ST FRANCIS DE SALES COLLEGE

Permanently Affiliated to Bangalore University || AICTE Approved   Electronic City, Bengaluru - 100

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A FRANSALIAN INSTITUTE OF HIGHER LEARNING

DEPARTMENT OF SCIENCE

BSc

PO-PSO-CO

Programme Outcomes(PO):

Programme Outcomes	Graduate Attribute/Program Outcome
PO-1	Intellectual Rigour and Research
PO-2	Digital Capability
PO-3	Professional & Effective Communication Skills
PO-4	Creative and Critical Thinker
PO-5	Inter-disciplinary and Social Interaction
PO-6	Holistic life-long formation with ethical practices & environmental concerns
PO-7	Optimistic Catalyst of Transformation and Effective Citizenship

Programme Specific Outcomes(PSO): PCM

PSO No.	Programme Specific Outcomes Upon completion of the B.Sc(PCM) Degree Programme, the graduate will be able to	Programme Outcomes
PSO-1	Acquire a systematic understanding of the different areas of study in physics, mathematics and chemistry.	PO1,PO3
PSO-2	Understand the interrelations between the different subjects and develop the ability to identify the links.	PO2,PO3

PSO-3	Develop skills necessary to plan, design and conduct experiments to test, demonstrate, verify and extend theoretical knowledge reliably and safely.	PO4
PSO-4	Develop ability to logically analyse data and solve problems systematically and objectively analyse open ended problems.	PO4,PO5
PSO-5	Demonstrate generic competencies such as communicating technical concepts in popular language, skilled use of ICT and ability to work both individually and in groups.	PO5
PSO-6	Use existing knowledge to synthesise new ideas and approaches to unfamiliar situations.	PO5,PO6
PSO-7	Acquire ability to face competitive exams for higher study in a chosen subject and procedural knowledge required for professional engagement in industry, teaching, research or other service.	PO5,PO6,PO7

6.1 Course Outcomes (CO) Name

of the Course: Physics Paper VII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understand the basics of structure of atom and study the various phenomena associated with atoms	PSO – 1,2,3	U,E, An,Ap,C
CO2	Able to specify the "Radioactive decay" for fields and understand why they are required. • Have an ability to determine and describe particle detectors and accelerators	PSO -2,3	U,E, An,Ap,C
CO3	Acquire Knowledge of Nuclear reactions and fundamental particles	PSO -1,4	U,E, An,Ap,C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.2 Course Outcomes (CO)

Name of the Course: Physics VIII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understand the main features of the historical development of quantum physics. discuss and explain the key concepts and principles of quantum physics	PSO – 1,2,3	U,E, An,Ap,C
CO2	Designing the logic gates and study the main features of the development of operational amplifiers .Acquire ability to discuss and explain the key concepts and principles of OPAMP	PSO -2,3	U,E, An,Ap,C
CO3	Apply quantum mechanics on dry and humid air. Determine if the atmosphere is stable or unstable from a vertical temperature profile. Describe how precipitation is created	PSO -1,4	U,E, An,Ap,C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.3 Course Outcomes (CO)

Name of the Course: Chemistry VII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Learn in detail the nomenclature, theories, properties and chelates of coordination compound	PSO – 1,2,3,7	R, U,E, An,Ap,C
CO2	Identify refractories, abrasives and glasses from their properties for its use in a specific application	PSO -1, 2, 6	R, U,E,

CO		PSOs Addressed	Cognitive Level
			An,Ap
CO3	Describe the production techniques and raw materials used in various industrial materials such as Cement, ceramics, paints, fuels and propellants.	PSO -1,4, 5	U,E, An,Ap
CO4	Explain the essential and trace elements in biological systems and their role	PSO -1, 5, 7	R, U, Ap
CO5	Learn the type, preparation and applications of some newer materials like conducting polymers, super conductors, fullerenes and nanoaterials	PSO -1, 5, 7	R, U, An

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.4 Course Outcomes (CO)

Name of the Course: Chemistry VIII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Generate awareness on the contribution of eminent personalities in the field of biochemistry and its significance and applications	PSO – 1,3,7	R, U,E, An,Ap,C
CO2	Describe the structure, classification and biological role of carbohydrates, lipids and proteins	PSO -1,2, 4, 6	R, U,E, An,Ap
CO3	Learn the types and structure of nucleic acids and hormones	PSO -1,4, 7	U,E, An,Ap
CO4	Explain enzyme classification, interaction and kinetics.	PSO -1, 5, 7	R, U, Ap

CO		PSO -1, 5, 7	R, U, An
CO5	Analyse the concept of biological oxidation and metabolism	PSO -1, 5, 7	R, U, An

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.5 Course Outcomes (CO)

Name of the Course: Mathematics VII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Gains knowledge about Vector spaces And gets idea about its various applications. .	PSO – 1,6,7	R,U,E, Ap,An
CO2	Understands concept and applications of linear transformation and standard properties of linear transformation.	PSO -1,6,7	Ap,An, E
CO3	Studies about orthogonal curvilinear coordinates and also gets idea about conversion of one coordinate system to another.	PSO -1,6,7	E,Ap,An
CO4	Studies formation of partial differential equation and understands the practical applications of linear and partial differential equation,	PSO -1,6,7	R,U,E,Ap
CO5	Solution of second order linear pde by finding CF and PI	PSO -1,6,7	U,E,Ap

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.6 Course Outcomes (CO)

Name of the Course: Mathematics VIII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understanding of basic concepts complex numbers, complex analysis, analytic and harmonic functions harmonic conjugates and	PSO – 1,6,7	R,U,E,

			Ap,An
	orthogonal surfaces and construction of analytic functions. Understands concept and applications of complex integration and different forms of Cauchy's theorem and formula. Studies about Transformation, bilinear transformation and gets idea about its various applications		
CO2	Gains knowledge about different types of numerical methods and its applications in Various fields. Studies numerical methods for diagonally dominant systems.	PSO -1,6,7	R,U,E,Ap

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.1 COURSE OUTCOME

Name of the Course: Physics Paper VI

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Acquire knowledge of the Physical universe and its evolution.	PSO – 1,2,3	U,E, An,Ap,C
CO2	understand how the macroscopic properties of solids result from their microscopic, atomic scale properties	PSO -2,3	U,E, An,Ap,C
CO3	the microscopic properties it deals with are responsible for the majority of modern technology	PSO -1,4	U,E, An,Ap,C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.2 COURSE OUTCOME

Name of the Course: Physics V

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understand the main features of the historical development of quantum physics. discuss and explain the key concepts and principles of quantum physics	PSO – 1,2,3	U,E, An,Ap,C
CO2	Describe the main features of the historical development of quantum physics.Acquire ability to discuss and explain the key concepts and principles of quantum physics	PSO -2,3	U,E, An,Ap,C
CO3	Apply thermodynamics on dry and humid air. Determine if the atmosphere is stable or unstable from a vertical temperature profile. Describe how precipitation is created	PSO -1,4	U,E, An,Ap,C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.3 Course Outcomes (CO)

Name of the Course: Chemistry V theory

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Demonstrate an understanding of core knowledge in stereochemistry. Distinguish between different kinds of isomers. Assign cis/trans or E/Z configuration to alkenes. Distinguish between mirror images that are superimposable and mirror images that are not superimposable. Decide whether an object is chiral or achiral. Locate asymmetric carbons (stereogenic centres) in a molecule.	PSO-3 ,PSO-4	U, Ap,An
CO2	Demonstrate an understanding of core knowledge in organic reactions, Structure and basic properties of amines, Nomenclature and basicity of heterocyclic compounds.	PSO-3 ,PSO-6	R, U, Ap
CO3	Demonstrate an understanding of carbohydrate chemistry, natural product related chemistry	PSO-3	An, E
CO4	Demonstrate an understanding of UV-Visible and IR spectroscopy, learn the basics of NMR, ready to solve simple problems related to NMR spectroscopy for compound identification, get a knowledge on drugs and synthesis of generic drugs, and on green chemistry	PSO-3, PSO-4,PSO-6,	U, An, C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.4 Course Outcomes (CO)

Name of the Course: Chemistry VI

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Explain the basic concepts and theories in electrochemistry	PSO – 1, 3	R, U, Ap, An, E, C
CO2	Derive equations for degree of hydrolysis of salts, calculate the pH of buffer solutions and explain their applications	PSO -2, 7	U, An, Ap, E, C
CO3	Describe the magnetic and electrical properties of solids	PSO -1	R, U
CO4	Predict the spectroscopic technique and its role in the structure elucidation based on its interaction with electromagnetic radiation	PSO -2, 4, 7	R, U, An, Ap, E, C
CO5	Explain voltammetry and its applications	PSO – 1, 5	U, Ap, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.5 COURSE OUTCOME

Name of the Course: Mathematics V

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	UNIT-I RINGS Students will be able to perform basic computations in group and ring theory and students will become familiarized with some applications of abstract algebra.	PSO – 1,6,7	R,U, Ap,An
CO2	UNIT-II VECTOR CALCULUS The students will be able to define vector equation for lines and	PSO -1,6,7	R,U,Ap,An, E

CO	Course Outcomes	PSOs Addressed	Cognitive Level
	planes and also will be able to determine gradient vector fields and how to find potential functions, then how to determine and apply, the important quantities associated with vector fields such as the divergence, curl, and scalar potential.		
CO3	CO3- UNIT-III NUMERICAL METHODS Students will be able to apply various interpolation methods and finite difference concepts and also work out numerical differentiation and integration whenever and wherever routine methods are not applicable.	PSO -1,6,7	R,U,Ap,An, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.6 Course Outcomes (CO)

Name of the Course: Mathematics VI

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	UNIT-I CALCULUS OF VARIATIONS Students understand what functionals are, and have some appreciation of their applications and also how to apply the formula that determines stationary paths of a functional to deduce the differential equations for stationary paths in simple cases. They also understand concept of Geodesics , hanging chain and isoperimetric problems.	PSO – 1,6,7	R, U, E, Ap, An
CO2	UNIT-II LINE & MULTIPLE INTEGRALS AND INTEGRAL THEOREMS Students will be able to use double, triple and line integrals in applications, including Green's Theorem, Stokes' Theorem and Divergence Theorem. Understands the practical applications of these theorems	PSO -1,6,7	R, U, Ap, An, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

4.1 Course Outcome (CO)

Name of the Course: Physics Paper IV

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understand the basics of Huygen's wave theory and study the wave nature of light and interference	PSO – 1,2,3	U,E, An,Ap,C
CO2	Able to specify the "constitutive relationships" for fields and understand why they are required. • Have an ability to determine and describe diffraction of light and advance improvement in light and technology world	PSO -2,3	U,E, An,Ap,C
CO3	Knowledge of, polarization, lasers and its applications in day to day life	PSO -1,4	U,E, An,Ap,C
CO4	Describe Fourier series and explain the trapezium waves in terms of Fourier series. study the concept of optical fibers and its applications	PSO-3,6	U,E, An,Ap,C

4.2 Course Outcomes (CO)

Name of the Course: Chemistry IV theory

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Systematic and coherent understanding of the fundamental concepts of Water Technology, Nuclear and Radiochemistry and Powder metallurgy	PSO-4	U, An, Ap

CO		PSO	Cognitive
CO2	Able to differentiate between aldehydes and ketones, identify and name simple ketones and aldehydes, recognize hemiacetals and acetals,explain the mechanism of nucleophilic addition to a carbonyl group	PSO-4 ,PSO-6	R, U,
CO3	Identify and name simple carboxylic acids, give the products from the reaction of a carboxylic acid with a base and recognize that this is a reversible reaction, . predict the product of the reduction of a carboxylic acid and give the reagents required to perform this reaction	PSO-4	U,An, E
CO4	Get knowledge of Environmental chemistry, Describe causes and effects of environmental pollution by energy industry, Explain energy crisis and different aspects of sustainability, Discuss local and global environmental issues based on the knowledge gained throughout the course	PSO-3, PSO-4,PSO-6,	U, Ap, C, R

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

4.3 Course Outcomes (CO)

Name of the Course: Mathematics IV

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	4. Determine subgroups and determine whether given subsets of a group are subgroups. 4. Construct and manipulate group homomorphisms and isomorphisms. 4. Demonstrate understanding of permutations and symmetries in a group theoretic context – particularly the significance of Cayley's Theorem.	PSO – 1,6,7	R,U,E, Ap,An
CO2	3. Calculate the Infinite Fourier transform, Fourier Sine and Cosine transform of elementary functions from the definition. 3. Calculate the Finite Fourier cosine and sine transform and apply it in solving boundary value problems.	PSO -1,6,7	R,U,E,Ap

CO		PSOs	Cognitive
CO3	3. Understands basic definitions of Limit & continuity, studies different types and its properties. 3. Gains knowledge about different Lagrange form theorems, Taylor's theorem and Lagrange multipliers.	PSO -1,6,7	R,U,E,Ap
CO4	4. Will be able to explain the concept of differential equation. 4. Will be able to find solution of higher-order linear differential equations. 4. Applies the method of undetermined coefficients to solve the non-homogeneous linear differential equations with constant coefficients	PSO -1,6,7	R,U,E,Ap

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

3.1 Course Outcomes (CO)

Name of the Course: Physics Paper III

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Build and simulate electrical DC circuits and perform.	PSO – 1,2,3	U,E, An,Ap,C
CO2	Able to specify the "constitutive relationships" for fields and understand why they are required. • Have an ability to determine and describe static and dynamic electric and magnetic fields for technologically important structures: the coil, charge distributions, the dipole, the coaxial cable, dielectric and conducting spheres immersed in electric fields	PSO -2,3	U,E, An,Ap,C

CO		PSO -1,4	U,E, An,Ap,C
CO3	Knowledge of, physical interpretation, and ability to apply Maxwell's equations to determine field waves, potential waves, energy and charge conservation conditions	PSO -1,4	U,E, An,Ap,C
CO4	Describe alternating current in terms of voltage and current with time. Use an oscilloscope to show ac. Discuss the use of ac. in the national grid HL: Solve problems about peak and rms values of voltage and current.	PSO-3,6	U,E, An,Ap,C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

3.2 Course Outcomes (CO)

Name of the Course: Chemistry III theory

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understand the concept of rate of change associated with chemical change, identify the reaction order for a chemical change.	PSO-4	U, An, Ap
CO2	Recognize the basic concepts of thermodynamics . Predict the reversible and irreversible reactions, energy change in heat capacities at constant volume and pressure and their relationship. Laws of thermodynamics	PSO-4 ,PSO-6	R, U,
CO3	Derive expressions for different free energy function (Gibbs & Helmholtz). Understand surface adsorption and catalysis, polymers and their applications. Gain knowledge on boron and its compounds	PSO-4	U,An, E
CO4	Get knowledge of Ellingham's diagrams. Understand the various reactions involved in the preparation of alcohols and glycols	PSO-3, PSO-4,PSO-6,	U, Ap, C, R

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

3.3 Course Outcomes (CO)

Name of the Course: Mathematics III

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	UNIT-I GROUPS Students should be able to use their knowledge of abstract algebra to understand and prove properties of groups and related theorems and to deduce information about the structure of a group. Students should be able to determine appropriate techniques and knowledge necessary to solve problems and prove theorems in Group Theory.	PSO – 1,6,7	R,U, Ap,An
CO2	UNIT-II ANALYSIS-I Understand and be able to apply basic definitions and concepts in set and function theory. Understand the nature of a logical argument and a mathematical proof and be able to produce examples of these. Understand the definitions of limits and convergence in the context of sequences and series of real numbers. Be able to compute limits of sequences involving elementary functions. Be able to prove simple statements involving convergence arguments.	PSO -1,6,7	R,U,Ap,An, E
CO3	CO3- UNIT-III LAPLACE TRANSFORMS Students will be able to find the Laplace transform of a function, Inverse Laplace transform of a function using definition, Laplace transform of derivatives, integrals and periodic functions. Use the Method of Laplace transforms to solve initial-value problems for linear differential equations with constant coefficients.	PSO -1,6,7	R,U,Ap,An, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

Programme Specific Outcomes(PSO): MEC

PSO No.	Programme Specific Outcomes Upon completion of the B.Sc(MEC) Degree Programme, the graduate will be able to	Programme Outcomes

PSO-1	Ability to apply knowledge of logical computing relevant and appropriate to the domain.	PO1,PO4
PSO-2	Ability to design, implement and evaluate computer-based system, process, component.	PO2,PO3
PSO-3	Focus on statistical science and its application	PO1,PO3
PSO-4	Capability to design and conduct experiments, as well as analyze and interpret data	PO4
PSO-5	Examine the impact of engineering& electronic solutions in global and environmental contexts and utilize the knowledge for sustained development.	PO4,PO5
PSO-6	Ability to use and apply the mathematical techniques & skills in modern electrical and computer engineering practice.	PO6
PSO-7	Acquire ability to face competitive exams for higher study in a chosen subject and procedural knowledge required for professional engagement in industry, teaching, research or other service.	PO6,PO7

6.1 Course Outcomes (CO)

Name of the Course: Electronics VII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Evaluate the performance of modulation and demodulation techniques in various transmission environments	PSO – 3,4,5,6	R, U, Ap, An, E
CO2	Study the principles of operation of various blocks of Radar systems and Radar Range equation in detail..	PSO -1,6	R,U, An, Ap, E, C
CO3	Learn the dynamics of the satellite and understand how analog and digital technologies are used for satellite communication networks.	PSO - 1,2,6,7	R, U
CO4	Recognize and classify the structures of Optical fiber and types and Familiar with Design considerations of fiber optic systems.	PSO - 1,3,4,5	R, U, An, Ap, E, C
CO5	Discuss the cellular system design and technical challenges and summarize the principles and applications of wireless systems and standards	PSO – 1,4,5,7	R,U, An, Ap, E, C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.2 Course Outcome

Course : Electronics

Subject: Electronics VIII

Subject Title : Microcontrollers

Paper Code- EL-602T and 602P

N CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Capacity to understand the complete architectural block diagram of 8051 microcontroller	PSO-1	U,An
CO2	Ability to learn the assembly language programming skills	PSO-1 PSO-6	U,Ap,An
CO3	Ability to learn the C language programming skills	PSO-1 PSO-6	U,Ap,An
CO4	To understand the interfacing techniques of 8051 to external world	PSO-5	U,An
CO5	To design and implement embedded systems	PSO-2 PSO-5	C,E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.3 Course Outcomes (CO)

Name of the Course: Mathematics VII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO2	Understands concept and applications of linear transformation and standard properties of linear transformation.	PSO -1,6,7	Ap,An, E
CO3	Studies about orthogonal curvilinear coordinates and also gets idea about conversion of one coordinate system to another.	PSO -1,6,7	E,Ap,An

CO	Course Outcomes	PSOs Addressed	Cognitive Level
CO4	Studies formation of partial differential equation and understands the practical applications of linear and partial differential equation,	PSO -1,6,7	R,U,E,Ap
CO5	Solution of second order linear pde by finding CF and PI	PSO -1,6,7	U,E,Ap

6.4 Course Outcomes (CO)

Name of the Course: Mathematics VIII

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understanding of basic concepts complex numbers, complex analysis, analytic and harmonic functions harmonic conjugates and orthogonal surfaces and construction of analytic functions. Understands concept and applications of complex integration and different forms of Cauchy's theorem and formula. Studies about Transformation, bilinear transformation and gets idea about its various applications	PSO – 1,6,7	R,U,E, Ap,An
CO2	Gains knowledge about different types of numerical methods and its applications in Various fields. Studies numerical methods for diagonally dominant systems.	PSO -1,6,7	R,U,E,Ap

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

6.5 Course Outcomes (CO)

Name of the Course: Computer Science Paper VII (Web Programming)

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level

CO		PSOs	
CO1	Introduction web		
CO2	Demonstrate the important HTML tags for designing static pages and separate design from content .Utilize the concepts of JavaScript for web application development to design web sites.	PSO 1,PSO5,PSO6	
CO3	Java Script Introduction: Utilize the concepts of JavaScript for web application development to design web sites. Designing Dynamic web pages using JavaScript.	PSO 1,PSO5,PSO6	
CO4	How to add style and create dynamic documents XML	PSO 1,PSO4,PSO6	

6.6 Course Outcomes (CO)

Name of the Course: Computer Science paper VIII (Networks)

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Describe the growth of computer networks and types of communication and understanding modern hardware used in data circuits	PSO 1,PSO5,PSO6	
CO2	CO2: Recall LAN technologies and network topologies also detect errors in sending and receiving packets during frame transmission.	PSO 1,PSO4,PSO6	
CO3	Apply the Design of Extended LAN and various routing algorithms calculations to apply algorithms to find shortest path in network.	PO5,PO6	

N CO	Course Outcomes	PSOs Addressed	

CO4	Co4: Analysis various network architecture, TCP/IP protocols in building the network and understand key terminologies of internet.	PO5,PO6	

5.1 Course Outcomes (CO)

Course : Electronics   Subject: Electronics V

Subject Title : Communication I   Paper Code- EL-501T

N CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Understand the type / source/ method of calculation of noises generated by the electronic communication system To study the properties of transmission lines that can affect the signal characteristics in wire systems	PSO-5	U,An
CO2	Ability to learn the communication circuits with analog modulation techniques to design/ develop/and test the communication transmitter system	PSO-4 PSO-6	U,Ap,An
CO3	Ability to learn the communication circuits with analog demodulation techniques to design/ develop/and test the communication Receiver system	PSO-4 PSO-6	U,Ap,An
CO4	To acquaints with antenna fundamentals and continues with a consideration of simple wire radiators in free space	PSO-5	U,An
CO5	To acquire the knowledge of the requirements and standards of a quality television system .	PSO-5	U,An

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.2 Course Outcomes (CO)

Name of the Course: Electronics VI

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Analyaze to study the architecture of 8085, pin diagram, addressing modes and its instruction sets. Execute Assembly language program using 8085 microprocessor.	PSO – 2,4,5	R, U, Ap, An, E, C
CO2	Evaluate stack operations, timing diagrams of 8085 under different operations and to execute assembly language programs using 8085 microprocessor.	PSO -2,4,5	R,U, An, Ap, E, C
CO3	Study of input output instructions and interfacing and can able to analyse the different interfacing IC's.	PSO -2,4,5	R, U
CO4	Examine the measurement systems, transducers, chopper amplifier and Electronic instrumentation.	PSO -2,4,5	R, U, An, Ap, E, C
CO5	Study of bio medical instrumentations, its block diagram, working and its applications.	PSO – 2,4,5	U, Ap, E

5.3 Course Outcomes (CO)

Name of the Course: Mathematics V

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	UNIT-I RINGS Students will be able to perform basic computations in group and ring theory and students will become familiarized with some applications of abstract algebra.	PSO – 1,6,7	R,U, Ap,An
CO2	UNIT-II VECTOR CALCULUS The students will be able to define vector equation for lines and planes and also will be able to determine gradient vector fields and how to find potential functions, then how to determine and apply, the important quantities associated with vector fields such as the divergence, curl, and scalar potential.	PSO -1,6,7	R,U,Ap,An, E
CO3	CO3- UNIT-III NUMERICAL METHODS Students will be able to apply various interpolation methods and	PSO -1,6,7	R,U,Ap,An, E

	finite difference concepts and also work out numerical differentiation and integration whenever and wherever routine methods are not applicable.		

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.4 Course Outcomes (CO)

Name of the Course: Mathematics VI

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	UNIT-I CALCULUS OF VARIATIONS Students understand what functionals are, and have some appreciation of their applications and also how to apply the formula that determines stationary paths of a functional to deduce the differential equations for stationary paths in simple cases. They also understand concept of Geodesics , hanging chain and isoperimetric problems.	PSO – 1,6,7	R, U, E, Ap, An
CO2	UNIT-II LINE & MULTIPLE INTEGRALS AND INTEGRAL THEOREMS Students will be able to use double, triple and line integrals in applications, including Green's Theorem, Stokes' Theorem and Divergence Theorem. Understands the practical applications of these theorems	PSO -1,6,7	R, U, Ap, An, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

5.5 Course Outcomes (CO)

Name of the Course: Computer Science Paper V (Java)

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	tate OOPS and Relate java syntax with C and ++.Categorize OOPS such as encapsulation, abstraction, olymorphism	SO 1, PSO 2	, U, An

CO		PSOs Addressed	Cognitive Level
CO2	Applying encapsulation concepts in developing the programs with classes and objects.Identify different types of inheritance and apply them for reusability of code.	SO 4, PSO	, An
CO3	Construct the packages by arranging the classes with visibility control.	SO 5	, Ap
CO4	Develop program using different methods of thread creation and exception handling. Create Internet program using applets. Evaluate Java collection with other implementation methods of data structure.	PSO 5	, Ap

5.6 Course Outcomes (CO)

Name of the Course: Computer Science Paper VI (Visual Programing)

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	To learn Visual Basic controls and the properties, events, methods and how to handle events of different controls.	PSO – 1,5	R,U,E,A
CO2	Demonstrate the use of forms, modules, procedures and to apply fundamental programming concepts of variables and scope, arrays, sequence, selection, iteration.	PSO – 5	U, An, Ap, E,C
CO3	To Understand the working of menus and tool bars for designing multiple document interface also database access and management	PSO – 1,5	Ap,An, E

	sing data controls.		
CO4	Analyse the Visual C plus plus components, Classes and Objects, event handling, VBX Controls.	PSO – 1,5	U, Ap, E, C

4.1 Course Outcomes (CO)

Name of the Course: Electronics IV

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO 1	Apply the fundamentals of digital electronics for designing Combinational circuits	PSO 1, 2, 4	An, Ap, E, C
CO 2	Designing Combinational circuits like decoders, encoders etc .	PSO 2, 4	R,U, An, Ap, E, C
CO 3	Design synchronous and asynchoronous sequential circuits for simple application	PSO 2, 4	An, Ap, E, C
CO 4	Design combinational circuits using hardware description language.	PSO 4, 5, 6, 7	U, An, Ap, E, C
CO 5	Implement the sequential circuits using hardware description language.	PSO 4, 5, 6, 7	U, An, Ap, E, C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

4.2 Course Outcomes (CO)

Name of the Course: Mathematics IV

CO	Course Outcomes	PSOs Addressed	Cognitive Level

CO	The learner will be able to		
CO1	1. Determine subgroups and determine whether given subsets of a group are subgroups. 2. Construct and manipulate group homomorphisms and isomorphisms. 3. Demonstrate understanding of permutations and symmetries in a group theoretic context – particularly the significance of Cayley's Theorem.	PSO – 1,6,7	R,U,E, Ap,An
CO2	1. Calculate the Infinite Fourier transform, Fourier Sine and Cosine transform of elementary functions from the definition. 2. Calculate the Finite Fourier cosine and sine transform and apply it in solving boundary value problems.	PSO -1,6,7	R,U,E,Ap
CO3	1. Understands basic definitions of Limit & continuity, studies different types and its properties. 2. Gains knowledge about different Lagrange form theorems, Taylor's theorem and Lagrange multipliers.	PSO -1,6,7	R,U,E,Ap
CO4	1. Will be able to explain the concept of differential equation. 2. Will be able to find solution of higher-order linear differential equations. 3. Applies the method of undetermined coefficients to solve the non-homogeneous linear differential equations with constant coefficients	PSO -1,6,7	R,U,E,Ap

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

4.3 Course Outcomes (CO)

Name of the Course: Computer Science Paper IV-Unix and OS

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	o understand OS, types, characteristics, functions services system alls and components of OS and process management, scheduling lgorithm, and algorithm evaluation in OS .	PSO ,PSO5,PSO6	

CO2	To understand process Synchronization and deadlocks: understanding the critical section problem, hardware synchronization, critical regions and deadlock prevention, avoidance and detection also combined approach to deadlock.	PSO ,PSO5,PSO6	
CO3	Memory management :Functions, single contiguous, Partitioned memory management, multiple relocatable partitioned memory management, File Management Disk Management.	PSO ,PSO4,PSO6	
CO4	History of Unix, salient features, Unix Components, Files and File Organization- Categories of files, Unix file system, directories, Directory related commands, Ownership of files.	PSO ,PSO5,PSO6	
CO5	Introduction to vi editor, The three modes of the vi editor, Invoking vi editor, Configuring the vi environment, Regular expressions, the grep command, Shell Programming - shell script features, shell variables, writing and executing a shell script. Branching control structures.	SO1	

3.1 Course Outcomes (CO)

Name of the Course: Electronics III

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Ability to design op amps and focus on its applications of op amps and solve problems.	PSO – 2,3,5,6	R, U, Ap, An, E, C
CO2	Ability to apply knowledge on opamps and its applications and solve problems.	PSO - 1,3,5,6	R,U, An, Ap, E, C
CO3	Ability to design implement and examine the C Programing Techniques and capability to perform experiments on c programming.	PSO -2,4,5	R, U

CO		PSO	Cognitive
CO4	Acquire knowledge on C programming learning and techniques.	PSO -2,5,7	R, U, An, Ap, E, C
CO5	Examine creativity and problem solving technique using C Programming and acquire knowledge	PSO – 5,7	U, Ap, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

3.2 Course Outcomes (CO)

Name of the Course: Mathematics III

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	UNIT-I GROUPS Students should be able to use their knowledge of abstract algebra to understand and prove properties of groups and related theorems and to deduce information about the structure of a group. Students should be able to determine appropriate techniques and knowledge necessary to solve problems and prove theorems in Group Theory.	PSO – 1,6,7	R,U, Ap,An
CO2	UNIT-II ANALYSIS-I Understand and be able to apply basic definitions and concepts in set and function theory. Understand the nature of a logical argument and a mathematical proof and be able to produce examples of these. Understand the definitions of limits and convergence in the context of sequences and series of real numbers. Be able to compute limits of sequences involving elementary functions. Be able to prove simple statements involving convergence arguments.	PSO -1,6,7	R,U,Ap,An, E
CO3	CO3- UNIT-III LAPLACE TRANSFORMS Students will be able to find the Laplace transform of a function, Inverse Laplace transform of a function using definition, Laplace transform of derivatives, integrals and periodic functions. Use the Method of Laplace transforms to solve initial-value problems for linear differential equations with constant coefficients.	PSO -1,6,7	R,U,Ap,An, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

3.3 Course Outcomes (CO)

Name of the Course: Computer Science Paper III (DBMS and SE)

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	ecall and Relate file management systems with DBMS. Design elations using Database Schema. Relate Relational. Sketch and elate E-R diagrams with relations.	SO ,PSO5,PSO6	, U, An
CO2	lgebra Notation with Relation Operation to access the data. ifferentiate and Refine the relations By applying normalization chniques. Apply SQL queries to access the data.	SO ,PSO5,PSO6	, U, An
CO3	nderstand Transaction concepts, Analyse Concurrency Control ethod and DDL, DML, DCL and SQL.PL	SO ,PSO4,PSO6	, Ap
CO4	nderstanding Software Engineering, Process Models and equirements	SO ,PSO5,PSO6	, Ap
CO5	Iodelling and Designing the requirements, Implementing the odels and Test.	SO1	, U, An

Name of the Degree Program: B.Sc. / B.Sc. (Honors) Physics

Starting year of implementation: 2021-22

Programme Outcomes (PO):

PO1 : Create the facilities and environment in all the educational institutions to consolidate the knowledge acquired at +2 level and to motivate and inspire the students to create deep interest in Physics, to develop broad and balanced knowledge and understanding of physical concepts, principles and theories of Physics.

PO 2 : Learn, design and perform experiments in the labs to demonstrate the concepts, principles and theories learned in the classrooms.

PO 3: Develop the ability to apply the knowledge acquired in the classroom and laboratories to specific problems in theoretical and experimental Physics.

PO 4 : Expose the student to the vast scope of Physics as a theoretical and experimental science with applications in solving most of the problems in nature spanning from 10-15 m to 1026m in space and 10-10 eV to 1025eV in energy dimensions.

PO 5: Emphasize the discipline of Physics to be the most important branch of science for pursuing the interdisciplinary and multidisciplinary higher education and/or research in interdisciplinary and multidisciplinary areas.

PO 6: To emphasize the importance of Physics as the most important discipline for sustaining the existing industries and establishing new ones to create job opportunities at all levels of employment.

<u>P.1 Course Outcomes (CO)</u>

Name of the Course: Physics 1

CO	Course Outcomes *The learner will be able to*	POs Addressed	Cognitive Level
CO1	Fixing units, tabulation of observations, analysis of data (graphical/analytical)	PO 1	U,E, An,Ap,C
CO2	Accuracy of measurement and sources of errors, importance of significant figures	PO 2	U,E, An,Ap,C

CO3	Knowledge of how g can be determined experimentally and derive satisfaction.	PO1	U,E, An,Ap,C
CO4	Understanding the difference between simple and torsional pendulum and their use in the determination of various physical parameters	PO 5	U, E, An,Ap
CO5	Knowledge of how various elastic moduli can be determined	PO 1	U,An,E
CO6	Measuring surface tension and viscosity and appreciate the methods adopted	PO 1	U,E
CO7	Hands on experience of different equipments.	PO1	U,E,C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

P.2 Course Outcomes (CO)

Name of the Course: Physics Paper II

CO	Course Outcomes *The learner will be able to*	Mapping
CO1	Demonstrate Gauss law, Coulomb's law for the electric field, and apply it to systems of point, line, surface, and volume distributions	PO-1,2

	of charges.	
CO2	Explain and differentiate the vector (electric fields, Coulomb's law) and scalar (electric potential, electric potential energy) formalisms of electrostatics.	PO-1
CO3	Apply Gauss's law of electrostatics to solve a variety of problems.	PO-1,2,5.
CO4	Describe the magnetic field produced by magnetic dipoles and electric currents.	PO-1
CO5	Explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.	PO-1
CO6	Describe how magnetism is produced and list examples where its effects are observed.	PO-1,5,6.
CO7	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.	PO-1,2,5,6.
CO8	Apply various network theorems such as Superposition, Thevenin, Norton, Reciprocity. Maximum Power Transfer, etc. and their applications in electronics, electrical circuit analysis, and electrical machines.	PO-1,2,5,6.

Name of the Degree Program: B.Sc. / B.Sc. (Honors) Chemistry

Starting year of implementation: 2021-22

Program Outcomes:

By the end of the program the students will be able to:

1. Create enthusiasm among students for chemistry and its application in various fields of life.

2. Provide students with broad and balanced knowledge and understanding of key concepts in chemistry

3. Develop in students a range of practical skills so that they can understand and assess risks and work safely measures to be followed in the laboratory.

4. Develop in students the ability to apply standard methodology to the solution of problems in chemistry

5. Provide students with knowledge and skill towards employment or higher education in chemistry or multi-disciplinary areas.

6. Provide students with the ability to plan and carry out experiments independently and assess the significance of outcomes and to cater to the demands of chemical Industries of well-trained graduates

7. Develop in students the ability to adapt and apply methodology to the solution of unfamiliar types of problems.

8. Instil[3] critical awareness of advances at the forefront of chemical sciences, to prepare students effectively for professional employment or research degrees in chemical sciences and to develop an independent and responsible work ethics.

C.1 Course Outcomes (CO)

Name of the Course: Chemistry I

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	Learn the concepts of chemical analysis, accuracy, precision and statistical data treatment	PO 1	R, U, Ap, An, E, C

CO		PO 1	
CO2	Prepare the solutions after calculating the required quantity of salts in preparing the reagents/solutions and dilution of stock solution.	PO 1	U, An, Ap, E, C
CO3	Know the concept of volumetric and gravimetric analysis and deducing the conversion factor for determination	PO 1	R, U, E
CO4	Handle toxic chemicals, concentrated acids and organic solvents and practice safety procedures.	PO 1	R, U
CO5	Understand the concepts of Organic reactions and techniques of writing the movement of electrons, bond breaking, bond forming	PO 1	U, Ap, E
CO6	Learn the Concept of aromaticity, resonance, hyper conjugation, etc.	PO 1	U, An, Ap, E, C
CO7	Understand the mechanism of nucleophilic, electrophilic reactions	PO 1	U, An, Ap, E, C
CO8	Understand the mechanism of nucleophilic, electrophilic reactions	PO 1	U, An, Ap, E, C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

C.2 Course Outcomes (CO)

CO	Course Outcomes *The learner will be able to*	PSOs Addressed	Cognitive Level

CO1	Learn scientific theory of atoms, concept of wave functions, the fundamentals of quantum mechanics and concept of operators	PO-1, 6,8	R, U, Ap, An, E, C
CO2	Understand the physical and chemical characteristics of elements	PO – 3,4	U, An, Ap, E, C
CO3	Identify the given element, relative size, charges of proton, neutron and electron and their assembly to form different atomsIdentify the given element, relative size, charges of proton, neutron and electron and their assembly to form different atoms	PO- 1, 3, 4	R, U, E
CO4	Learn the theory of dilute solutions, distribution law and its applications	PO 7, 8	R, U, E
CO5	Properties of liquid as solvent for various household and commercial use	PO – 5, 8	U, Ap, E
CO6	Explain the laws governing the behaviour of ideal gases and real gases including their comparison	PO- 1, 2, 3	U, An, Ap, E, C
CO7	Understand the laws of crystallography, X-ray diffraction techniques, Bragg's law and its applications	PO- 3, 5	U, An, Ap, E, C
CO8	Solve the problems related to quantum mechanics, different molecular velocities, critical constants and molar mass of non-volatile solutes	PO- 4, 5, 6, 7	U, An, Ap, E, C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

B.Sc. Mathematics (Honors)

Starting year of implementation: 2021-22

Programme Outcomes (PO)

1. Disciplinary Knowledge: Bachelor degree in Mathematics is the culmination of in-depth knowledge of Algebra, Calculus, Geometry, differential equations and several other branches of pure and applied mathematics. This also leads to study the related areas such as computer science and other allied subjects.

2. Communication Skills: Ability to communicate various mathematical concepts effectively using examples and their geometrical visualization. The skills and knowledge gained in this program will lead to the proficiency in analytical reasoning which can be used for modeling and solving of real life problems.

3. Critical thinking and analytical reasoning: The students undergoing this programme acquire ability of critical thinking and logical reasoning and capability of recognizing and distinguishing the various aspects of real life problems.

4. Problem Solving : The Mathematical knowledge gained by the students through this programme develop an ability to analyze the problems, identify and define appropriate computing requirements for its solutions. This programme enhances students overall development and also equip them with mathematical modeling ability, problem solving skil

5. Research related skills: The completing this programme develop the capability of inquiring about appropriate questions relating to the Mathematical concepts in different areas of Mathematics.

6. Information/digital Literacy: The completion of this programme will enable the learner to use appropriate softwares to solve system of algebraic equation and differential equations.

7. Self –directed learning: The student completing this program will develop an ability of working independently and to make an in depth study of various notions of Mathematics.

8. Moral and ethical awareness/reasoning: : The student completing this program will develop an ability to identify unethical behavior such as fabrication, falsification or misinterpretation of data and adopting objectives, unbiased and truthful actions in all aspects of life in general and mathematical studies in particular.

9. Lifelong learning: This programme provides self-directed learning and lifelong learning skills. This programme helps the learner to think

independently and develop algorithms and computational skills for solving real word problems.

10. Ability to peruse advanced studies and research in pure and applied Mathematical sciences.

M.1 Course Outcomes (CO)

Name of the Course: Mathematics I

CO	Course Outcomes *The learner will be able to*	Cognitive Level
CO1	UNIT-I - Matrix Students learn to solve system of linear equations. Solve the system of homogeneous and non homogeneous linear of m equations in n variables by using concept of rank of matrix, finding eigen values and eigenvectors.	R,U,E, Ap,An
CO2	UNIT-II- Polar coordinates Students will be able toSketch curves in Cartesian, polar and pedal equations.	R,U,Ap,An, E
CO3	UNIT -III- Differential Calculus Students are able to identify and apply the intermediate value theorems and L'Hospital rule.	R,U,Ap,An, E
CO4	UNIT -IV -Successive Differentiation Students will be familiar with the techniques of integration and differentiation of function with real variables	R,U,Ap,An, E

M.2 Course Outcomes (CO)

Name of the Course: Algebra II & Calculus II

CO	Course Outcomes *The learner will be able to*	Cognitive Level
CO1	UNIT-I – Groups I Recognize the mathematical objects called Groups. Link the fundamental concepts of groups and symmetries of geometrical objects.	R,U,E, Ap,An
CO2	UNIT-II- Groups II Explain the significance of the notions of Cosets, normal subgroups and factor groups.	R,U,Ap,An, E
CO3	UNIT -III- Partial Derivatives Understand the concept of differentiation and fundamental theorems in differentiation and various rules. Find the extreme values of functions of two variables.	R,U,Ap,An, E
CO4	UNIT -IV – Integral Calculus To understand the concepts of multiple integrals and their applications.	R,U,Ap,An, E

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

B.SC. (DEGREE & HONS) ELECTRONICS

Starting year of implementation: 2021-22

Programme Outcomes (PO):

PO No.	Programme Outcomes
PO-1	Aptitude to apply Logic thinking and Basic Science Provide students with skills that enable them to get employment in industries or pursue higher studies or research assignments or turn as entrepreneurs.
PO-2	Knowledge for problem solving in various fields of electronics both in industries and research.
PO-3	To acquire experimental skills, analysing the results and interpret data.
PO-4	Capacity to identify and implementation of the formulate to solve the electronic related issues and analyze the problems in various sub disciplines of electronics.
PO-5	Capability to use the Modern Tools/Techniques.

E.1 Course Outcome

Course : Electronics I   Subject: Electronics (DSC1)

Subject Title : Electronics Devices and Circuits   Paper Code- DSC1

N0 CO	Course Outcomes The learner will be able to	POs Addressed	Cognitive Level
CO1	Aptitude to apply Logic thinking and Basic Science knowledge for problem solving in various fields of electronics both in industries and research.	PO-1 PO-1	U,An
CO2	To acquire experimental skills, analysing the results and interpret data.	PO-2 PO-1	U,Ap,An
CO3	Ability to design / develop / manage / operation and maintenance of sophisticated electronic gadgets / systems / processes that conforms to a given specification within ethical and economic constraints.	PO-3 PO-4	U,Ap,An
CO4	Capacity to identify and implementation of the formulate to solve the electronic related issues and analyze the problems in various sub disciplines of electronics	PO-5	U,An,C
CO5	Capability to understand the working principles of the electronic devices and their applications.	PO-2	U,An

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

E. 2 Course Outcome

Course : Electronics   Subject: Electronics (DSC2)

Subject Title : Analog and Digital Electronics   Paper Code- DSC2(ELE-CP2)

N CO	Course Outcomes *The learner will be able to*	POs Addressed	Cognitive Level
CO1	To acquire knowledge on basic electronics active components .	PO-1 PO-1	U,An
CO2	To learn about basic analog electronics circuits with active components	PO-2 PO-1	U,,An
CO3	To understand the basic digital circuits	PO-3 PO-4	U,An
CO4	Capacity to analyze the problems in various sub disciplines of electronics	PO-2	U,An,Ap
CO5	Ability to implement and study the analog and digital circuits	PO-5	Ap, E, C

R- Remember; U- Understand; Ap- Apply; An – Analyse; E- Evaluate; C – Create

B.Sc. (Degree & Hons) Computer Science

Starting year of implementation: 2021-22

PO	Programme Specific Outcomes
PO1	Analyse a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
PO2	Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
PO3	Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
PO4	Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
PO5	Should become an independent learner. So, learn to learn ability.
PO6	Enhance literary sensibility and language skills
PO7	Enable to work individually or as a team member in multidisciplinary settings.

C.1 Course Outcomes

Name of the Course: CS-C1T: Problem Solving Techniques

CO	Course Outcome *The learner will be able to*	POs Addressed	Cognitive Level
CO1	Understand the concept of algorithms and proving Algorithm as Technology and Implementing Fundamental Algorithms.Factoring methods for basic programs, understanding Array techniques	PSO-1,3,	U,An,A,E

CO	Understand the basic concepts of C programming, different control structures used in C and also the concepts of Arrays and its types. Studying pointers, Structures, Unions, functions and command line arguments.	PSO-1,2	U,An,Ap,E
CO3	Techniques for solving problems like sorting, searching and also Text processing and pattern searching.	PSO-1,3,7	R,U,Ap,E

C.2 Course Outcomes

Name of the Course: CS-C5T Object Oriented Programming using Java

CO	*Course Outcome* *The learner will be able to*	POs Addressed	Cognitive Level
CO1	State OOPS and Relate java syntax with C and C. Categorize OOPS such as encapsulation, abstraction, polymorphism. Applying encapsulation concepts in developing the programs with classes and objects. Identify different types of inheritance and apply them for reusability of code.	PSO-1,3,	U,An,A,E
CO2	Applying encapsulation concepts in developing the programs with classes and objects. Identify different types of inheritance and apply them for reusability of code.Construct the packages by arranging the classes with visibility control. Develop program using different methods of thread creation and exception handling	PSO-1,2	U,An,Ap,E
CO3	Develop program using different methods of thread creation and exception handling Create Internet program using applets. Evaluate java collection with other implementation methods of data structure.	PSO-1,3,7	R,U,Ap,E

B.SC. (DEGREE & HONS) PSYCHOLOGY

Starting year of implementation: 2021-22

Programme Outcomes (PO):

PO	PROGRAM SPECIFIC OUTCOMES (PSO)
PO 1	To establish the knowledge of key concepts and approaches in Psychology and gain understanding of origin and recent advances in the field.
PO 2	An ability to apply the theoretical principles of Psychology demonstrating an understanding of behavior, thoughts, and feelings of the individual and the individual in group settings
PO 3	To plan, design and conduct research studies and interpret using statistical tools and apply the research findings to real life situations. Conduct a comprehensive review of existing literature and formulate hypotheses based on that.
PO 4	Investigate psychological aspects of human behavior through the use of research methods and demonstrate their application in social and professional settings to upgrade moral and ethical values in the society.
PO 5	To become contributing members in the society in terms of mental wellbeing and directing their stakeholders towards responsible citizenship.
PO 6	Enhance literary sensibility and language skills
PO 7	Enable to work individually or as a team member in multidisciplinary settings.

PS.1 Course Outcome

Name of the Course: Foundations of Psychology

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	To understand the genesis of psychology, it's different perspectives, origin and importance.	PSO1, PSO2	R, U, E
CO2	Appreciate and apply various theories of learning in the practical world.	PSO1, PSO2	U, Ap, An, E
CO3	To comprehend the fundamental mental processes which are base for behaviour and be able to compare them across different perspectives.	PSO1, PSO2, PSO 4	U, Ap, An, E

PS.2 Course Outcome

Name of the Course: Foundations of Psychology

CO	Course Outcome *The learner will be able to*	PSOs Addressed	Cognitive Level
CO1	To understand and evaluate various human emotions and the determinants of motivation which has a practical application.	PSO2, PSO5	U, E
CO2	To reflect and remember the concepts that are related to intelligence and IQ in general.	PSO3, PO4	R, R

CO3	To analyse and understand the various human personalities.	PSO4, PSO5	A, U

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