



GOVERNMENT DEGREE COLLEGE

RAZOLE, Dr B R AMBEDKAR KONASEEMA (Dist), A.P-533242

NAAC Re-Accredited with 'B' Grade



B.Sc (MPCS) Course Outcomes (COs)

Coure Name - C1	CO Number	CO Statements	Blooms Taxonomy Level
English - I	CO 1	1. Use grammar effectively in writing and speaking r	L1, L2, L4
	CO 2	2. Demonstrate the use of good vocabulary	L1,L3
	CO 3	3. Demonstrate an understating of writing skills	L5,L3,L2
	CO 4	4. Acquire ability to use soft skills in professional and daily life	L1,L4
	CO 5	5. Confidently use the tools of communication skills	L1,L4
Coure Name - C2	Course Outcome	CO	Blooms Taxonomy Level
TElugu - I	CO 1	పాఠశాలలో పాఠశాలలో పాఠశాలలో పాఠశాల పాఠశాలలో,పాఠశాలలో పాఠశాలలో. పాఠశాల పాఠశాలలో	L1,L2,L5
	CO 2	పాఠశాల పాఠశాల పాఠశాల , పాఠశాల పాఠశాలలో, , పాఠశాల పాఠశాల పాఠశాల , పాఠశాల పాఠశాల పాఠశాలలో	L1,L2,
	CO 3	. పాఠశాల పాఠశాల పాఠశాల , పాఠశాల పాఠశాల పాఠశాల పాఠశాల పాఠశాల పాఠశాల	L1,L2,L5
	CO 4	పాఠశాలలో పాఠశాల పాఠశాల పాఠశాల పాఠశాల , పాఠశాల పాఠశాల పాఠశాల పాఠశాల , పాఠశాల పాఠశాల పాఠశాలలో	L3,L5
	CO 5	పాఠశాల పాఠశాల పాఠశాల పాఠశాలలో.	L2, L3

Course Name - C3	CO Number	CO	Blooms Taxonomy Level
	CO 1	Identify differentiate linear and non-linear differential equations.	L1 , L2
Differential Equations	CO 2	Apply different methods for solving differential equations of first order but not of first degree.	L3
Maths - I	CO 3	Evaluate the solution of higher-order linear differential equations with constant coefficients	L4, L5
	CO 4	Apply the method of "variation of parameters" to find the solution of higher-order linear differential equations with variable coefficients	L3
	CO 5	Explain the solution of Legendre Differential Equations with variable coefficients	L2, L3,L4
Coure Name - C4	Course Outcome	CO	Blooms Taxonomy Level
	CO 1	Summarize for the students should have attained a common level in basic mechanics, a secure foundation in mathematics.	L2, L5
Physics -I	CO 2	Describe this course would empower the student to acquire engineering skills and practical knowledge, which help the student.	L1, L2
	CO 3	Develope this course will provide a theoretical basis for doing experiments in related areas.	L6
	CO 4	Test the basic knowledge & information about space rockets.	L4, L5, L6
	CO 5	Explain the postulates of special theory of relativity.	L2, L3, L4
Coure Name - C5	CO Number	CO	Blooms Taxonomy Level

COMPUTER FUNDAMENTALS AND PHOTOSHOP	CO 1	To explore basic knowledge on computer	L5,L3
	CO 2	Appreciate and understand the working of a digital computer	L5,L1
	CO 3	understand how Photoshop will help you create your own successful images	L6,L5,L4
	CO 4	Apply different sytles and techniques on images	L4,L1,L3
	CO 5	Create your Visiting card and Create Cover page for any text book	L1,L4
Coure Name - C6	Course Outcome	CO	Blooms Taxonomy Level
English - II	CO 1	Use reading skills effectively.	L1, L2, L4
	CO 2	Comprehend different texts	L1,L3
	CO 3	Interpret different types of texts	L5,L3,L2
	CO 4	Analyse what is being read	L1,L4
	CO 5	Build up a repository of active vocabulary	L1,L4
Coure Name - C7	CO Number	CO	Blooms Taxonomy Level
Telugu - II	CO 1	పాఠ్యపుస్తకం పాఠ్యాంశాలను అర్థం చేసుకోవడం పాఠ్యాంశాలను వివరించడం పాఠ్యాంశాలను సంగ్రహించుట మరియు , పాఠ్య పాఠ్యాంశాలను వివరించుట	L1,L2,L5
	CO 2	పాఠ్యాంశాలను అర్థం చేసుకోవడం పాఠ్యాంశాలను "వివరించు" పాఠ్యాంశాలు ,వివరించు ,వివరించు , వివరించు"	L1,L2,
	CO 3	పాఠ్యాంశాలను ,పాఠ్యాంశాలను పాఠ్యాంశాలను అర్థం చేసుకోవడం పాఠ్యాంశాలను పాఠ్యాంశాలను పాఠ్యాంశాలను . పాఠ్యాంశాలను పాఠ్యాంశాలను పాఠ్యాంశాలను , పాఠ్యాంశాలను పాఠ్యాంశాలను	L1,L2,L5
	CO 4	పాఠ్యాంశాలను అర్థం చేసుకోవడం పాఠ్యాంశాలను పాఠ్యాంశాలను పాఠ్యాంశాలను .పాఠ్యాంశాలను పాఠ్యాంశాలను పాఠ్యాంశాలను , పాఠ్యాంశాలను పాఠ్యాంశాలను పాఠ్యాంశాలను పాఠ్యాంశాలను	L3,L5

		1. To understand the basic concepts of geometry and its applications in real life. 2. To understand the basic concepts of geometry and its applications in real life.	
	CO 5	To understand the basic concepts of geometry and its applications in real life. 2. To understand the basic concepts of geometry and its applications in real life.	L2, L3
Coure Name - C8	CO Number	CO	Blooms Taxonomy Level
	CO 1	Explain the basics of three dimensional geometry , space and drs. and dcs of a line	L2, L3,L4
Solid Geometry	CO 2	Differentiate the concept of plane , different forms of a plane and system of planes , Planes bisecting the angles between the given planes and pair of planes	L2,L4
Maths- 2	CO 3	Observe the conept of lines in three dimensional space and different forms shortest distance between two skew	L1,L2
	CO 4	Recognise the concept of sphere , great circle , tangent planes, pole, polar orthogonality of two spheres	L1
	CO 5	Understand the concept of cone , generator of a cone, enveloping cone and reciprocal cones	L2
Coure Name - C9	Course Outcome	CO	Blooms Taxonomy Level
	CO 1	Develop the basics of waves and oscillations, a secure foundation in mathematics.	L6
Physics- II	CO 2	Describe this course would empower the student to acquire knowledge, which helps the student in their everyday life.	L1, L2
	CO 3	Apply the knowledge on the vibrating musical instruments.	L3
	CO 4	Explain the working of medical laboratory instruments.	L2, L3, L4

	CO 5	Discuss about the applications of ultrasonics.	L2
Coure Name - C10	CO Number		Blooms Taxonomy Level
PROGRAMMING IN C	CO 1	Appreciate and understand the working of a digital computer	L5,L2
	CO 2	Analyze a given problem and develop an algorithm to solve the problem	L3,L2,L1
	CO 3	Improve upon a solution to a problem	L4,L1,L3
	CO 4	Use the 'C' language constructs in the right way	L1,L6
	CO 5	Design, develop and test programs to handle File in C	L6,L3,L1
Coure Name - C11	Course Outcome	CO	Blooms Taxonomy Level
English - III	CO 1	Speak fluently in English	L1, L2, L4
	CO 2	Participate confidently in any social interaction	L1,L3
	CO 3	Face any professional discourse	L5,L3,L1
	CO 4	Demonstrate critical thinking	L1,L4
	CO 5	Enhance conversational skills by observing the professional interviews	L2,L4
Coure Name - C12	CO Number	CO	Blooms Taxonomy Level
Telugu-III	CO 1	పరిశీలించి అర్థం చేసుకోవడం, విశ్లేషించి సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం	L1,L2,L5
	CO 2	పరిశీలించి అర్థం చేసుకోవడం, విశ్లేషించి సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం	L1,L2,
	CO 3	పరిశీలించి అర్థం చేసుకోవడం, విశ్లేషించి సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం, సమాధానం ఇవ్వడం	L1,L2,L5

	CO 4	$\mathbb{Z}$ and $\mathbb{Z}_n$ are cyclic groups. $\mathbb{Z}$ is a free group. $\mathbb{Z}_n$ is a free group.	L3,L5
	CO 5	$\mathbb{Z}$ and $\mathbb{Z}_n$ are cyclic groups. $\mathbb{Z}$ is a free group. $\mathbb{Z}_n$ is a free group.	L2, L3
Coure Name - C13	Course Outcome	CO	Blooms Taxonomy Level
	CO 1	Identify properties implied by the definitions of groups	L1,L2
Abstract Algebra	CO 2	Recognise the differences between groups and subgroup	L1
Mathematics -III	CO 3	Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups	L4
	CO 4	State the concepts of isomorphism and homomorphism for groups	L1,
	CO 5	Summarize the concept of cyclic groups and its implications	L2,L5
Coure Name - C14	CO Number	CO	Blooms Taxonomy Level
	CO 1	Summarize the students should have attained a common level in basics of Light.	L2, L5
Physics - III	CO 2	Develop the knowledge on the Powerful tools for tackling a wide range of topics in Optics, Laser, Fiber Optics.	L6
	CO 3	Apply the knowledge on the applications of Lasers and Optical Fibers.	L3
	CO 4	Develop the knowledge on very important and fascinating areas of interference, diffraction and polarization with many experiments associated with it.	L6
	CO 5	Focus the knowledge on the communicating system using fiber optics.	L4

Coure Name - C15	CO Number		Blooms Taxonomy Level
OBJECT ORIENTED PROGRAMMING USING JAVA (PAPER-III)	CO 1	Understand concepts of Object oriented programming and features of java.	L5,L3
	CO 2	Implement logical ability skills by learning java constructs like operators, controls structures, etc.,	L4,L5,L1
	CO 3	Understanding interfaces and inheritance of oops using java	L5,L2,L6
	CO 4	Implement various thread concepts and handling exceptions	L6,L2,L1
	CO 5	Design and Develop WebPages using applet	L1,L5
Coure Name - C16	Course Outcome	CO	Blooms Taxonomy Level
Real Analysis	CO 1	Test the convergence of given sequences using the definitions of convergence and various convergence tests	L4,L5,L6
Mathematics- IV	CO 2	Differentiate various convergence tests to find the convergence of the given series, Alternating series	L2,L4
	CO 3	Distinguish the concepts of limits, Continuity, Discontinuity, Uniform Continuity	L2,L5
	CO 4	Summarize the Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis	L2,L5
	CO 5	Identify various types of the conditions of Riemann Integrability	L1,L2
Coure Name - C17	CO Number		Blooms Taxonomy Level
	CO 1	Develop the basics of Thermodynamics.	L6
Physics -IV	CO 2	Test the knowledge on the Thermometers.	L4, L5, L6

	CO 3	Describe the production of Low Temperatures and Refrigeration.	L1, L2
	CO 4	Explain the pyrometers and provide Knowledge on Temperature of the Sun.	L2, L3, L4
	CO 5	Write about Mechanical Engines.	L3, L6
Coure Name - C18	Course Outcome		Blooms Taxonomy Level
DATA STRUCTURES (PAPER-IV)	CO 1	Understand available Data Structures for data storage and processing	L5,L6
	CO 2	Understanding real time applications of Arrays and linked list	L2,L1
	CO 3	Choose a suitable Data Structures for a real-time applications - Stack, Queue	L1,L4
	CO 4	Implement various applications of Non-Linear data structures like trees	L1,L5
	CO 5	Develop ability to implement different Sorting and Search methods and Understand graph traversals.	L4,L1,L2
Coure Name - C19	CO Number	CO	Blooms Taxonomy Level
	CO 1	Compare the concepts of Rings, Commutative Rings, Integral Domains , Skew Fields and Fields, Characteristic of a Ring	L2,L4,L5
Mathematics- V	CO 2	Compare the concepts of Subrings, ideals , principal ideals, maximal ideals and prime ideals	L2,L4,L5
Ring theory and vector calculus	CO 3	Differentiate the concept of homomorphism, isomorphisms and linear transformations	L2,L4
	CO 4	Summarize the differential ideas of divergence, curl, and the Laplacian along with their	L2,L5

		physical interpretations, using differential forms or tensors to represent derivative operations	
	CO 5	Evaluate line, surface and volume integrals - both derivation and calculation in rectangular, cylindrical and spherical coordinate systems.	L4
Coure Name - C20	Course Outcome		Blooms Taxonomy Level
	CO 1	Recognize the concepts of the terms span, linear independence, basis , dimension and apply these concepts to various vector spaces and subspaces	L1
Mathematics-VI	CO 2	Evaluate dimension and rank of the given linear transformations with the given basis	L4,L5
Linear Algebra	CO 3	Compute eigenvectors and the corresponding eigenvalues for the given matrix	L3
	CO 4	Describe the concept of inner product spaces and various results orthogonality	L1
	CO 5	Compute orthonormal basis from the given set of vectors	L3
Coure Name - C21	CO Number	CO	Blooms Taxonomy Level
	CO 1	Develop the basics of Electronics, Electricity and Magnetism.	L6
Physic -V	CO 2	Develop the knowledge of electrical circuits, electrical connections, and storage devices their working etc.	L6
	CO 3	Test the theoretical and practical knowledge about signal generating circuits enable the students to identify different communication techniques.	L4, L5, L6
	CO 4	Explain about the logic circuits and their applications which enables them	L2, L3, L4

		to design logic circuits of their own.	
	CO 5	Apply the principles of electronics day to day life.	L3
Coure Name - C22	CO Number		Blooms Taxonomy Level
	CO 1	Develop the basics of properties of particles.	L6
Physics -VI	CO 2	Explain different radioactive devices	L2, L3, L4
	CO 3	Apply the knowledge on bio medical instruments like X-ray, CT scan, MRI etc.,	L3
	CO 4	Develop the knowledge on Crystallography.	L6
	CO 5	Test this course would empower the student to acquire practical knowledge, which helps the student in their everyday life.	L4, L5, L6
Coure Name - C23	Course Outcome	CO	Blooms Taxonomy Level
DATA BASE MANAGEMNT SYSTEM (PAPER-V)	CO 1	Identify basic database storage structures and access techniques such as file organizations	L5,L6,L3
	CO 2	Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models	L5,L4
	CO 3	Learn and apply Structured query language (SQL) for database definition and database manipulation	L4,L1,L2
	CO 4	Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database using SQL	L4,L3,L1
	CO 5	Understand various transaction	L6,L3,L5

		processing, concurrency control mechanisms and database protection mechanisms using PL/SQL	
Coure Name - C24	CO Number	CO	Blooms Taxonomy Level
SOFTWARE ENGINEERING (PAPER-VI)	CO 1	Plan a software engineering process life cycle , including the specification, design, implementation, and testing	L2,L3
	CO 2	Understand concept of Requirement Engineering Process and Feasibility study	L5,L2
	CO 3	Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology	L3,L2,L1
	CO 4	Understanding User Interface Design and factors that helps in HCI	L5,L6
	CO 5	Able to use modern engineering CASE tools necessary for software project management, time management and software reuse	L5
Coure Name - C25	Course Outcome	CO	Blooms Taxonomy Level
	CO 1	Analyze and detect different form of errors	L4
Mathematics - VII	CO 2	solve Algebraic and Transcendental equations using different methods.	L3 ,L6
Numerical Analysis	CO 3	Dintinguish forward, backward, central, average difference operators and the related problems and difference tables	L2 ,L5

	CO 4	Compare Interpolating functions within the range using equally equal spaced aruguments	L2,L4,L5
	CO 5	Compare Interpolating functions within the range using unequally spaced arguments like lagranges interpolation etc	L2,L4,L5
Coure Name - C26	CO Number	CO	Blooms Taxonomy Level
	CO 1	Explain the forms of energy, Environmental degradation due to energy production and utilization. Air and water pollution, green-house effect and global warming, acid rain.	L2, L3, L4
Physic - VII	CO 2	Estimate the exponential increase in energy consumption and world's energy resources, energy resources available in India, need for use of new and renewable energy sources.	L2, L4, L5
	CO 3	Describe the working principles of Solar heating system, solar cooker, solar cells. Principle of wind energy conversion. Advantages, disadvantages of wind mills. Applications of wind energy	L1, L2
	CO 4	Develop the basics of ocean energy and its various forms,wave energy technologies and its advantages Hydrogen production methods - Electrolysis of water, uses of hydrogen as fuel.	L6
	CO 5	Observe the conversion of biomass into fuels–energy through fermentation, pyrolysis, gasification and	L2

		combustion. Properties and characteristics of biogas.	
Coure Name - C27	Course Outcome	CO	Blooms Taxonomy Level
WEB TECHNOLOGIES (PAPER-VII)	CO 1	Understand Web technologies and Design an interactive web pages using HTML	L5,L1,L2
	CO 2	Implement Style sheets for an interactive web pages using CSS	L3,L1,L2
	CO 3	Apply Behavioral actions to interactive WebPages to develop dynamic using JavaScript	L4,L1,L3
	CO 4	Implement Data validation techniques using DHTML with JavaScript	L4,L1
	CO 5	Understand the concept of XML to define data for web applications	L5,L6
	CO Number	CO	Blooms Taxonomy Level
	CO 1	Discuss the methods of curve fitting	L2
Mathemataics - VIII	CO 2	Differentiate between several types of curve fitting for straight line, second degree parabola, power curve, exponential curve	L2,L4
Cluster -1	CO 3	Compute the derivative of function using the given data by the use of interpolation formulae	L3
Advanced Numerical Analysis	CO 4	Explain various formulae of numeral integration and their application	L2 , L3 , L4
	CO 5	Solve the Numerical differential equations	L3 , L6
Coure Name - C29	CO Number		Blooms Taxonomy Level
	CO 1	Explain about the differential equation of Hermite polynomials and its solution ,	L2 , L3 , L4

		Generating function, Rodrigue formulae , Orthogonal properties and recurrence formulae	
Mathematics -IX	CO 2	Explain about the differential equation of Legendre polynomials and its solution, Generating function, Rodrigue formulae , orthogonal properties and recurrence formulae	L2 , L3 , L4
Cluster - II	CO 3	Explain the differential equation of Laguerre polynomials and its solution , Generating function, Rodrigue formulae , Orthogonal properties and recurrence formulae .	L2 , L3 , L4
Special Functions	CO 4	Explain the differential equation of Bessels polynomials and its solution , Generating function, Rodrigue formulae , Orthogonal properties and recurrence formulae	L2 , L3 , L4
	CO 5	Evaluate Gamma and Beta functions and its various forms, Legendre Duplication formula, Relation between Beta and gamma functions , their applications in finding various integrals	L4,L5
Course Name - C30	Course Outcome		Blooms Taxonomy Level
	CO 1	Discuss a variety of problem- solving strategies to solve problems	L2
Mathematics - X	CO 2	Test the thinking skills	L4 ,L5,L6
Cluster- 3	CO 3	Adapt effective mathematical communication	L6
Project work	CO 4	Develop mathematical knowledge through problem solving	L6
	CO 5	write Practical applications of the theory subject	L3,L5



PRINCIPAL

Government Degree College
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