	30.43	69.57	0	0.0	3		2	2	4	2.75	GOOD
5	M.COM PART II SEM IV	27	14	51.85	5	9	0	0	35.71	64.29	0	0.0	3		2	4	4	3.25	GOOD
6	B.A. I SEM II S 2022	174	31	17.82	11	19	0	1	35.48	61.29	0	3.2	1	1	2	3	4.0	2.20	SATISFACTORY
7	B.A. II SEM IV S 2022	99	19	19.19	0	17	0	2	0.00	89.47	0	10.5	1	1		4	4.0	2.50	GOOD
8	B.A. III SEM VI S 2022	120	43	35.83	18	25	0	0	41.86	58.14	0	0.0	2		2	3	4.0	2.75	GOOD
9	M.A. I SEM II S 2022	41	8	19.51	2	5	0	1	25.00	62.50	0	12.5	1	1	2	3	4.0	2.20	SATISFACTORY
10	M.A. II SEM IV S 2022	75	22	29.33	10	12	0	0	45.45	54.55	0	0.0	2		2	3	4.0	2.75	GOOD
11	BCA I SEM II S 2022	17	8	47.06	5	2	0	1	62.50	25.00	0	12.5	2	1		3	4	2.50	SATISFACTORY
12	BCA II SEM IV S 2022	22	5	22.73	4	1	0	0	80.00	20.00	0	0.0	1		4		4	3.00	GOOD
13	BCA III SEM VI S 2022	29	23	79.31	7	0	0	16	30.43	0.00	0	69.6	4	3	2		4	3.25	GOOD
14	B.Sc. I SEM II S 2022	120	100	83.33	41	55	0	4	34.17	45.83	0	3.33	4	1	2	2	4	2.60	GOOD
15	B.Sc. II SEM IV S 2022	113	80	70.79	49	18	0	13	43.36	15.93	0	11.5	3	1	2	4	4	2.80	GOOD
16	B.Sc. III SEM VI S 2022	112	102	91.07	74	17	0	11	66.07	15.18	0	9.82	4	1	3	4	4	3.20	GOOD
17	M.Sc. I SEM II (ELECTRONICS) S-2022	11	0	0.00	0	0	0	0	0.00	0.00	0	0.0					0	0.00	POOR
18	M.Sc. II SEM IV (ELECTRONICS)S-2022	25	16	64.00	16	0	0	0	100.00	0.00	0.00	0.00	3		4		4	3.67	VERY GOOD
19	M.Sc. I SEM II (MICROBIOLOGY)S-2022	25	22	88.00	21	2	1	1	95.45	9.09	4.55	4.55	4	1	4	4	4	3.40	SATISFACTORY
20	M.Sc. II SEM IV (MICROBIOLOGY)S-2022	29	26	89.66	23	4	Nil	2	88.46	15.38	0.00	7.69	4	1	4	4	4	3.40	GOOD
21	M.Sc. I SEM II (MATHEMATICS)S-2022	49	15	30.61	7	7	0	1	46.67	46.67	0.00	6.67	2	1	2	2	4	2.20	SATISFACTORY
22	M.Sc. II SEM IV (MATHEMATICS)S-2022	55	30	54.55	0	0	0	30	0.00	0.00	0.00	100.00	3	4			4	3.67	VERY GOOD

PROGRAM SPACIFIC OUTCOME ATTAINMENT(PSO) 2021-22

COMMERCE DEPARTMENT							
Name of the Examination	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
B.COM PART I SEM II	1		3	3	4	3	GOOD
B.COM PART IISEM IV	2	1	3	2	4	2	SATISFACTORY
B.COM PART III SEM VI	3	1	3	2	4	3	GOOD
M.COM PART I SEM II	3		2	2	4	3	GOOD
M.COM PART II SEM IV	3		2	4	4	3	GOOD
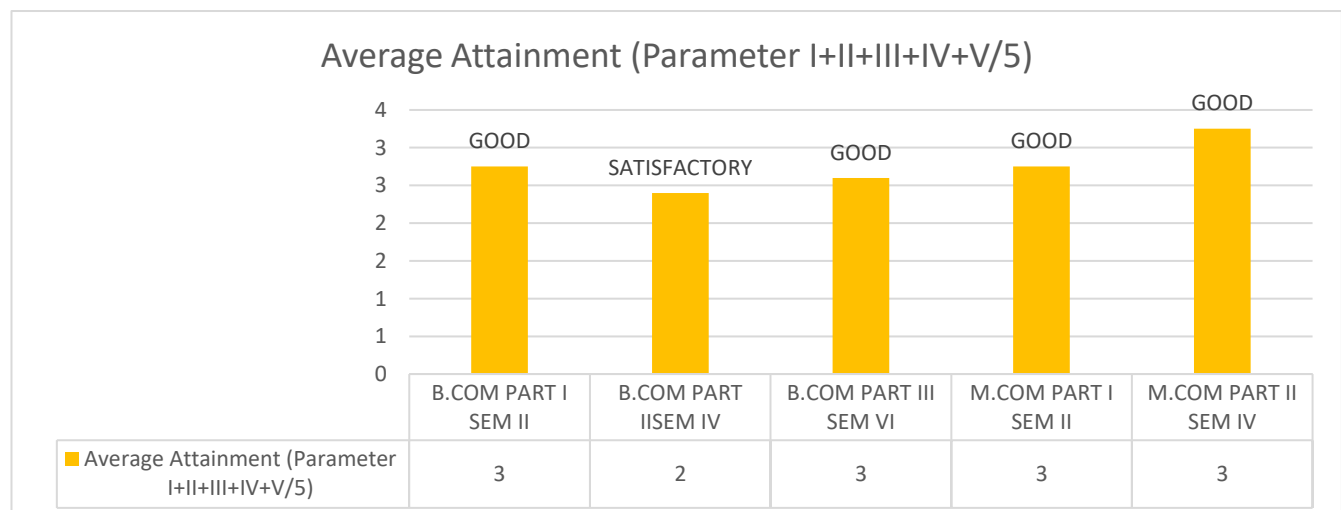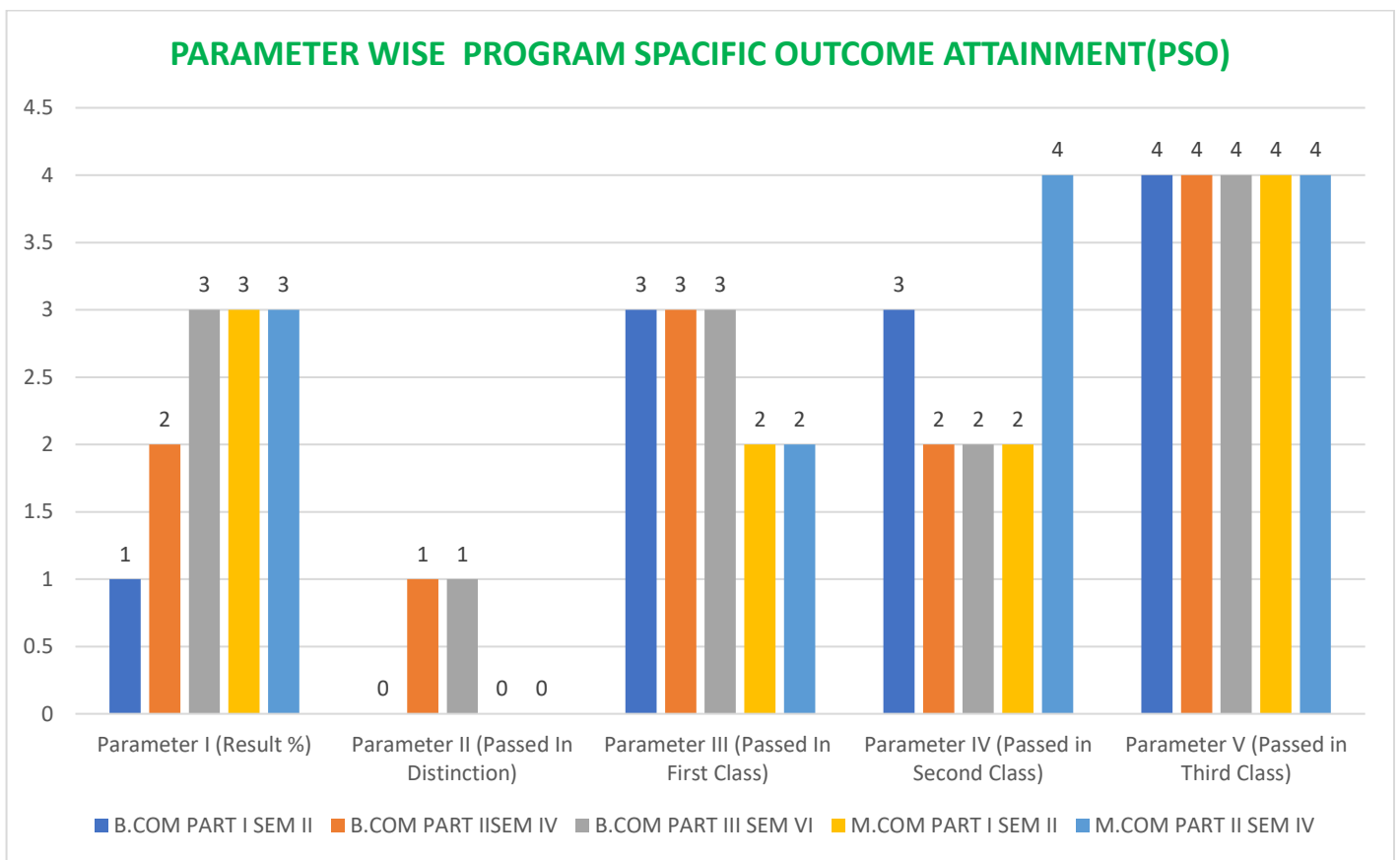
PARAMETER WISE PROGRAM SPACIFIC OUTCOME ATTAINMENT(PSO)

Average Attainment (Parameter I+II+III+IV+V/5)

	B.COM PART I SEM II	B.COM PART IISEM IV	B.COM PART III SEM VI	M.COM PART I SEM II	M.COM PART II SEM IV
Average Attainment (Parameter I+II+III+IV+V/5)	3	2	3	3	3

ARTS DEPARTMENT

Name of the Examination	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
B.A. I SEM II S 2022	1	1	2	3	4	2	SATISFACTORY
B.A. II SEM IV S 2022	1	1	NIL	4	4	3	GOOD
B.A. III SEM VI S 2022	2	NIL	2	3	4	3	GOOD
M.A. I SEM II S 2022	1	1	2	3	4	2	SATISFACTORY
M.A. II SEM IV S 2022	2	NIL	2	3	4	3	GOOD

PARAMETER WISE PROGRAM SPACIFIC OUTCOME ATTAINMENT(PSO)

Average Attainment (Parameter I+II+III+IV+V/5)

SCIENCE DEPARTMENT

Name of the Examination	Parameter I	Parameter II	Parameter III	Parameter IV	Parameter V	Average Attainment (Parameter I+II+III+IV+V/5)	GRADE
B.Sc. I SEM II S 2022	4	1	2	2	4	3	GOOD
B.Sc. II SEM IV S 2022	3	1	2	4	4	3	GOOD
B.Sc. III SEM VI S 2022	4	1	3	4	4	3	GOOD
BCA I SEM II S 2022	2	1	NIL	3	4	3	GOOD
BCA II SEM IV S 2022	1	NIL	4	NIL	4	3	GOOD
BCA III SEM VI S 2022	4	3	2	NIL	4	3	GOOD
M.Sc. I SEM II (ELECTRONICS) S-2022	NIL	NIL	NIL	NIL	0	0	POOR
M.Sc. II SEM IV (ELECTRONICS)S-2022	3	NIL	4	NIL	4	4	VERY GOOD
M.Sc. I SEM II (MICROBIOLOGY)S-2022	4	1	4	4	4	3	GOOD
M.Sc. II SEM IV (MICROBIOLOGY)S-2022	4	1	4	4	4	3	GOOD
M.Sc. I SEM II (MATHEMATICS)S-2022	2	1	2	2	4	2	SATISFACTORY
M.Sc. II SEM IV (MATHEMATICS)S-2022	3	4	NIL	NIL	4	4	VERY GOOD

PARAMETER WISE PROGRAM SPACIFIC OUTCOME ATTAINMENT(PSO)

Average Attainment (Parameter I+II+III+IV+V/5)

COURSE OUTCOME ATTAINMENT 2021-2022

Course Outcome Attainment

Degree	Name of Subject	No.of Students Appeared For Exam	No.of Students Passed in the Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.COM PART I SEM I	ENGLISH	184	175	95.11	4	VERY GOOD
	MARATHI	184	177	96.20	4	VERY GOOD
	PRINCIPLES OF ECONOMICS	184	176	95.65	4	VERY GOOD
	ADVANCED ACCOUNTANCY	184	178	96.74	4	VERY GOOD
	PRINCIPLES OF BUSINESS ORGANISATION	184	179	97.28	4	VERY GOOD
	COMPUTER FUNDAMENTALS & OPERATING SYSTEM-1	184	173	94.02	4	VERY GOOD
B.COM PART I SEM II	ENGLISH	175	99	56.57	3	GOOD
	MARATHI	175	86	49.14	2	SATISFACTORY
	BUSINESS ECONOMCS	175	49	28.00	2	SATISFACTORY
	FINANCIAL ACCOUNTING	175	96	54.86	3	GOOD
	PRINCIPLES OF BUSINESS MANAGEMENT	175	95	54.29	3	GOOD
	COMPUTER FUNDAMENTALS & OPERATING SYSTEM-2	175	70	40.00	2	SATISFACTORY
B.COM PART II SEM III	ENGLISH	132	131	99.24	4	VERY GOOD
	MARATHI	132	132	100.00	4	VERY GOOD
	COMPANY ACCOUNT	132	131	99.24	4	VERY GOOD
	BUSINESS MATHEMATICS	132	131	99.24	4	VERY GOOD
	AUDITING	132	132	100.00	4	VERY GOOD
	MONITORY SYSTEM	132	132	100.00	4	VERY GOOD
	INFORMATION TECHNOLOGY & BUSINESS DATA PROCESSING -1	132	132	100.00	4	VERY GOOD
B.COM PART IIISEM IV	ENGLISH	129	81	62.79	4	VERY GOOD
	MARATHI	129	117	90.70	4	VERY GOOD
	CORPORATE ACCOUNTING	129	74	57.36	3	GOOD
	BUSINESS STATISTICS	129	67	51.94	3	GOOD
	INCOME TAX	129	104	80.62	4	VERY GOOD
	INDIAN FINANCIAL SYSTEM	129	99	76.74	4	VERY GOOD
	INFORMATION TECHNOLOGY & BUSINESS DATA PROCESSING -2	129	113	87.60	4	VERY GOOD
	ENGLISH	131	131	100.00	4	VERY GOOD

B.COM PART III SEM V	MARATHI	131	131	100.00	4	VERY GOOD
	COST ACCOUNTING	131	131	100.00	4	VERY GOOD
	BUSINESS ENVIRONMENT	131	131	100.00	4	VERY GOOD
	BUSINESS REGULATORY	131	131	100.00	4	VERY GOOD
	INTERNET & WORLD WIDE WEB-1	131	131	100.00	4	VERY GOOD
	E-COMMERCE-1	131	131	100.00	4	VERY GOOD
B.COM PART III SEM VI	ENGLISH	131	111	84.73	4	VERY GOOD
	MARATHI	131	122	93.13	4	VERY GOOD
	MANAGEMENT ACCOUNTING	131	116	88.55	4	VERY GOOD
	ECONOMICS OF DEVELOPMENT	131	123	93.89	4	VERY GOOD
	COMPANY LAW	131	113	86.26	4	VERY GOOD
	INTERNET & WORLD WIDE WEB-2	131	124	94.66	4	VERY GOOD
	E-COMMERCE-2	131	126	96.18	4	VERY GOOD
M.COM I SEM I	MANAGERIAL ECONOMICS	37	35	94.59	4	VERY GOOD
	SERVICES MARKETING & CRM	37	35	94.59	4	VERY GOOD
	ADVANCED FINANCIAL ACCOUNTING	37	35	94.59	4	VERY GOOD
	BANKING & INSURANCE	37	35	94.59	4	VERY GOOD
M.COM II SEM II	ACCOUNTING FOR MANAGEMENT	33	28	84.85	4	VERY GOOD
	STRATEGIC MANAGEMENT	33	26	78.79	4	VERY GOOD
	MANAGEMENT CONCEPT & OB	33	27	81.82	4	VERY GOOD
	COMPUTER APPLICATION FOR BUSINESS	33	31	93.94	4	VERY GOOD
M.COM II SEM III	RESEARCH METHODOLOGY	25	25	100.00	4	VERY GOOD
	STATISTICAL ANALYSIS	24	24	100.00	4	VERY GOOD
	CORPORATE TAX & MANAGEMENT	25	25	100.00	4	VERY GOOD
	E-COMMERCE & LEGAL SECURITY	25	25	100.00	4	VERY GOOD
M.COM II SEM IV	ENTREPRENEURHIP AND SKILL DEVELOPMENT	27	19	70.37	4	VERY GOOD
	INTERRNATIONAL FINANCING	27	23	85.19	4	VERY GOOD
	SALES AND DISTRIBUTION MANAGEMENT	27	18	66.67	4	VERY GOOD
	COOPERATIVE MANAGEMENT	27	15	55.56	4	VERY GOOD
B.A. PART I	**B.A.SEM I ENG**	182	159	87.36	4	VERY GOOD
	B.A.SEM I MAR	183	167	91.25	4	VERY GOOD
	B.A.SEM I ECO	164	141	85.87	4	VERY GOOD
	B.A.SEM I ELT	7	7	100.00	4	VERY GOOD
	B.A.SEM I POI	182	175	96.15	4	VERY GOOD
	B.A.SEM I HIS	140	131	93.57	4	VERY GOOD

	B.A.SEM I SLT	47	45	95.74	4	VERY GOOD
B.A.PART I	B.A.SEM II ENG	166	51	30.72	2	SATISFACTORY
	B.A.SEM II MAR	166	136	81.92	4	VERY GOOD
	B.A.SEM II ECO	158	104	65.82	3	GOOD
	B.A.SEM II ELT	8	3	37.50	2	SATISFACTORY
	B.A.SEM II POL	166	99	59.63	3	GOOD
	B.A.SEM II HIS	128	39	30.46	2	GOOD
	B.A. SEM II SLT	33	11	33.33	2	GOOD
B.A.PART II	B.A. SEM III ENG	102	101	99.01	4	SATISFACTORY
	B.A. SEM III MAR	103	102	99.02	4	SATISFACTORY
	B.A. SEM III ECO	96	94	97.91	4	SATISFACTORY
	B.A. SEM III ELT	8	8	100.00	4	SATISFACTORY
	B.A. SEM III POL	103	101	98.05	4	SATISFACTORY
	B.A. SEM III HIS	86	85	98.83	4	SATISFACTORY
	B.A. SEM III SLT	18	16	88.88	4	SATISFACTORY
B.A.PART II	B.A. SEM IV ENG	97	27	27.83	2	SATISFACTORY
	B.A. SEM IV MAR	98	86	87.75	4	VERY GOOD
	B.A. SEM IV ECO	90	51	56.66	3	GOOD
	B.A. SEM IV ELT	8	6	75.00	4	VERY GOOD
	B.A. SEM IV POL	97	63	64.94	3	GOOD
	B.A. SEM IV HIS	80	26	32.50	2	SATISFACTORY
	B.A. SEM IV SLT	16	16	100.00	4	VERY GOOD
B.A.PART III	B.A. SEM V ENG	125	123	98.40	4	VERY GOOD
	B.A. SEM V MAR	124	123	99.19	4	VERY GOOD
	B.A. SEM V ECO	125	123	98.40	4	VERY GOOD
	B.A. SEM V POL	125	124	99.20	4	VERY GOOD
	B.A. SEM V HIS	121	119	98.34	4	VERY GOOD
	B.A. SEM V SLT	3	3	100.00	4	VERY GOOD
B.A.PART III	B.A. SEM VI ENG	120	63	52.50	3	GOOD
	B.A. SEM VI MAR	118	112	94.91	4	VERY GOOD
	B.A. SEM VI ECO	118	62	52.54	3	GOOD
	B.A. SEM VI POL	120	80	66.66	3	GOOD
	B.A. SEM VI HIS	117	56	47.86	2	SATISFACTORY
	B.A. SEM VI SLT	3	1	33.33	2	SATISFACTORY
	MEA	48	43	89.58	4	VERY GOOD

M.A.Part I Sem I	**MAE**	47	45	95.74	4	VERY GOOD
	HET	47	47	100.00	4	VERY GOOD
	EMS	48	47	97.91	4	VERY GOOD
M.A.Part II Sem II	**ERD**	41	15	36.58	2	SATISFACTORY
	ITF	41	11	26.82	2	SATISFACTORY
	BIC	41	27	65.85	3	GOOD
	FIM	41	23	56.09	3	GOOD
M.A.Part II Sem III	**MEA**	77	77	100.00	4	VERY GOOD
	MAE	78	78	100.00	4	VERY GOOD
	HET	78	78	100.00	4	VERY GOOD
	EMS	75	75	100.00	4	VERY GOOD
M.A.Part II Sem IV	**ERD**	74	39	52.70	3	GOOD
	ITF	75	39	52.00	3	GOOD
	BIC	74	33	44.59	2	SATISFACTORY
	FIM	72	32	44.44	2	SATISFACTORY
B.Sc. I	ENGLISH	123	122	99.19	4	VERY GOOD
	MARATHI	123	122	99.19	4	VERY GOOD
	B.Sc. I SEM I PHYSICS	63	62	98.41	4	VERY GOOD
	B.Sc. I SEM I CHEMISTRY	71	71	100.00	4	VERY GOOD
	B.Sc. I SEM I MATHEMATICS	42	42	100.00	4	VERY GOOD
	B.Sc. I SEM I ELECTRONICS	35	35	100.00	4	VERY GOOD
	B.Sc. I SEM I COMPUTER SCIENCE	39	39	100.00	4	VERY GOOD
	B.Sc. I SEM I MICROBIOLOGY	58	58	100.00	4	VERY GOOD
	B.Sc. I SEM I BOTANY	30	30	100.00	4	VERY GOOD
	B.Sc. I SEM I ZOOLOGY	29	29	100.00	4	VERY GOOD
B.SC. I	ENGLISH	120	111	92.50	4	VERY GOOD
	MARATHI	120	115	95.83	4	VERY GOOD
	B.Sc. I SEM II PHYSICS	63	55	87.30	4	VERY GOOD
	B.Sc. I SEM II CHEMISTRY	67	60	89.55	4	VERY GOOD
	B.Sc. I SEM II MATHEMATICS	39	38	97.43	4	VERY GOOD
	B.Sc. I SEM II ELECTRONICS	35	32	91.43	4	VERY GOOD
	B.Sc. I SEM II COMPUTER SCIENCE	39	38	97.44	4	VERY GOOD
	B.Sc. I SEM II MICROBIOLOGY	57	50	87.72	4	VERY GOOD
	B.Sc. I SEM II BOTANY	29	29	100.00	4	VERY GOOD
	B.Sc. I SEM II ZOOLOGY	28	28	100.00	4	VERY GOOD

B.Sc. II	B.Sc. II SEM III PHYSICS	73	73	100.00	4	VERY GOOD
	B.Sc. II SEM III CHEMISTRY	53	53	100.00	4	VERY GOOD
	B.Sc. II SEM III MATHEMATICS	46	46	100.00	4	VERY GOOD
	B.Sc. II SEM III ELECTRONICS	43	43	100.00	4	VERY GOOD
	B.Sc. II SEM III COMPUTER SCIENCE	46	46	100.00	4	VERY GOOD
	B.Sc. II SEM III MICROBIOLOGY	41	41	100.00	4	VERY GOOD
	B.Sc. II SEM III BOTANY	18	18	100.00	4	VERY GOOD
	B.Sc. II SEM III ZOOLOGY	21	21	100.00	4	VERY GOOD
B.Sc. II	B.Sc. II SEM IV PHYSICS	68	52	76.47	4	VERY GOOD
	B.Sc. II SEM IV CHEMISTRY	52	44	84.61	4	VERY GOOD
	B.Sc. II SEM IV MATHEMATICS	44	40	90.90	4	VERY GOOD
	B.Sc. II SEM IV ELECTRONICS	42	37	88.10	4	VERY GOOD
	B.Sc. II SEM IV COMPUTER SCIENCE	46	29	63.04	3	GOOD
	B.Sc. II SEM IV MICROBIOLOGY	41	37	90.24	4	VERY GOOD
	B.Sc. II SEM IV BOTANY	18	16	89.00	4	VERY GOOD
	B.Sc. II SEM IV ZOOLOGY	23	23	100.00	4	VERY GOOD
B.Sc. III	B.Sc. III SEM V PHYSICS	70	70	100.00	4	VERY GOOD
	B.Sc. III SEM V CHEMISTRY	55	55	100.00	4	VERY GOOD
	B.Sc. III SEM V MATHEMATICS	50	50	100.00	4	VERY GOOD
	B.Sc. III SEM V ELECTRONICS	43	43	100.00	4	VERY GOOD
	B.Sc. III SEM V COMPUTER SCIENCE	35	35	100.00	4	VERY GOOD
	B.Sc. III SEM V MICROBIOLOGY	43	43	100.00	4	VERY GOOD
	B.Sc. III SEM V BOTANY	25	25	100.00	4	VERY GOOD
	B.Sc. III SEM V ZOOLOGY	18	18	100.00	4	VERY GOOD
B.Sc. III	B.Sc. III SEMVI PHYSICS	69	65	94.20	4	VERY GOOD
	B.Sc. III SEMVI CHEMISTRY	54	50	92.59	4	VERY GOOD
	B.Sc. III SEMVI MATHEMATICS	49	48	97.96	4	VERY GOOD
	B.Sc. III SEMVI ELECTRONICS	43	43	100.00	4	VERY GOOD
	B.Sc. III SEMVI COMPUTER SCIENCE	35	30	85.71	4	VERY GOOD
	B.Sc. III SEMVI MICROBIOLOGY	43	43	100.00	4	VERY GOOD
	B.Sc. III SEMVI BOTANY	25	24	96.00	4	VERY GOOD
	B.Sc. III SEMVI ZOOLOGY	18	18	100.00	4	VERY GOOD
M.Sc. Mathematics	REAL ANALYSIS	48	46	95.83	4	VERY GOOD
	ADVANCED ABSTRACT ALGEBRA	48	48	100.00	4	VERY GOOD
	COMPLEX ANALYSIS	48	48	100.00	4	VERY GOOD
	TOPOLOGY-I	48	48	100.00	4	VERY GOOD

	DIFFRENTIAL GEOMETRY	48	48	100.00	4	VERY GOOD
	MEASURE AND INTEGRATION THEORY	49	38	77.55	4	VERY GOOD
	ADVANCED LINEAR ALGEBRA &FIELD THEORY	49	40	81.63	4	VERY GOOD
	INTEGRAL EQUATIONS	49	34	69.39	3	GOOD
	TOPOLOGY-II	49	29	59.18	3	GOOD
	RIEMANNIAN GEOMETRY	49	41	83.67	4	VERY GOOD
	FUNCTIONAL ANALYSIS-I	55	55	100.00	4	VERY GOOD
	ADVANCED MECHANICS	55	55	100.00	4	VERY GOOD
	OPERATIONAL RESEACH	55	55	100.00	4	VERY GOOD
	GENERAL RELATIVITY	55	55	100.00	4	VERY GOOD
	DIFFERENCE EQUATIONS-I	55	55	100.00	4	VERY GOOD
	(I)FUNCTIONAL ANALYSIS-II	55	50	90.91	4	VERY GOOD
	(II)PARTIAL DIFFERENTIAL EQUATIONS	55	51	92.73	4	VERY GOOD
	(III)NUMERICAL ANALYSIS	55	40	72.73	3	GOOD
	(IV)RELATIVISTIC &COSMOLOGY	55	49	89.09	4	VERY GOOD
	(V)DIFFERENCE EQUATIONS-II	55	55	100.00	4	VERY GOOD
M.Sc. Electronics	1ELE1	14	14	100.00	4	VERY GOOD
	1ELE2	14	14	100.00	4	VERY GOOD
	1ELE3	14	14	100.00	4	VERY GOOD
	1ELE4	14	14	100.00	4	VERY GOOD
	2ELE1	11	4	36.36	2	SATISFACTORY
	2ELE2	11	2	18.18	1	UNSATISFACTORY
	2ELE3	11	2	18.18	1	UNSATISFACTORY
	2ELE4	11	11	100.00	4	VERY GOOD
	3ELE1	25	25	100.00	4	VERY GOOD
	3ELE2	25	25	100.00	4	VERY GOOD
	3ELE3	25	25	100.00	4	VERY GOOD
	3ELE4	25	25	100.00	4	VERY GOOD
	4ELE1	25	17	68.00	3	GOOD
	4ELE2	24	21	87.50	4	VERY GOOD
	4ELE3	24	22	91.67	4	VERY GOOD
	4ELE4	24	24	100.00	4	VERY GOOD
M.Sc. Microbiology	Microbial Techniques	26	26	100.00	4	VERY GOOD
	Microbial Enzymology	26	26	100.00	4	VERY GOOD
	Microbial physiology and photosynthesis	26	26	100.00	4	VERY GOOD
	Environmental Microbiology	26	26	100.00	4	VERY GOOD
	Biostatistics, Bioinformatics and computer application	25	22	88.00	4	VERY GOOD
	Enzyme Technology	25	24	96.00	4	VERY GOOD
	Microbial Metabolism	25	24	96.00	4	VERY GOOD
	Environmental Microbiology and Extremophiles	25	24	96.00	4	VERY GOOD
	Molecular Biology	29	29	100.00	4	VERY GOOD
	Virology	29	29	100.00	4	VERY GOOD
	Fementation Technology	29	29	100.00	4	VERY GOOD
	Immunology	29	29	100.00	4	VERY GOOD
	Biotechnology	29	27	93.10	4	VERY GOOD
	Clinical Virology	29	29	100.00	4	VERY GOOD
	Microbial Technology	29	28	96.55	4	VERY GOOD
	Medical Microbiology	29	28	96.55	4	VERY GOOD

	Subject					
B.C.A. Sem I	1ST 1- Computer Fundamentals	17	17	100.00	4	VERY GOOD
	1ST 2-C-Programming	17	17	100.00	4	VERY GOOD
	1ST 3 - Digital Techniques-	17	17	100.00	4	VERY GOOD
	1ST 4- Numerical Methods	17	17	100.00	4	VERY GOOD
	1ST 5- Mathematics (Discrete Mathematics)	17	17	100.00	4	VERY GOOD
	1ST 6- Communication Skills	17	17	100.00	4	VERY GOOD
B.C.A. Sem II	2ST 1- Operating System	17	9	52.94	3	GOOD
	2ST 2-Advance C-Programming	17	12	70.59	3	GOOD
	2ST 3 - Digital Techniques-II	17	12	70.59	3	GOOD
	2ST 4- Numerical Methods-II	17	12	70.59	3	GOOD
	2ST 5- Mathematics (Discrete Mathematics-II)	17	16	94.12	4	VERY GOOD
	2ST 6- Communication Skills-II	17	13	76.47	4	VERY GOOD
B.C.A. Sem III	3ST 1 - Data Structure	24	23	95.83	4	VERY GOOD
	3ST 2-0bject Oriented Programming with C++	24	23	95.83	4	VERY GOOD
	3ST 3 Data-Base Management System	24	23	95.83	4	VERY GOOD
	3ST 4- Advanced Operating System	24	23	95.83	4	VERY GOOD
	3ST 5- Electronics	24	23	95.83	4	VERY GOOD
B.C.A. Sem IV	4ST 1 - System Analysis Design & MIS	24	6	25.00	1	POOR
	4ST 2- Visual Basic	24	7	29.17	1	POOR
	4ST 3 - Web Designing and Office Automation	24	18	75.00	3	VERY GOOD
	4ST 4- Networking	24	6	25.00	1	POOR
	4ST 5- Advance Microprocessor and Microcontroller	24	16	66.67	3	GOOD
B.C.A. Sem V	5 ST 1- Core Java	30	30	100.00	4	VERY GOOD
	5 ST 2 - Network Security	30	30	100.00	4	VERY GOOD
	5 ST 3 - Software Engineeing	30	30	100.00	4	VERY GOOD
	5 ST 4 - Computer GraphicCS	30	30	100.00	4	VERY GOOD
	5 ST 5-E-Commerce	30	30	100.00	4	VERY GOOD
B.C.A. Sem VI	6ST 1- .NET using ASP	29	21	72.41	3	GOOD
	6ST 2 - Client Server Technology	29	24	82.76	4	VERY GOOD
	6ST 3 - Multimedia and it's Application	29	27	93.10	4	VERY GOOD
	6ST 4 - Software Testing	29	24	82.76	4	VERY GOOD
	6ST 5- Advance Database Management System	29	25	86.21	4	VERY GOOD

DEPARMENT OF COMMERCE

| DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.COM PART III SEM VI	ENGLISH	85	4	VERY GOOD
	MARATHI	93	4	VERY GOOD
	MANAGEMENT ACCOUNTING	89	4	VERY GOOD
	ECONOMICS OF DEVELOPMENT	94	4	VERY GOOD
	COMPANY LAW	86	4	VERY GOOD
	INTERNET & WORLD WIDE WEB-2	95	4	VERY GOOD
	E-COMMERCE-2	96	4	VERY GOOD

COURSE OUTCOME ATTAINMENT
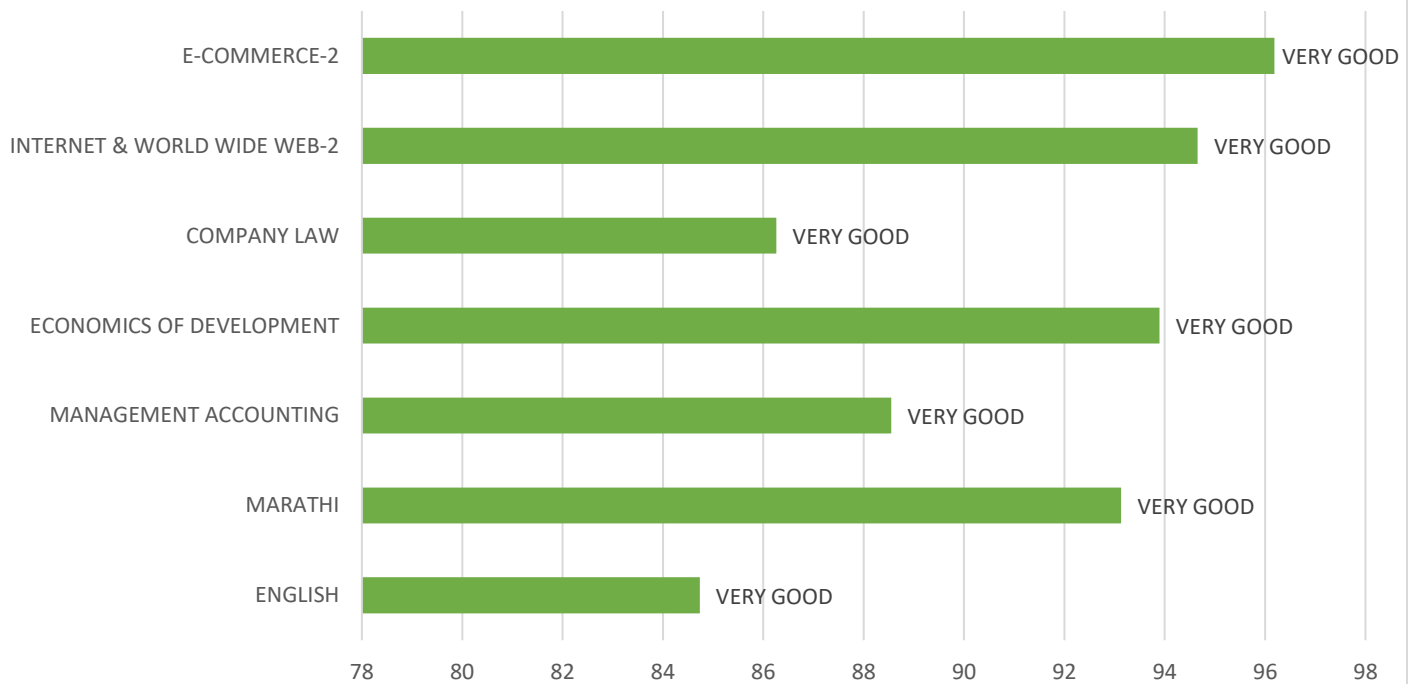
	ENGLISH	MARATHI	MANAGEMENT ACCOUNTING	ECONOMICS OF DEVELOPMENT	COMPANY LAW	INTERNET & WORLD WIDE WEB-2	E-COMMERCE-2
■ Passed Percentage (%)	85	93	89	94	86	95	96

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.COM II SEM IV	ENTREPRENEURHIP AND SKILL DEVELOPMENT	70.37	3	GOOD
	INTERRNATIONAL FINANCING	85.19	4	VERY GOOD
	SALES AND DISTRIBUTION MANAGEMENT	66.67	3	GOOD
	COOPERATIVE MANAGEMENT	55.56	3	GOOD

COURSE OUTCOME ATTAINMENT
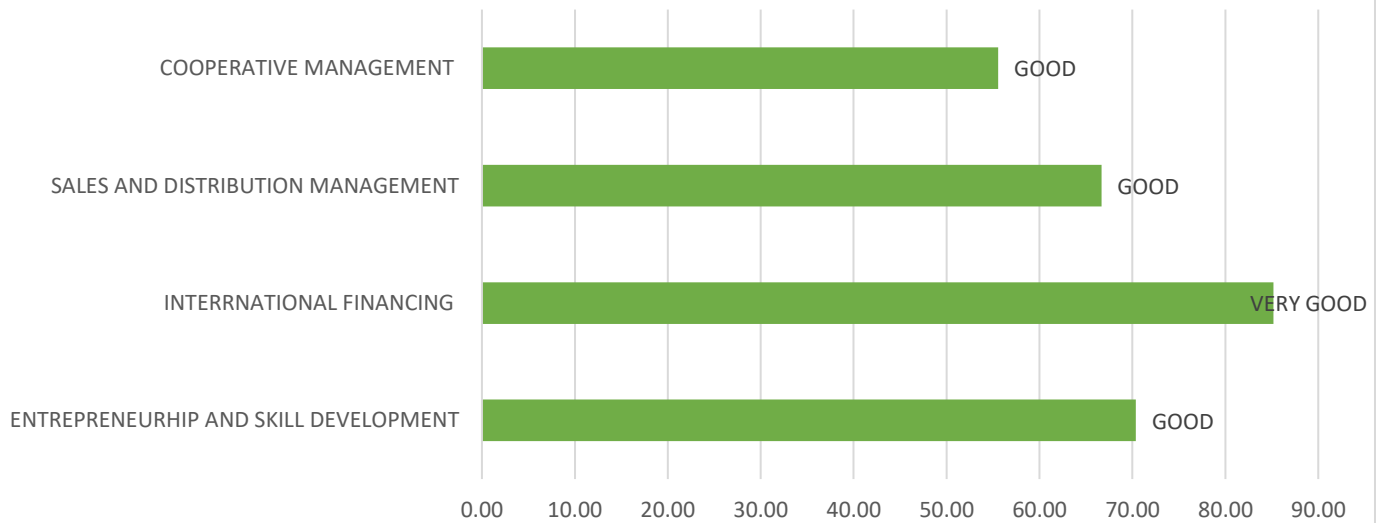
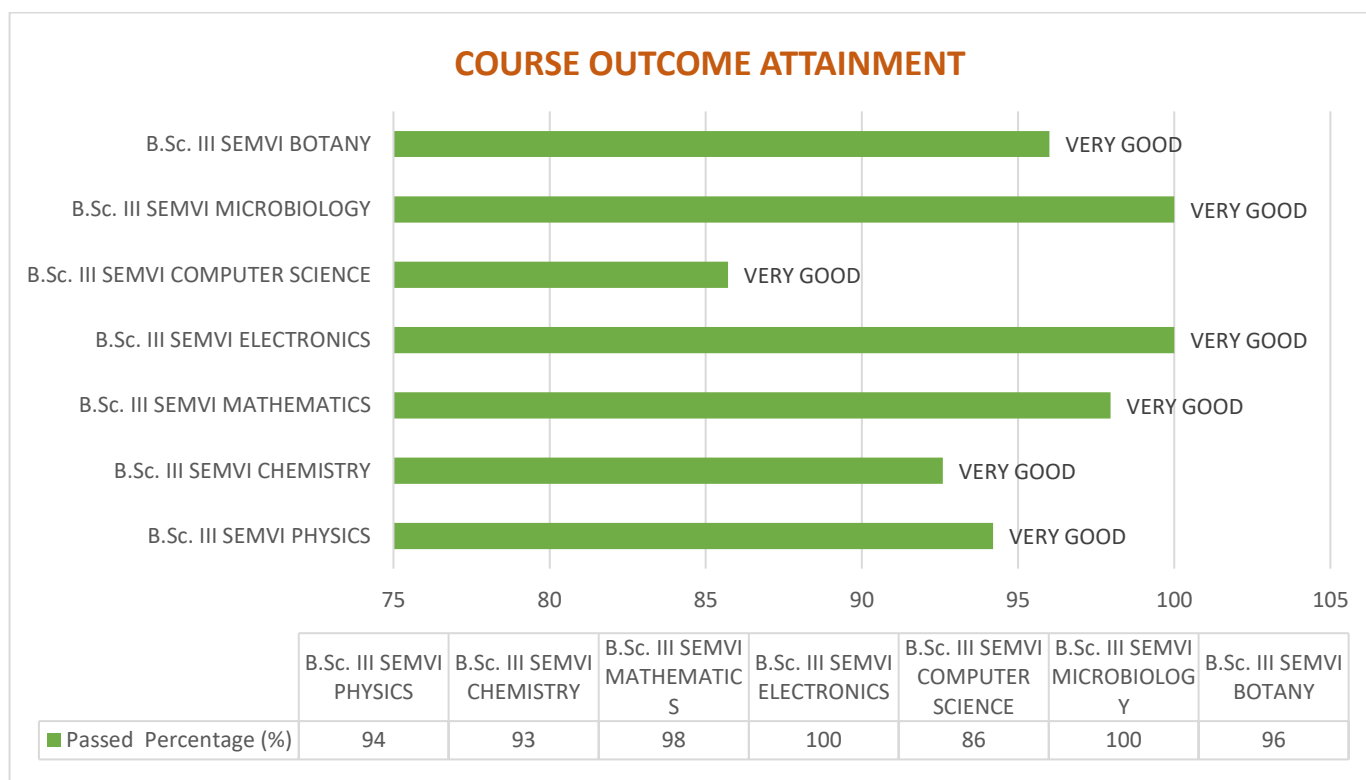|	ENTREPRENEURHIP AND SKILL DEVELOPMENT	INTERRNATIONAL FINANCING	SALES AND DISTRIBUTION MANAGEMENT	COOPERATIVE MANAGEMENT
Passed Percentage (%)	70.37	85.19	66.67	55.56

COURSE OUTCOME ATTAINMENT 2021-2022

DEPARMENT OF SCIENCE

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.SC. PART III SEM VI	B.Sc. III SEMVI PHYSICS	94	4	VERY GOOD
	B.Sc. III SEMVI CHEMISTRY	93	4	VERY GOOD
	B.Sc. III SEMVI MATHEMATICS	98	4	VERY GOOD
	B.Sc. III SEMVI ELECTRONICS	100	4	VERY GOOD
	B.Sc. III SEMVI COMPUTER SCIENCE	86	4	VERY GOOD
	B.Sc. III SEMVI MICROBIOLOGY	100	4	VERY GOOD
	B.Sc. III SEMVI BOTANY	96	4	VERY GOOD
	B.Sc. III SEMVI ZOOLOGY	100	4	VERY GOOD

COURSE OUTCOME ATTAINMENT

	B.Sc. III SEMVI PHYSICS	B.Sc. III SEMVI CHEMISTRY	B.Sc. III SEMVI MATHEMATICS	B.Sc. III SEMVI ELECTRONICS	B.Sc. III SEMVI COMPUTER SCIENCE	B.Sc. III SEMVI MICROBIOLOGY	B.Sc. III SEMVI BOTANY
Passed Percentage (%)	94	93	98	100	86	100	96

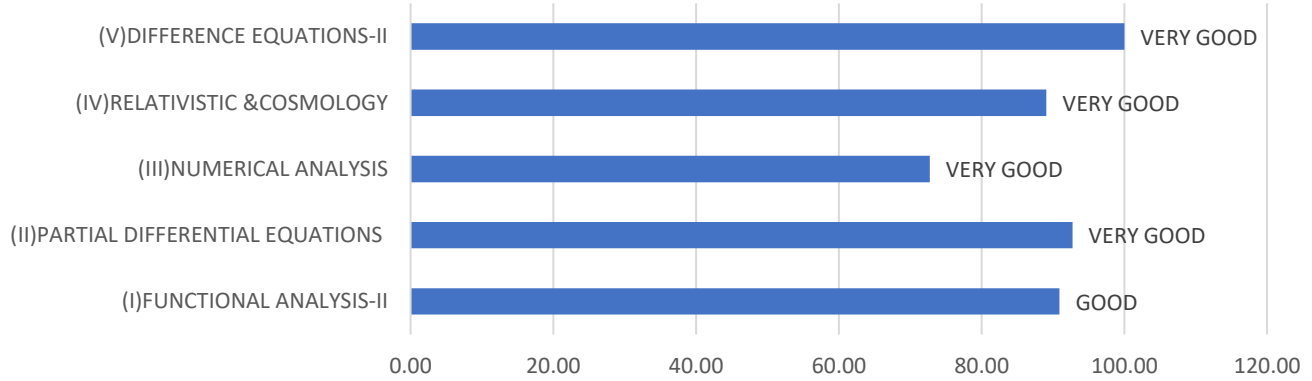| DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.C.A. Sem VI	6ST 1- .NET using ASP	72.41	3	GOOD
	6ST 2 - Client Server Technology	82.76	4	VERY GOOD
	6ST 3 - Multimedia and its Application	93.10	4	VERY GOOD
	6ST 4 - Software Testing	82.76	4	VERY GOOD
	6ST 5- Advance Database Management System	86.21	4	VERY GOOD

COURSE OUTCOME ATTAINMENT

	6ST 1- .NET using ASP	6ST 2 - Client Server Technology	6ST 3 - Multimedia and it's Application	6ST 4 - Software Testing	6ST 5- Advance Database Management System
■ Passed Percentage (%)	72.41	82.76	93.10	82.76	86.21

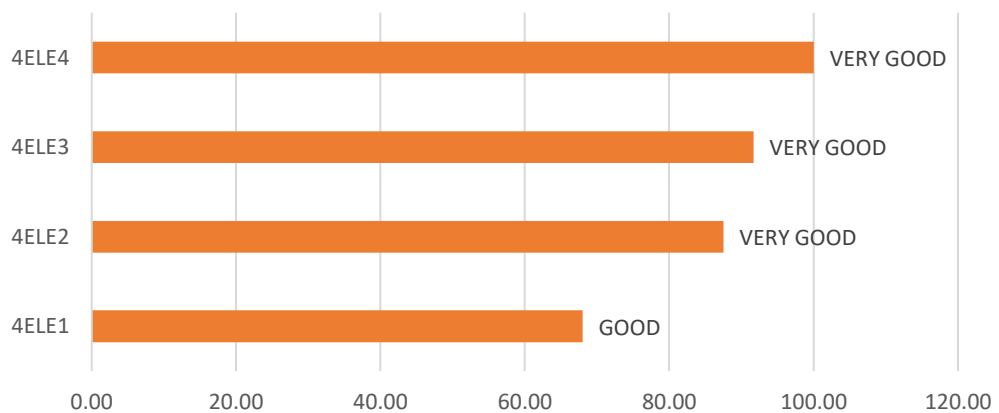| DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.Sc. Mathematics	(I)FUNCTIONAL ANALYSIS-II	90.91	4	VERY GOOD
	(II)PARTIAL DIFFERENTIAL EQUATIONS	92.73	4	VERY GOOD
	(III)NUMERICAL ANALYSIS	72.73	3	GOOD
	(IV)RELATIVISTIC &COSMOLOGY	89.09	4	VERY GOOD
	(V)DIFFERENCE EQUATIONS-II	100.00	4	VERY GOOD

COURSE OUTCOME ATTAINMENT

	(I)FUNCTIONAL ANALYSIS-II	(II)PARTIAL DIFFERENTIAL EQUATIONS	(III)NUMERICAL ANALYSIS	(IV)RELATIVISTIC &COSMOLOGY	(V)DIFFERENCE EQUATIONS-II
Passed Percentage (%)	90.91	92.73	72.73	89.09	100.00

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.Sc. Electronics	4ELE1	68.00	3	GOOD
	4ELE2	87.50	4	VERY GOOD
	4ELE3	91.67	4	VERY GOOD
	4ELE4	100.00	4	VERY GOOD

COURSE OUTCOME ATTAINMENT

	4ELE1	4ELE2	4ELE3	4ELE4
Passed Percentage (%)	68.00	87.50	91.67	100.00

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
M.Sc. Microbiology	Biotechnology	93.10	4	VERY GOOD
	Clinical Virology	100.00	4	VERY GOOD
	Microbial Technology	96.55	4	VERY GOOD
	Medical Microbiology	96.55	4	VERY GOOD

COURSE OUTCOME ATTAINMENT

	Biotechnology	Clinical Virology	Microbial Technology	Medical Microbiology
Passed Percentage (%)	93.10	100.00	96.55	96.55

DEGREE	Name of Subject	Passed Percentage (%)	CO Attainment Level	Grade
B.C.A. Sem VI	6ST 1- .NET using ASP	72.41	3	GOOD
	6ST 2 - Client Server Technology	82.76	4	VERY GOOD
	6ST 3 - Multimedia and it's Application	93.10	4	VERY GOOD
	6ST 4 - Software Testing	82.76	4	VERY GOOD
	6ST 5- Advance Database Management System	86.21	4	VERY GOOD

COURUSE OUTCOME ATTAINMENT

Course	Attainment
6ST 5- Advance Database Management System	VERY GOOD
6ST 4 - Software Testing	VERY GOOD
6ST 3 - Multimedia and it's Application	VERY GOOD
6ST 2 - Client Server Technology	VERY GOOD
6ST 1- .NET using ASP	GOOD

Scale: 0, 20, 40, 60, 80, 100, 120