



# **COMMON COURSES**

## **ENGLISH MODEL I**

SEMESTER	PAPER CODE	TITLE OF PAPER	со	COURSE OUTCOME
		F: #	CO1	Use English accurately in both written and spoken forms.
Semester I	EN1CCT01	Fine Tune Your English	CO2	Identify the common errors in English usage.
		English	CO3	Practice English for formal communication effectively.
			CO1	Discover time tested fictional works.
Semester I	EN1CCT02	Pearls from	CO2	Critique the aesthetic and structural elements of short stories and one act plays.
		the Deep	CO3	Assess the extent to which poetry mirrors life.
			CO1	Identify the major issues related to war, dissention and refugeeism.
Semester II	EN2CCT03	Issues that matter	CO2	Act rationally to concerns regarding culture and identity.
			CO3	Develop a sustainable consciousness towards environment.
	EN2CCT04	Savouring the Classics	CO1	Appreciate literature through the study of classic poems and short stories.
Semester II			CO2	Understand the features that go into the making of classic drama.
			CO3	Estimate the influence of classic novels on today's literature.
		Litanatuma	CO1	Distinguish the subtle negotiations of indigenous and diasporic identities within Literature.
Semester III	EN3CCT05	Literature and/as identity	CO2	Examine the fissures, the tensions and interstices present in South Asian regional identities.
			CO3	Discover the emergence of life writing within alternate/ marginal identities.
			CO1	Review the ability of life sketches to inspire optimism.
Semester IV	EN4CCT06	Illumination s	CO2	Estimate the life lessons implied in motivational essays and speeches.
			CO3	Analyse the extent to which classic short stories and poems influence human minds.

# ENGLISH MODEL II

SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
		Fine Tune	CO1	Use English accurately in both written and spoken forms.
Semester I	EN1CCT01	Your English	CO2	Identify the common errors in English usage.
		English	CO3	Practice English for formal communication effectively.
			CO1	Identify the major issues related to war, dissention and refugeeism.
Semester II	EN2CCT03	Issues that Matter	CO2	Act rationally to concerns regarding culture and identity.
			CO3	Develop a sustainable consciousness towards environment.
		Literature and/as identity	CO1	Distinguish the subtle negotiations of indigenous and diasporic identities within Literature.
Semester III	EN3CCT05		CO2	Examine the fissures, the tensions and interstices present in South Asian regional identities.
			CO3	Discover the emergence of life writing within alternate/ marginal identities.
Semester IV	EN4CCT06		CO1	Review the ability of life sketches to inspire optimism.
		Illumination s	CO2	Estimate the life lessons implied in motivational essays and speeches.
			CO3	Analyse the extent to which classic short stories and poems influence human minds.

#### **ENGLISH B. Com.**

SEMESTER	PAPER CODE	TITLE OF PAPER	CO	COURSE OUTCOME
	Semester I EN1CCT01 Fine Tur	Fine Tune	CO1	Use English accurately in both written and spoken forms.
Semester I			CO2	Identify the common errors in English usage.
Eliglish	Liigiisii	CO3	Practice English for formal communication effectively.	

			CO1	Identify the major issues related to war, dissention and refugeeism.
Semester II	EN2CCT03	Issues that matter	CO2	Act rationally to concerns regarding culture and identity.
			CO3	Develop a sustainable consciousness towards environment.
			CO1	Discover time tested fictional works.
Semester III	EN3CCT07	Gems of imagination	CO2	Critique the aesthetic and structural elements of short stories and one act plays.
		magmation	CO3	Assess the extent to which poetry mirrors life.
	Semester IV   EN4CCT08		CO1	Develop love for literature through the study of classic poems and short stories.
Semester IV		Revising the classics	CO2	Understand the features that go into the making of classic drama.
			CO3	Estimate the influence of classic novels on today's literature.

# MALAYALAM MODEL I

SEMESTER	PAPER	TITLE OF	СО	COURSE OUTCOME
SEMESTER	CODE	PAPER	CO	COURSE OUTCOME
				Understand the post-modern Malayalam
			CO1	Short stories and their portrayal of social
				issues.
		Kadhasahith	CO2	Analyze the evolving of Malayalam story
Semester I	ML1CCT01	yam	CO2	and novel through the ages.
		yam	CO3	Develop reading and writing skills.
			CO4	Appreciate the unique writing styles of
			CO4	popular Malayalam writers.
			CO5	Critically analyze Malayalam Short stories
			CO1	Analyze the impact of culture and different
				eras in the poetry
			CO2	Appraise popular poets and their works
			based on cultural backs	based on cultural background.
Semester II	ML2CCT02	   Kavitha	CO3	Appreciate the aesthetics of Malayalam
		Ta vicia		poems.
			CO4 Identify varied poetic styles a	1
				expressions
			CO5	Understand the use of language in poetic
				expressions

			CO1	Appreciate the varied visual arts existing in Kerala.
			CO2	Assess the features of cinema and varied aspects of this art.
Semester III	ML3CCT03	Dridhyakala Sahithyam	CO3	Critically analyze of the Classical and Popular art forms
			CO4	Familiarize with the varied trends in theatre and its social relevance
			CO5	Understand the history and features of varied folk dances in Kerala
	ML4CCT04		CO1	Appreciate contemporary Malayalam prose literature
			CO2	Use the Malayalam language expressively
Semester IV		Malayala Gadhayrach	CO3	Fine tune reading and writing skills
Semester IV		anakal	CO4	Familiarize with popular Malayalam writers and their literary works
			CO5	Realize the history of Malayalam short story

#### MALAYALAM MODEL II

SEMESTER	PAPER	TITLE OF	CO	COURSE OUTCOME		
SEVIESTER	CODE	PAPER	CO	COURSE OUTCOME		
			CO1	Understand the basic aspects of Malayalam		
			COI	short stories and poems.		
				Familiarize with contemporary poets, their		
			CO2	poetic style and vision about the society,		
		Katha	Short stories and poems.  Familiarize with contemporary poets, their poetic style and vision about the society, culture & nation.  CO3  Realize the impact of time and space in Malayalam literature  Understand the social and political reality behind modernity that exists today.  CO1  Understand the basic aspects of Malayalam short stories and poems.  Appreciate the aesthetics in Malayalam prose.  CO2  Develop language skills to express ideas effectively.  Express reading and writing skills in			
Semester I	ML1CCT09	Kauia	CO3	Realize the impact of time and space in		
		Kavitila	Malayalam literature	Malayalam literature		
			COA	Understand the social and political reality		
			behind modernity that	behind modernity that exists today.		
			CO1	Understand the basic aspects of Malayalam		
				short stories and poems.		
			CO1	Appreciate the aesthetics in Malayalam		
				prose.		
			CO2	Develop language skills to express ideas		
Semester II	ML2CCT10	Gadhyapari	CO2	effectively.		
Schester II	WILLZCCTTO	chayam	CO3	Express reading and writing skills in		
				Malayalam.		
			CO4	Appraise writers and their literary		
				contributions.		

## MALAYALAM B. Com.

SEMESTER	PAPER	TITLE OF	СО	COURSE OUTCOME
SEMESTER	CODE	PAPER	CO	COURSE OUTCOME
				Understand the post-modern Malayalam
			CO1	Short stories and their portrayal of social
				issues.
		Vothovoum	CO2	Analyze the evolving of Malayalam story
Semester I	ML1CCT05	Kathayaum Kavithayum	CO2	and novel through the ages.
		Kavitilayulli	CO3	Develop reading and writing skills.
			CO4	Appreciate the unique writing styles of
				popular Malayalam writers.
			CO5	Critically analyze Malayalam Short stories
			CO1	Appreciate the aesthetics in Malayalam
			COI	prose.
			CO2	Develop language skills to express ideas
Semester II	LML2CCT06 L	Athmakadh,	CO2	effectively.
Semester II		Lekhanam	CO3	Express reading and writing skills in
				Malayalam.
			CO4	Appraise writers and their literary
			CO4	contributions.

#### HINDI MODEL I

CEMECTED	PAPER	TITLE OF	СО	COURSE OUTCOME
SEMESTER	CODE	PAPER	CO	COURSE OUTCOME
			CO1	Identify various forms of Hindi literature.
Semester I	HN1CCT01	Prose and One act	CO2	Understand the culture diversity and social responsibility.
		plays	CO3	Appreciate the art of drama.
			CO4	Develop human values through character
				study
		Short stories	CO1	Compare prose forms of Hindi literature.
			CO2	Analyse the literary aspects of short stories and novel.
Semester II	HN2CCT01	and novels	CO3	Identify the moral values in modern
		and novels	COS	literature.
			CO4	Develop communication skills in Hindi
			CO <del>1</del>	Language.
Semester III		Poetry,	CO1	Understand various kinds of poetry.
Semester III	HN3CCT01	Grammar	CO2	Apply grammar in practical situations.

		and	CO3	Develop communicative skills.
		Translation	CO4	Practice the skill of translation.
			CO1	Understand the features of drama and long
				poem.
		Drama and	CO2	Examine the historical importance of the
Semester IV HN4CCT01	HN4CCT01	_		play.
		long poem	CO3	Identify the rural culture and customs in the
			CO3	poem.
			CO4	Develop language skills.

#### HINDI MODEL II

SEMESTER	PAPER CODE	TITLE OF PAPER	CO	COURSE OUTCOME
			CO1	Recall/ Identify poetry and one act play
Conservation I	IINI1 CCTO4	Poetry and	CO2	Develop creative skills in Poetry wring
Semester I HN10	HN1CCT04	One act play	CO3	Create awareness regarding culture and social responsibility
			CO4	Recognise great writers and their outlook
			CO1	Understand various prose forms.
		Prose and	CO2	Develop creativity in article writing
Semester II	HN2CCT02	Short stories CO	CO3	Understand society in various aspects
			CO4	Recognise eminent writers in the field of short stories.

## HINDI B.Com.

SEMESTER	PAPER CODE	TITLE OF PAPER	CO	COURSE OUTCOME
			CO1	Understand various forms of literature.
Composton I	LINI1CCT02	Prose and	CO2	Develop social and cultural consciousness.
Semester I	HN1CCT02	Mass Media	CO3	Relevance of mass media in society.
			CO4	Understanding relationship of mass media
			CO4	in literature
	Semester II HN2CCT04	Poetry,	CO1	Familiarize with poetry.
		Commercial	CO2	Relevance of translation in modern period.
Semester II		Correspond	CO3	Introducing with official correspondence in
		ence and		Hindi.
		Translation	CO4	Develop language skills.



# **OPEN COURSES**

SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
			CO1	Understand basic ideas and concepts in economics.
Samastan V	ECSOPT01	Fundamenta ls of	CO2	Interpret basic concepts of public economics.
Semester V	EC5OPT01	ls of economics	CO3	Understand financial system in international trade.
			CO4	Study the Indian economic development in various perspectives.
			CO1	Understand the concept of errors, fundamental and derived quantities.
			CO2	Explain the different phenomenon of light and its application
Semester V	PHYOPT02	Physics in Daily life	CO3	Enumerate the concepts and laws of linear and rotational motion
			CO4	Illustrate the concepts of matter, energy, waves and power generation technologies
			CO5	Outline the general features of universe and satellites
			CO1	Recognize the importance of Physical fitness and create awareness about the scientific principles of physical education
		Physical Health and	CO2	Understand the basic concepts of health and wellness, nutrition and effects of exercise on body systems
Semester V	PE5OPT01	Life Skill Education	CO3	Identify healthy lifestyle, common injuries, first aid measures, and yoga
		Zavanion	CO4	Understand the various International and national level sports events and Impart knowledge about various sports and games activities and their influence in the society
			CO1	Understand the importance of balanced ecosystem
Semester V	ZY5OPT01	Vocational	CO2	Emphasize the scope of ornamental fish culture and successful entrepreneurship in ornamental fish trade
		Zoology	CO3	To acquire basic knowledge and skills in commercial Quail farming and to analyse the role of Quail in health sector
			CO4	Awareness about need for waste management and organic farming

			CO5	Illustrate maintenance and management of an apiary and to understand their role in nutritional security and environmental sustainability.
			CO1	Explain the theory base of accounting.
		Fundamenta	CO2	Prepare journal and record transactions in the books of original entry.
Semester V	CO5OP03	ls of	CO3	Compute the various ledger accounts.
		Accounting	CO4	Calculate arithmetical accuracy by preparation of trial balance.
			CO5	Prepare the financial statement.
			CO1	Analyse the formulation and health effects of food additives
			CO2	Compare soaps and detergents
		Chemistry in everyday life	CO3	Realize the uses and toxicology of cosmetics
Semester V	CH5OPT01		CO4	Explain the concepts related to the structure, applications and environmental impact of plastics, paper and dyes
			CO5	Discuss the classification of drugs, and propose prevention and treatment of drug addiction
			CO6	Familiarize the importance of Chemistry in Agriculture
			CO7	Provide elementary idea on Nano-chemistry and its applications
			CO1	Identify the sources, importance and need of interior decoration.
		Interior	CO2	Explain the basic elements and principles of interior decoration.
Semester V HS5OPT0	HS5OPT01	Decoration and Related	CO3	Apply the principles of colour and light in interiors.
		Arts	CO4	Discuss the types, selection, arrangement and uses of furniture and furnishings.
			CO5	Assess the role of accessories and indoor gardening in interiors.

## **COMPLEMENTARY COURSE**



## FOR MODEL II PHYSICS AND CHEMISTRY

CEMECTED	PAPER	TITLE OF	CO	COURSE OUTCOME
SEMESTER	CODE	PAPER	CO	COURSE OUTCOME
		Partial	CO1	Enhances the idea of partial derivatives.
		differentiati on matrices	CO2	Solving system of linear equations and its applications.
Semester I	MM1CMTO1	trigonometr y and	CO3	Application of binomial theorem in trigonometry.
		numerical methods	CO4	Familiarize different methods in numerical analysis.
		Integral	CO1	Acquire the idea of integrals and application of integrals in finding volumes and areas.
Semester II	MM2CMT01	calculus and differential equations	CO2	Familiarize with multiple integrals and its applications.
			CO3	Solve ordinary differential equations.
			CO4	Solve partial differential equations using different methods.
		Vector calculus analytic geometry and abstract algebra	CO1	Application of directional derivatives.
Semester III	MM3CMT01		CO2	Evaluate Greens theorem, Stokes theorem and its applications.
Semester III	WINISCINITOI		CO3	Understand conic sections.
			CO4	Acquire basic knowledge in abstract algebra
Semester IV		Fourier series	CO1	Analyse periodic functions and apply power series to solve differential equation.
		Laplace	CO2	Familiarize Laplace transforms.
	MM4CMT01	transform and complex	CO3	Acquire knowledge of elementary functions and complex integration in complex analysis
		analysis	CO4	Application of complex integration

#### FOR B. Voc. APPLIED ACCOUNTING AND TAXATION

SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
Samastar I	Compostor I AATC102		CO1	Familiarize sets.
Semester I	AATG103		CO2	Solving sequence related problems.

	ъ .	CO3	Application of various concepts of algebra.
	Business Mathematic	CO4	Familiarize matrices.
	S	CO5	Solving system of linear equations using
			matrices.

# FOR B.A. ECONOMICS

		Social	CO1	Understand the formation of state in ancient India.
			CO2	Evaluate the administrative features of early empires in India.
Semester I	HY1CMT02	Formations in pre - modern	CO3	Analyze the changing production and relations.
		India (History)	CO4	Understand the features of Indian feudalism.
		(History)	CO5	Evaluate socio economic, political and cultural transformations of different phases in Indian History.
	ANA CHATTOO	Transition to the	CO1	Understand the ideas about the transition that the world had experienced over the years.
Semester II	HY2CMT03	Contempora	CO2	Identify trails and turbulences.
		ry World (History)	CO3	Analyze the problems of present day developments.
			CO1	Acquaint the origin and scope of sociology.
	SO3CMT01		CO2	Identify the basic concepts in sociology.
Semester III		Introduction to	CO3	Understand the historical background and development of sociology in India.
Semester III		Sociology	CO4	Analyze the different sociological perspectives.
			CO5	Recognise how individuals fit in the society.
			CO1	Familiarize development of sociology as a theoretical discipline.
	SO4CMT02	Developme nt of	CO2	Comprehend the historical background of sociological theories.
Semester IV		Sociological Theories	CO3	Recognise the classical sociological theorists and their contributions to sociology.
			CO4	Analyse the major classical theories in sociology.

## FOR B.Sc. FAMILY AND COMMUNITY SCIENCE

		.v	CO1	To familiarize taxa level identification of Kingdom Protista and their role in human health
			CO2	To instill curiosity on phylum Porifera and coelenterate
Semester I	ZY1CMT01	Non- Chordate Diversity	CO3	Understand different levels of Helminth and Annelid biodiversity and their significance in human life
			CO4	Familiarize taxa level identification of Phylum Arthropoda
			CO5	To create an awareness on diversity of phylum Mollusca and Echinodermata
			CO1	Acquire in depth knowledge on the diversity of Protochordates
			CO2	Understand different levels of biological diversity of Agnatha and Super class Pisces
Semester II	ZY2CMT02	Chordate Diversity	CO3	To create awareness on physiology and diversity of Amphibia
		·	CO4	To create appreciation on reptilian and Avian biodiversity
			CO5	Acquire in depth knowledge on Mammalian biodiversity
			CO1	To acquire knowledge in physiology of nutrition, respiration and circulation to develop critical societal goal of health literacy
			CO2	Acquire various aspects of regulation, control and co-ordination of physiological activities of human beings
		Physiology	СОЗ	Analyse hormonal regulation of physiological processes
Semester III	ZY3CMT03.	and Immunolog y	CO4	To gain knowledge about the structure and functions of immune-bodies and their reactions
			CO5	To understand various immune mechanisms, role of immune cells and organs; To acquire knowledge about preventing common diseases rather than curing.

			CO1	Understand the scope and successful entrepreneurship in aquaculture
			CO2	Understand importance of balanced ecosystem and the successful entrepreneurship in ornamental fish trade
Semester IV	ZY4CMT04	Applied Zoology	CO3	Maintenance and management of silkworms and to understand the scope of silk trade
			CO4	Awareness about need for waste management and organic farming
			CO5	Illustrate maintenance and management of an apiary and to understand their role in nutritional security and environmental sustainability.
			PRAC'	ΓΙCAL
			CO1	Understand the relative size, shape and location of different features of what is being drawn
Semester I	ZY1CMT01	Non- Chordate	CO2	Understand the different levels of biological diversity
		Diversity	CO3	To understand the systemic classification
			CO4	To identify the organisms through sections
			CO5	To develop skill in dissections and mountings
			CO1	Understand the different levels of biological diversity
			CO2	To understand the systemic classification
Semester II	ZY2CMT02	Chordate Diversity	CO3	To identify the organisms through Osteology
		Diversity	CO4	To develop skill in taxonomic identification using the key
			CO5	To develop skill in dissections and mountings
			CO1	Understand the components of body fluids
		Dhysiology	CO2	Understand the reactions of components
Semester III	ZY3CMT03	Physiology and	CO3	To Identify human blood groups and Rh factor
		Immunolog	CO4	To Estimate Haemoglobin of the blood
		У	CO5	Understand the functions, working and uses of instruments
Semester IV	ZY4CMT04	Applied Zoology	CO1	Gain deep knowledge in identification morphology and Economic importance of culturable fishes

	CO2	Develop skill to the species level
	CO2	identification of Earth worms
	CO3	To identify different species and castes of
	CO3	honey bees
	CO4	Understand the principle, procedure and
	CO4	uses of equipments used in culture
	CO5	Understand the natural resources available
		from animals

# FOR B. Sc. FAMILY AND COMMUNITY SCIENCE AND B. Sc. ZOOLOGY

		ъ :	CO1	Study various atom models	
		Basic Theoretical	CO2	Develop fundamental concepts in chemistry	
Semester I	CH1CMT01	and Analytical	CO3	Study the basic principles of analytical chemistry	
		Chemistry	CO4	Learn the principles of chromatographic techniques	
			CO1	Learn Fundamental Concepts of Organic Chemistry	
Semester II	CH2CMT02	Basic Organic	CO2	Study the Mechanisms of Organic Reactions	
		Chemistry	CO3	Understand the Stereochemistry of Organic Compounds	
			CO4	Get an introductory idea about Natural and	
				Synthetic Polymers	
			PRACTICALS		
Semester I and	CH2CMP01	Volumetric	CO1	Develop skills for the quantitative estimation using different types of titrations	
11	CH2CMP01	Analysis	CO2	Prepare different standard solutions	
			CO3	Prepare solutions of different concentrations from a standard solution	
			CO1	Differentiate between natural and artificial radioactivity	
		Inorganic And	CO2	Learn the basics of bioinorganic chemistry	
Semester III	CH3CMT04	Organic Chemistry	CO3	Study the structure and aromaticity of heterocyclic compounds	
		Chemistry	CO4	Understand various food additives and its health effects	
Comostar IV	CHACMTOC	Advanced	CO1	Get an introductory idea about lipids and its classifications	
Semester IV	CH4CMT06	Bio-Organic - Chemistry	CO2	Understand the structure elucidation and uses of natural products	

			CO3	Recognize the structure and biological functions of vitamins, steroids and hormones
			CO4	Interpret the classification and characteristics of amino acids, nucleic acids and enzymes
			PRAC'	ΓICALS
Semester III	CH4CMP03	Organic Chemistry	CO1	Study the methods for the determination of physical constants such as boiling point and melting point
and IV	CH4CWF03	Practical	CO2	Develop skills for the systematic analysis of organic compounds
			CO3	Learn to prepare derivatives of organic compounds
		Project,	CO1	Familiarize with the research methodology
Semester V and VI	CH6PRP01	Industrial visit and comprehens	CO2	Develop as independent thinkers who are responsible for their own learning in the field of chemistry.
		ive viva- voce	СОЗ	Acquire skills required to pursue their career in research and development in the chemistry.
			CO1	Explore career opportunities suited for chemistry graduates.
			CO2	Integrate theory and practice
Semester V and VI	СН6ОЈР01	OJT	CO3	Learn the laboratory skills and safety measures to transfer and interpret knowledge entirely in the working environment
			CO4	Got exposures of a breadth of experimental techniques using modern instrumentation in the field of chemistry.

#### **B. A. ECONOMICS**



SEMESTER	PAPER CODE	TITLE OF PAPER	co	COURSE OUTCOME
			CO1	Understand the broad contours of Social Sciences.
		Perspectives and	CO2	Understand Economics and its methodologies.
Semester I	EC1CRT01	Methodolog y of	СОЗ	Create an enthusiasm among students about different schools of economic thoughts.
		Economics	CO4	Understand the various aspects of social science research, methodology, concepts and tools.
			CO1	Acquire fundamentals of microeconomics.
			CO2	Perceive supply and demand and the basic forces that determine equilibrium in a market economy.
			CO3	Understand the foundation for economic analysis and problem solving.
Semester II	EC2CRT02	Micro Economic Analysis I	CO4	Get introduced to the framework for learning about consumer behaviour and analyzing consumer decisions.
			CO5	Study about firms and their decisions about Optimal production
			CO6	Solve basic microeconomic problems.
			CO7	Understand the use of microeconomic techniques to the policy formulation and operation of real economy.
			CO1	Develop skills enabling them to understand economic concepts and use those concepts to analyses specific questions.
Semester III	EC3CRT03	Micro Economic	CO2	Understand consumer and firms behavior and to analyse different types of market structure.
		Analysis II	CO3	Analyses the behavior of firms in a monopoly or oligopoly and calculates the resulting changes in producer or consumer surplus
			CO4	Understand the use of economic tools to analyse economic policies.
			CO1	Understand the basic concepts of Growth and Development.

		Economics of Growth	CO2	Analyse the various approaches of economic growth.
Semester III	EC3CRT04	and Developme	CO3	Understand the indicators of economic growth and development.
		nt	CO4	Understand the major economic problems like poverty, unemployment and inequality.
			CO5	Analyse the role of education and health in economic development.
			CO1	Interpret the meaning, scope and nature of macroeconomics.
		Macro	CO2	Understand the various concepts of national income accounting.
Semester IV	EC4CRT05	Economics Analysis I	CO3	Analyse the classical model of employment and output determination.
			CO4	Analyse the Keynesian model of macroeconomic equilibrium.
			CO5	Study the functioning of an economy using the IS-LM model.
			CO1	Analyse the impact of public policy on the allocation of resources and distribution of income in the economy.
		D 11'	CO2	Evaluate the various activities of state in economic affairs.
Semester IV	EC4CRT06	Public Economics	CO3	Understand the scope and importance of public finance.
			CO4	Analysecentre and state finance commissions.
			CO5	Understand the working of the local self-government.
			CO1	Familiarize the basic mathematics for economic analysis.
Semester V	EC5CRT07	Quantitative Techniques	CO2	Study the economic theory including micro economic theory, macro economic theory, statistics and econometrics within the praxis of mathematics.
			СОЗ	Analyse the application of mathematical and statistical tools in the realm of economic theories.
		CO4	Acquire proficiency in the subject econometrics with ease.	
			CO1	Understand consumption and investment function.

Semester V	EC5CRT08	Macro Economics	CO2	Interpret various concepts related with money.
		II	CO3	Understand various concepts and theories related with inflation.
			CO4	Analyse the monetary and fiscal policy in the context of IS-LM Framework.
			CO5	Understand post Keynesian school of macroeconomic thought.
			CO1	Understand basic ideas and concepts in economics.
Semester V	EC5OPT01	Fundamenta ls of	CO2	Interpret basic concepts of public economics.
Semester V	ECSOPTOI	ls of Economics	СОЗ	Understand financial system in international trade.
			CO4	Study the Indian economic development in various perspectives.
			CO1	Understand the meaning and scope of Environmental economics.
		Environmen	CO2	Understand the need for sustainable development.
Semester V		tal Economics	СОЗ	Analyse the basic issues of environment like Global Warming, depletion of ozone layer and loss of bio-diversity etc.
			CO4	Evaluate some environmental policies.
			CO5	Analyse the concept of human rights.
			CO1	Familiarize the fundamental concepts of econometrics as a discipline.
Semester V	EGGODTIO	Introductory Econometri	CO2	Understand the fitting of econometric model of economic theories.
Semester V	EC5CRT10	cs	СОЗ	Critical analysis of economic problems using econometric methodology.
			CO4	Apply the basic ideas of estimation and hypothesis testing.
			CO1	Develop statistical skills to collect, analyse and interpret empirical data.
Semester VI	EC6CRT11	Quantitative	CO2	Apply the statistical methods and tools which are essential for the study of economics at the undergraduate level.
		Methods	CO3	Carry out their project work with ease.
	CO4	Understand the quantitative and qualitative aspects regarding research and economic analysis		

			CO1	Understand the basic principles that govern international trade.
			CO2	Understand the concepts like balance of payments and foreign exchange.
Semester VI	EC6CRT12	Internationa 1 Economics	CO3	Understand the flow of trade in goods, services, resources and technology at a global level.
			CO4	To study the international financial institutions.
			CO1	Understand scope and methods of business economics.
			CO2	Analyse the role of managerial decision making in business economics.
Semester VI	EC6CBT02	Business Economics	CO3	Understand how analytical tools of micro and macroeconomics are applied for solving many practical business problems.
			CO4	Understand the business economics on the basis of economic concepts like scarcity, resource allocation, choice etc.
			CO1	Understand the financial market institutions, regulators and instruments.
Semester VI		Money and Financial	CO2	Study the developments related to the working of financial markets.
Semester VI	EC6CBT13	Markets	CO3	Analyse various financial market segments and money market segments.
			CO4	Understand various concepts related with financial markets.
			CO1	Understand the economic development strategy before and after economic reforms.
			CO2	Familiarise with the demographic features and its impact on economic development.
		Indian	CO3	Analyse the role of agriculture, industry and service sector in the Indian economy.
Semester VI	EC6CRT14	Economy	CO4	Identify the rationale of economic planning and the various development issues.
			CO4	Understand the features of Indian feudalism.
			CO5	Evaluate socio economic, political and cultural transformations of different phases in Indian History.
Semester VI	EC6PR01	Project	CO1	Inculcate the spirit of research aptitude in students.

CO2 Motivate to explore theories and praxis in
Economics.
Enable them to apply their subject
CO3 knowledge in socio-economic scenario and
thereby propounding solutions.



# B. A. ENGLISH LANGUAGE AND LITERATURE

SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
			CO1	Distinguish literature as a specific discipline within the humanities
		Mathadalagy	CO2	Classify the tenets of traditional approaches and also that of formalism
Semester I	EN1CRT01	Methodology of Literary Studies	CO3	Describe the shift towards contextual-political critiques of literary studies
		Studies	CO4	Identify the questions raised by Cultural Studies and Feminism
			CO5	Explain the issues of subalternity and regionality in the literary domain.
Semester I	HY1CMT01	Roots of the Modern World	CO1	Understand the history of the world with special reference to Asian societies, movements, wars, revolutions etc.
Semester I	EN1CCT01	Fine Tune	CO1	Use English in both written and spoken forms.
Semester 1	LIVICCIOI	Your English	CO2	Practice English for formal communication effectively
			CO1	Discover and enjoy works of literature
Semester I	EN1CCT02	Pearls from the Deep	CO2	Estimate the aesthetic and structural elements of literature
			CO1	Interpret the evolution and the differential traits of the English language till the present time.
		Introducing	CO2	Analyze the emergence of British and American Literature through diverse periods.
Semester II	EN2CRT02	Language and Literature	CO3	Sketch the evolution of literature from antiquity to postmodern times
			CO4	Recognize the diversity of genres and techniques of representation and narration
		CO5	Identify the links between literature and film as narrative expressions	
			CO1	Identify major issues of contemporary significance
Semester II		Issues that Matter	CO2	Respond rationally and positively to the issues raised
			CO3	Intergrate the values imparted through the excerpts

			CO4	Reframe himself/ herself as conscious, cautious, concerned human being and articulate these values in error free English.
Semester II	EN2CRT04	Savouring the	CO1	Familiarise with the classics from various lands
Semester II	ENZCK 104	Classics	CO2	Understand the features that go into the making of a classic
			CO1	Discover various prose styles of expression.
Semester III	EN3CRT03	Harmony of Prose	CO2	Practice eloquent expressions, brevity and aptness of voicing ideas in stylish language.
			CO1	Understand the representation of poetry in various periods of the English tradition
Semester III	EN3CRT04	Symphony of Verse	CO2	Recall the emerging cultural and aesthetic expressions of poetry.
		The Evolution of	CO1	Produce a comprehensive overview of the History of Britain and its impact upon the rest of the world
Semester III	EN3CMT03	Literary Movements:	CO2	Interpret English literature in the light of historical events
		The Shapers of Destiny	СОЗ	Analyze the manner in which a person is molded by the historical events of his personal and communal life
			CO1	Distinguish the subtle negotiations of Indigenous and Diasporic identities within Literature
Semester III	EN3CC05	Literature and/as Identity	CO2	Examine the fissures, the tensions and interstices present in South Asian regional identities
			CO3	Point out the emergence of Life writing and alternate/ alternative/ marginal identities.
Semester IV	EN4CRT05	Modes of Fiction	CO1	Categorize British and non- British short fiction, and also the novel as a form of literary expression.
Semester IV	EN4CRT06	Language and Linguistics	CO1	Show the various organs and processes involved in the production of speech, the types and typology of speech sounds, segmental & suprasegmental features of the English language, and transcription using IPA.
			CO2	Describe and explain morphological processes and phenomena.

			CO3	Recognise the various processes involved in the generation of meaning.
			CO4	Appraise the students' awareness that natural language is structure dependent and generative and to develop their ability to observe, describe and explain grammatical processes and phenomena.
		The Evolution of	CO1	Understand literature against the backdrop of history.
Semester IV	EN4CMT04	Literary Movements: The Cross Currents of Change	CO2	Interpret the various historical and literary movements.
Semester IV	EN4CCT06	Illuminations	CO1	Understand and get motivated by inspiring life sketches, essays, speeches, short stories and poems
			CO1	Understand with the works of the playwrights included in the course.
Semester V	Semester V EN5CRT07	Acts on the Stage	CO2	Identify the broad genre-based nuances in the realm of drama.
			CO3	Interpret and critique drama as an art form.
			CO1	Distinguish major developments in literary criticism from the ancient times to the twentieth century.
Semester V	EN5CRT08	Literary Criticism and	CO2	Recognize the realm of literary theory and major theoretical schools.
		Theory	CO3	Understand the chief Strains of Indian literary criticism.
			CO4	Analyze short poetical pieces critically.
			CO1	Distinguish the Indian quotient in English writings from India
Semester V	Semester V EN5CRT09 Indian Writing in English	Writing in	CO2	Recognize the different concerns that Indian English writers share, cutting across subnationalities and regionalities.
		CO3	Analyze the locus standi of diasporic Indian writers.	
Company ENS	FN5CRT01	Environment al Science	CO1	Develop a sense of awareness among the students about the environment and its various problems.
Semester v	Semester V EN5CRT01 and	and Human Rights	CO2	Understand the inter-relationship between man and environment and the necessity to protect nature and natural resources.

			CO3	Acquire the basic knowledge about environment and the social norms that provide unity with environmental characteristics and create positive attitude about the environment.
			CO1	Discern the social, political, cultural aspects of postcolonial societies.
Semester VI	EN6CR10	Postcolonial Literatures	CO2	Understand the impact of colonialism and imperialism on native cultural identities.
			CO3	Infer the links between language, history and culture.
			CO1	Critically respond to literature from a feminist perspective.
Semester VI	Semester VI EN6CR11 Women Writing	Women Writing	CO2	Understand the patriarchal notions pervade in the social and cultural scenario and how feminism exposed these notions.
			СОЗ	Identify how stereotypical representations of women were constructed and how these are subverted by feminist writing.
Semester VI	EN6CR12	American	CO1	Familiarize with the evolution of various literary movements in American literature.
Semester VI	LIVOCK12	Literature	CO2	Acquaint with the major authors in American Literary History.
			CO1	Discern that the literature the world over engage in very deep ways with the vicissitudes of life.
Semester VI	Semester VI EN6CR13 Modern World Literature	CO2	Distinguish literatures that often defy genres/ rationalities and canonical assumptions to emerge as a platform where poetics and politics fuse.	
			CO3	understand the notion of Major and Minor, Central and Peripheral literatures is a myth.
Semester VI	EN6CB03	Regional	CO1	Understanding of much discussed writers/literary pieces in the vernaculars.
Semester v1	LINOCHUS	Literatures in Translation	CO2	Comprehend modern trends in regional literature.



# **B. Sc. FAMILY AND COMMUNITY SCIENCE**

	PAPER	TITLE OF	a a	GOVINGE OVERGOVE
SEMESTER	CODE	PAPER	CO	COURSE OUTCOME
			CO1	Recognize the thrust zones in Family and Community Science (Home Science) and career predictions.
		Mathadalag	CO2	Identify applicable methodology for carrying out research focused ventures.
Semester I	HS1CRT01	Methodolog y of Home Science &	CO3	Study the report writing in the accepted design for a research scheme.
		Food Science	CO4	Understanding the basic concepts of macronutrients and its role in culinary techniques.
			CO5	Analyze different food groups in its composition and nutritional value, new developments and technology available in food processing.
	HS2CRT02	Human Physiology & Microbiolog y	CO1	Explain the functioning of various systems in the human body.
			CO2	Describe the digestion and absorption of different nutrients in the body.
Semester II			CO3	Analyse the role of hormones and its effect during imbalances in the human body.
			CO4	Determine the basic concepts of food microbiology.
			CO5	Identify the various infections, defence mechanisms in the human body and immunization programmes.
			PRAC	ΓICAL
	HS2CRP02	Food Science & Human Physiology and Microbiolog y	CO1	Analyze the various components of food and the different phases of cookery, its effect on the quality of foods and the preservation techniques in food industries.
Semester II			CO2	Apply different ways and means to prevent food deterioration in food processing.
			CO3	Identify microorganisms, products making using economically important microbes in a lab setting
			CO4	Calculate body health parameters such as Hb and blood pressure

			CO5	Recognize the operational settings in microbiology or a food quality laboratory reflecting career breaks.
			CO1	Identify the methods of child study, principles and factors influencing growth and development and the different aspects of personality development.
		Haman	CO2	Explain the stages of prenatal development, neonatal care, needs and rights of children.
Semester III	HS3CRT03	Human Developme nt	CO3	Compare the developmental pattern during infancy, babyhood, early childhood and late childhood period.
			CO4	Discuss the developments, issues and concerns of adolescents.
			CO5	Examine the different discipline techniques and its effect on children, importance of play and principles of habit formation.
	HS4CRT04	Family	CO1	Identify the functions and types of marriage and the factors leading to successful married life.
			CO2	Explain the different aspects of family, family interactions and the contemporary issues affecting family.
Semester IV		Dynamics	CO3	Examine the critical family situations and the coping strategies.
			CO4	Determine the problems of overpopulation and importance of population education.
			CO5	Assess the needs, problems and care of the elderly.
				PRACTICAL
		Human	CO1	Assess the physical, motor, emotional, intellectual and social development of a preschool child.
Semester IV	HS4CRP04	Human developmen t and Family Dynamics- Practical	CO2	Prepare growth enhancing materials and toys to enhance overall development of infants, toddlers and preschool children.
			CO3	Examine the causes of behaviour problems among children and the problems of elderly.
			CO4	Illustrate the concepts of human development and family dynamics using visual aids.
Semester V	HS5CRT05	Interior Decoration	CO1	Apply the basic elements and principles of design for interiors.

			CO2	Choose appropriate colour and lighting for home decor.
			СОЗ	Select furniture and suitable furnishing materials for interiors.
			CO4	Apply accessories and flower arrangements suitable for interiors.
			CO5	Plan appropriate exterior and interior space.
			CO1	Comprehend the basic concepts of Nutrition Science.
		Human	CO2	Interpret the concepts of human energy requirements and tools for the measurement of basal metabolism.
Semester V	HS5CRT06	Nutrition & Biochemistr	CO3	Identify the macro nutrients and their metabolism.
		у	CO4	Categorise the sources and functions of vitamins and minerals.
			CO5	Use the principles of Human Nutrition in the assessment of nutritional status and identifying the nutritional requirements at various stages of life.
	Semester V HS5CRT07		CO1	Describe the production and properties of textile fibers and their uses.
		Textile Science	CO2	Explain the process of yarn making and characteristics of different types of yarns.
Semester V			CO3	Analyze different methods of fabric construction and different textile weaves
			CO4	Describe different methods of textile dyeing and printing.
			CO5	Explain the different methods of finishes and its purpose and new trends in textiles
		Environmen	CO1	Describe the need for conserving the environment and promoting sustainability in food systems.
Semester V	HS5CRT08	tal Studies & Human Rights	CO2	Identify major ecosystems, eco regions, vegetation types and endemic regions in India and Kerala
			CO3	Determine the major problems associated with the environment and suggest possible solutions

			CO4	Compare suitable energy conservation techniques for planning and implementing Eco-friendly product designs.
			CO5	Assess the needs and importance of human rights.
			CO1	Identify the sources, importance and need of interior decoration.
		Interior	CO2	Explain the basic elements and principles of interior decoration.
Semester V	HS5OPT01	Decoration and Related Arts (Open	CO3	Use the principles of colour and light in interiors.
		Course)	CO4	Discuss the types, selection, arrangement and uses of furniture and furnishings.
			CO5	Assess the role of accessories and indoor gardening in interiors.
			CO1	Describe the basic principles of management.
		Family Resource Managemen t	CO2	Determine the classification and Utilization of human and non human resources.
Semester VI	HS6CRT09		СОЗ	Identify the types of family income, family budget planning and the saving and investment schemes.
			CO4	Explain the principles and use of energy management techniques and labour saving devices.
			CO5	Identify the consumer aids and methods to solve consumer problems.
		Interior		PRACTICAL
		Decoration	CO1	Develop motif, accessories and flower arrangements suitable for interiors
Semester VI	HS6CRP09	and Family Resource	CO2	Evaluate design concepts and curtain styles in interiors
		Manageme	CO3	Create labels and advertisements
	nt	nt	CO4	Plan the utilisation of resources
			CO1	Explain the concepts of Dietetics.
		Clinical	CO2	Identify the nutritional management of common disorders.
Semester VI	Nutrition and Districts	CO3	Choose the appropriate techniques to manage lifestyle diseases.	
Semester VI	HS6CRT10	Dietetics	CO4	Determine the dietary management during chronic disease conditions.

			CO5	Detect the causes, consequences and prevention of malnutrition.
				PRACTICAL
			CO1	Analyse the components of food.
Semester VI	HS6CRP10		CO2	Prepare diets for individuals in different life stages.
			CO3	Assess the nutritional status.
			CO4	Prepare normal and therapeutic diets.
			CO1	Explain the terminologies related to fashion and fashion cycle.
		Fashion	Apply the fundamental fashion, elements and princi	Apply the fundamental concepts of fashion, elements and principles of design in dress design
Semester VI	HS6CRT11	Designing and Apparel Production	СОЗ	Compare different methods of pattern making
		Troduction	CO4	Examine the steps involved in garment construction
			CO5	Explain the role of various departments in garment industry
	HS6CRP11		CO1	Analyse different textile fibres and weaves
		Textile Science &	CO2	Develop printed fabrics by applying hand printing techniques.
Semester VI		Fashion Designing -	СОЗ	Interpret body proportions and develop dress designs based on individual creativity
		Practical	CO4	Construct garments by applying different garment construction techniques.
		Extension Education	CO1	Identify the widening concept of extension education for upbringing the family and society. in India.
			CO2	Describe the different community and its developmental set up in India
Semester VI	Semester VI HS6CRT12 and Developed al	and Development	CO3	Identify the importance of rural Leadership in bringing about planned change in human behaviour for developing community
		on	CO4	Plan an extension program by evaluating its effectiveness.
			CO5	Prepare technologically advanced ICT tools as different methods of approaching people.
				PRACTICAL
			CO1	Prepare audio visual aids suitable for community development programmes.

Semester VI	HS6CRP12		CO2	Create beneficial products from used and waste materials.
			CO3	Assess the functioning of different energy saving devices.
			CO4	Prepare a plan of work for a community development programme with tools for evaluation.
			CO5	Assess the credibility of news articles or media content prepared
			CO1	Explain the parameters involved in quality control.
	Semester VI HS6CBT01 Food Safety	CO2	Identify the sources of contamination of food and water and safe food practices.	
Semester VI		CO3	Determine the various toxicants and food adulterants found in foods.	
			CO4	Outline the different laws and standards pertaining to foods.
			CO5	Suggest measures to prevent food borne illnesses.
Semester VI	HS6PRP01	Project	CO1	Identify problems and formulate solutions in Food and Nutrition, Human Development and Family Interactions, Resource Management and Interior Decoration, Textiles and Fashion designing, Community development and Extension programmes, Environment Studies and Human Rights.

# B. Sc. ZOOLOGY

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SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
			CO1 Provide awareness on the basic passion science and concepts	Provide awareness on the basic philosophy of science and concepts
		General Perspectives	CO2	Understand the life and its manifestations through history and scope
Semester I	ZY1CRT0I	in Science &Protistan	CO3	To familiarize taxonomic principle and tools taxa level identification of Kingdom Protista
		Diversity	CO4	Make interest in Protistan diversity
			CO5	Impart knowledge on parasitic forms of Protista and their role in human health
			CO1	To instil curiosity on invertebrates around us
		Animal	CO2	Understand different levels of biological diversity through the systematic classification of invertebrate fauna
C II	ZV2CDT02	Diversity -		Familiarize taxa level identification of
Semester II	ZY2CRT02	Non -	CO3	Phylum Arthropoda
	Chordata	Chordata	CO4	To create an awareness on diversity of phylum Mollusca and Echinodermata
		CO5	To understand the evolutionary significance of Minor Phyla and Phylum Hemichordata	
			CO1	Acquire in depth knowledge on the diversity of Protochordates
			CO2	Understand different levels of biological diversity of Agnatha and Super class Pisces
Semester III	ZY3CRT03 Animal Diversity Chordata	Diversity -	СОЗ	To create awareness on physiology and diversity of Amphibia
		Chordata	CO4	To create appreciation on Reptilian and Avian biodiversity
			CO5	Acquire in depth knowledge on Mammalian biodiversity
			CO1	Familiarize the learner the basic concept of scientific method and designs in research
		Research		process
		Methodolog y,	CO2	Equip the students with the basic techniques of animal rearing collection and Preservation
Semester IV	ZY4CRT04 Bi	Biophysics and	CO3	To understand the basic principle and uses of various biological instruments.
		Biostatistics	CO4	Create awareness about the laws and ethical values in biology
			CO5	To develop skill to apply statistical methods in biological studies

			CO1	Instil the basic concepts of Ecosystems, Natural Resources and their conservation
		Environmen	CO2	Make the students aware of the concept of population, community and their interaction.
Semester V	ZY5CRT05	tal Biology and Human Rights	CO3	Create a consciousness regarding Biodiversity, environmental issues.
		Rights	CO4	To understand various conservation strategies for sustainable ecosystem
			CO5	Develop the real sense of Human rights – concepts & manifestations
			CO1 the cell and cell organelles	To understand the structure and function of the cell and cell organelles and their role in the functioning of living organisms.
		Cell	CO2	Understand the central role of cell communication and division to pursue the existence of life.
Semester V		Biology and Genetics	CO3	Emphasize the central role of genes and their inheritance in the life of all organisms
			CO4	Analyze the concept of recombination, linkage mapping and elucidate the gene transfer mechanisms.
			CO5	Understand the concept of mutations and genetic disorders.
			CO1	Acquire knowledge about the evolutionary history of earth and origin of life
		Evolution, Ethology	CO2	Understand the evolutionary theories, population genetics and its role in evolution
Semester V	ZY5CRT07	and Zoogeograp	СОЗ	Acquire knowledge about evolutionary concepts and mechanisms
		hy	CO4	Conceive knowledge on animal behavioural patterns and their role
			CO5	Specify the distribution of animals on earth, its pattern, evolution and causative factors
	Human Physiology,	CO1	To acquire deep knowledge in physiology of nutrition, respiration, circulation and excretion to develop critical societal goal of health literacy	
Semester V	ZY5CRT08	Biochemistr y and Endocrinolo	CO2	Acquire various aspects of control and co- ordination of physiological activities of human beings
		gy	CO3	Understand the basic principles of biochemistry useful for illustrating different and function

			CO4	To acquire deep knowledge on metabolism and its significance
			CO5	Analyse hormonal regulation of physiological processes
			CO1	Understand physiology of reproductive cycles, reproductive health and importance of sex education
			CO2	To acquire knowledge on early stages of embryogenesis.
Semester VI	ZY6CRT09	Developme ntal Biology	CO3	To acquire deep knowledge in the embryology of Frog, Chick and Human being. To gain knowledge in assistive reproductive technology and birth control
			CO4	Determine the experimental methods and designs that can be used for future studies and research
			CO5	To study the techniques of differentiation processes of an organism
			CO1	To understand the outline classification of microbes, sterilization, media preparation and preservation techniques
		Microbiolog	CO2	To acquire deep knowledge on bacterial morphology, growth, reproduction and staining techniques
Semester VI	ZY6CRT10	y and Immunolog	CO3	To create general awareness about the infections and diseases
		У	CO4	To understand various immune mechanisms, role of immune cells and organs
			CO5	To gain knowledge about the structure and functions of immune-bodies and their reactions
			CO1	To understand the basic concepts, tools and techniques in Biotechnology
		Biotechnolo gy,	CO2	Understand the principles and practices of animal cell culture and applications of biotechnology
Semester VI	ZY6CRT11 i	Bioinformat ics and Molecular	СОЗ	To analyse the role of bioinformatics in Life Sciences.
		Biology	CO4	Understand the structure and properties of genes in living organisms at the molecular level
			CO5	Conceive the significance of central dogma of gene action

Semester VI	ZY6CRT12	Occupation al Zoology (Apiculture, Vermicultur e, Quail Farming &Aquacultu re)	CO2 CO3 CO4	Illustrate maintenance and management of an apiary and to understand their role in nutritional security and environmental sustainability.  Awareness about need for waste management and organic farming  To understand the culture techniques in commercial scale and to analyse the role of Quail in health sector  Understand the scope of fish culture and successful entrepreneurship in ornamental fish trade
			CO5	Understand the importance of balanced ecosystem
			CO1	To understand principles of nutrition and its role in life stages and health
			CO2	Build students with a general principles and concept of health parameters and wellness
Semester V	ZY6CBT04	Nutrition, Health and	CO3	Gain deep knowledge regarding common life style diseases
Semester v		Lifestyle Managemen t	CO4	To aware of causes of life style diseases and to develop healthy living.
			CO5	To understand the value of good life style practices, physical fitness and healthy food habits for life style disease management and develop health literacy among students
			PRAC'	ΓICALS
			CO1	To familiarize taxa level identification techniques
		Perspectives	CO2	Gain deep knowledge in taxonomic Identification using keys
Semester I	ZY1CRPO1	in Science & Protistan	CO3	To identify biological diversity of Phylum Protista
	Diversity	Diversity	CO4	Awareness about economically important parasitic protists and their role in human health
			CO5	To understand Identification of Protistans from pond water
Semester II	ZY2CRPO2	Animal Diversity- Non-	Understand the relative size, s	
		Chordata	CO2	To identify the organisms through sections
			CO3	To develop skill in dissections and mountings

			CO4	To understand the systemic classification and biological diversity of non-chordata
			CO5	Gain deep knowledge in taxonomic Identification using keys
			CO1	Understand the relative size, shape and location of different features of what is being drawn
		Animal	1 CO2 1	To identify sections and dissections of organisms
Semester III	ZY3CRPO3	Diversity-	CO3	To develop skill in mountings
		Chordata	CO4	To identify the organisms through osteological studies
			CO5	Gain deep knowledge in biological diversity and taxonomic Identification of phylum Chordata
			CO1	Familiarize Animal collection Tools, Techniques and Estimation
		Research Methodolog	CO2	To develop skill in microscopic measurements and drawings
Semester IV	Biophysic and	Biophysics	СОЗ	Understand the principle and uses of equipment
			CO4	Gain deep knowledge in MS
		Biostatistics	CO5	Analyse measures of central tendency, dispersion and Graphical representation of biological data.
			CO1	To estimate dissolved Oxygen and carbondioxide in water and soil organic carbon
		Environmen	CO2	To Identify and estimate planktons
Semester V	ZY5CRPO5	tal Biology and Human	CO3	Understand the principle and uses of equipment
		rights	CO4	Understand adaptations of sandy and rocky shore fauna and animal Association
			CO5	Gain deep knowledge about important areas of bio diversity through Field study
			CO1	To develop skill in mountings
	Semester V ZY5CRPO6 Cell biology and Genetics	Cell biology	CO2	Identify Tissues and cell organelles
Semester V			CO3	To solve Genetic problems
Semester v			CO4	Understand normal and abnormal human karyotypes
		CO5	Develop skill in cytologic preparations	
			CO1	To Identify Zoogeographical realms and islands and endemic species of each realm

Semester V	ZY5CRPO7	Evolution,	CO2	To appreciate Contributions of scientists
		Ethology	CO3	Gain deep knowledge about horse evolution
		and	CO4	To understand evolutionary process through
		Zoogeograp	CO4	Homology, Analogy and connecting links
		hy	COF	To Identify animal behaviour and the
			CO5	instruments used in behavioural studies
		Human	CO1	To estimate the components of body fluids
		Physiology,	CO2	To identify tonicity of solutions
Compaton V	ZY5CRPO8	Biochemistr	CO3	Understand the principle and uses of
Semester V	ZIJCKPO8	y and	COS	instruments
		Endocrinolo	CO4	To analyse components in a mixture
		gy	CO5	To Identify endocrine organs and functions
			CO1	To identify embryological specimens
			CO2	Understand the principle, procedure and uses
			CO2	of Embryological techniques
Semester VI	ZY6CRPO9	Developme	CO2	To understand different stages of chick
Semester vi	Z 1 oCRPO9	ntal Biology	CO3	embryo
			CO4	To develop skill in dissections and staining
			CO5	To estimate the fecundity and gonado-
		COS	somatic index of fish.	
			CO1	Understand the principle and uses of
	ZY6CRP10		CO1	Microbial instruments
		Microbiolog y and	CO2	To develop skill in preparation of media for
				microbial cultures.
Semester VI			CO3	To understand different culture methods of
Schiester vi	Z TOCKI IO	Immunolog		microbiology
		у	CO4	To develop skill in staining, mounting and
			CO+	identifying bacteria and fungus
			CO5	Gain deep knowledge in Antigen – antibody
				Reactions and immune organs
			CO1	Understand the principle, procedure and uses
				of techniques
		Biotechnolo	CO2	Gain knowledge to access and identify
		gy,		genome sequences
Semester VI	ZY6CRP11	Bioinformat	CO3	To identify protein sequences and their
Selfiester vi		ics and		composition
		Molecular	CO4	To develop skill to visualize macromolecule.
		Biology		Gain deep knowledge in composition,
			CO5	structure and functional significance of DNA
				and RNA
		Occupation		Gain deep knowledge in identification
Semester VI	ZY6CRP12	al Zoology	CO1	morphology and Economic importance of
				culturable fishes and shell fishes

CO2	Develop skill to the species level identification of ornamental fishes, Earth worms and honey bees
CO3	Understand the principle, procedure and uses of equipment used in culturing
CO4	Understand the natural resources available from animals
CO5	To develop skill in dissections and Mountings

## B. Sc. CHEMISTRY (MODEL II)



CEMECTED	PAPER	TITLE OF	СО	COURSE OUTCOMES
SEMESTER	CODE	PAPER	CO	COURSE OUTCOMES
			CO1	Identify chemistry as a prominent discipline of science and to refresh the basic concepts of chemistry
			CO2	Study about the periodic table and periodic properties of elements
Semester I	CH1CRTO1	General and Analytical	СОЗ	Develop skills in different laboratory titrations and to understand the principles behind titrimetric analysis
		Chemistry	CO4	Create an awareness about various analytical methodologies with special attention to chromatographic techniques
			CO5	Learn about important analytical tools and how to evaluate analytical data to practice chemistry
	CH1VOTO1	Industrial aspects of Inorganic and Organic Chemistry	CO1	Learn about different methods for the analysis of coal
			CO2	Create an awareness about various food additives and their health effects
Semester I			CO3	Understand about the basic idea about various metallurgical operations
Semester 1			CO4	Discuss the importance of inorganic materials
		Chemistry	CO5	Develop an idea about the properties of electrical insulating materials
			CO6	Provide an introductory idea regarding nanochemistry
			CO1	Study the historical development of atom models
Semester II	GVA CD TOO	Theoretical	CO2	Generate an idea about different types of bonds and classify molecules according to their hybridization
Semester ii	CH2CRT02	and Inorganic Chemistry	CO3	Understand molecular orbital theory of diatomic molecules
		Chemistry	CO4	Compare the properties of s and p block elements
			CO5	Understand the chemistry of d and f block elements and their compounds
			CO1	Understand surface and interfacial phenomena

Semester II	CH2VOTO2	Chemical Industries	CO2	Analyse the various moulding process used in polymer chemistry
		and Industrial aspects of	CO3	Know about different types catalysis
			CO4	Have an idea about hydrochemistry
		Physical Chemistry	CO5	Understand different polymer processing techniques
			CO6	Classify different lubricants according to their properties
			CO7	Familiarize with cement and its applications
			CO8	Compare various types of batteries
			PRAC'	ΓICALS
		X 1	CO1	Develop skills for the quantitative estimation using different types of titrations
Semester I &	CH2CRP01	Volumetric	CO2	Prepare different standard solutions
II		Analysis	CO3	prepare solutions of different concentrations from a standard solution
		Industrial Inorganic Chemistry Practical	CO1	Study the methods used for the analysis of water
Semester I &	CH2VOP01		CO2	Enable the students to do ore analysis and alloy analysis
II			CO3	Helps to determine the percentage composition of analyte in the given samples
			CO1	Have a basic idea about the nomenclature of organic compounds, fundamentals of organic reaction mechanism
			CO2	Make students capable of understanding stereochemistry of organic reactions
Semester III	CH3CRT03 Organic chemistry I	_	CO3	Interpret preparation and reactions of aliphatic hydrocarbons and alkyl halides
			CO3	Generate an idea about aromaticity and reactions of aromatic hydrocarbons and aryl halides
			CO4	Have an idea about pericyclic reactions
	Unit	CO1	Understand various techniques and equipments used for distillation	
Semester III CH3	СН3VОТ03	Operations in Chemical	CO2	Describe the types and working principles of absorption equipments
		Industry	СОЗ	Explain the working and classification of different evaporators

			CO4	Classify different filters and dryers
			CO5	Understand the various steps involved in crystallization
			CO1	Study about the mechanism of nitration
			CO2	Understand the mechanisms and factors of
			CO2	halogenation and sulphonation reactions
		Unit	CO3	Develop an idea about the different types of
		processes in	CO3	oxidation reactions
Semester III	CH3VOT04	Organic	CO4	Recognize the importance of hydrogenation
Schlester III		Chemicals		reactions in industries
		Manufactur	CO5	Understand the manufacture and uses of
		e		esterification and hydrolysis reactions
			CO6	Explain methods of amination by reduction
			CO7	Learn more about different types of
				alkylation and alkylating agents
			CO1	Study the chemistry of alcohols, phenols and ethers
		Organic		
Semester IV	CH4CRT04	Chemistry-	CO2	Learn the preparion, properties and reactions of aldehydes and ketones
		II		Know the chemistry of carboxylic acids,
			CO3	sulphonic acids and their derivatives
			CO1	Study about the principles of instrumentation
				Illustrate principle and working of various
			CO2	spectroscopic techniques like UV, IR etc.
		Instrumenta	CO3	Understand the instrumentation of spectro
Semester IV	CH4VOT05	l Methods of		flourimetry, AAS, AES etc.
		Chemical	CO4	Develop an idea about electroanalytical
		Analysis-I	CO4	instrumentation
			CO5	Provide a basic idea about chromatographic
			003	instrumentation
				Differentiate between process
			CO1	instrumentation and laboratory
				instrumentation
Semester IV			CO2	Provide a basic idea about microprocessor
		Instrumenta		based instruments
	Semester IV CH4VOT06 I Methods of Chemical Analysis-II		CO3	Describe various surface analysis and
				microscopic techniques
		Analysis-II	CO 4	Make them aware about the principle,
			CO4	instrumentation and applications of optical
			methods  Evaluin thermos analytical techniques and	
			CO5	Explain thermos analytical techniques and their industrial applications
				then moustrial applications

			CO6	Illustrate the basic principles and applications of SFC and electrophoresis
		Qualitative	CO1	Study the methods for the determination of physical constants such as boiling point and melting point.
Semester (III&IV)	CH4CRP02	Organic Analysis	CO2	develop skills for the systematic analysis of organic compounds
			СОЗ	Learn to prepare derivatives of organic compounds
Semester		Industrial Organic	CO1	Helps to determine of acid value, saponification value, and iodine value of oil
(III&IV)	CH4VOP02	Chemistry	CO2	Know the method of synthesis of soap
(III&IV)		Practical	СОЗ	Executing various methods of unit process in the lab
			CO1	Aware about colorimetric Estimation
		Industrial	CO2	Determine the coefficient of viscosity of a given liquid
Semester (III&IV)	CH4VOP03	Physical Chemistry	CO3	Determination of dissociation constant of weak acid potentiometrically.
(mer )		Practical	CO4	Determine the concentrations of strong acid and weak acid in a mixture by conductometric titration Using a strong base
			CO1	To have a deeper understanding about the importance of preserving natural resources and environment
		Environmen	CO2	Identify the consequences of environmental pollution
Semester V	CH5CRT05	t, Ecology and Human	CO3	Analyse the basic strategies in population and environmental issues
		rights	CO4	Create an awareness about ecological chemistry and the toxicological effects of pollutants
			CO5	Identify issues and problems relating to human rights
Semester V CH5CRT06		Omazzi	CO1	Understand preparation, properties and reactions of nitro compounds, amines and diazonium salts
	CH5CRT06	Organic Chemistry- III	CO2	Explain the mechanism and stereochemistry of reactions of nitrogen containing compounds
			CO3	Explain the synthesis and reactions of heterocyclic compounds.

			CO4	Identify active methylene compounds and their reactions
			CO5	Classify carbohydrates and to illustrate its structure and properties.
			CO6	Illustrate structure and applications of drugs and dyes
			CO7	Discuss the classification, polymerization mechanism and Recycling of plastics
			CO1	Understand the intermolecular forces in gases and Perform calculations based on gas laws and van der Waals equation
Semester V	CH5CRT07	Physical	CO2	Discuss intermolecular forces in liquids and determine the surface tension and viscosity of liquids
		Chemistry-I	CO3	Develop an idea about the structures of solids and liquid crystals
			CO4	Recognize the various aspects related to surface chemistry and colloidal state
	Semester V CH5CRT08 Physical Chemistry II		CO1	Compare classical and quantum mechanics and apply quantum mechanics to simple systems
Semester V		Chemistry-	CO2	Generate basic ideas of principle and applications of rotational, vibrational and Raman spectroscopy
			CO3	Get an outline on electronic, NMR and ESR spectroscopy and calculate different molecular parameters from rotational and vibrational spectrum
			CO1	Analyse the formulation and health effects of food additives
			CO2	Compare soaps and detergents
			CO3	Realize the uses and toxicology of cosmetics
Semester V	CH5OPT01	Chemistry	CO4	Explain the concepts related to the structure, applications and environmental impact of plastics, paper and dyes
	CHOOF 101	in everyday life	CO5	Discuss the classification of drugs, and propose prevention and treatment of drug addiction
			CO6	Familiarize the importance of Chemistry in Agriculture
		CO7	Provide elementary idea on nanochemistry and its applications	

		CO1	Understand the isomerism and stability of coordination complexes	
			CO2	Explain the nature of bonding in coordination compounds through the various bonding theories.
			CO3	Interpret the spectral and magnetic properties of complexes
Semester VI	CH6CRT09	Inorganic Chemistry	CO4	Examine the properties, preparation and bonding of organometallic compounds
			CO5	Evaluate the role of metals in biological systems
			CO6	Discuss preparation, properties and structure of Boron compounds
			CO7	Explain the classification, preparation and structure of Inter-halogen and Noble gas compounds
			CO1	Classify various terpenoids and alkaloids
			CO2	Understand the classification and properties of lipids, soaps and detergents
			CO3	Recognize the structure and biological functions of vitamins, steroids and hormones
			CO4	Interpret the classification and characteristics of amino acids, peptides and proteins
Semester VI	CH6CRT10	Organic	CO5	Describe the components, structure and function of nucleic acids
		Chemistry IV	CO6	Classify enzymes and discuss the mechanism and factors affecting enzyme action
			CO7	Explain Molecular recognition and guest-host interactions
			CO8	Illustrate various organic photochemical reactions
			CO9	Elucidate the structure of organic compounds using spectroscopic techniques such as UV, IR, NMR and mass spectrometry
Semester VI C			CO1	Understand the basic concepts and the laws of thermodynamics
	CH6CRT11	Physical Chemistry III	CO2	Derive expression for joule-thomson coefficient, clausius-clapeyron, gibbs-helmholtz and gibbs-duhem equations
			CO3	Understand the concept of chemical Equilibrium

			CO4	Formulate expressions for degree of ionization, mechanism of buffer action and hydrolysis of salts
			CO5	Understand the concept of Phase equilibria and phase diagrams
			CO6	Comprehend the kinetics of different types of chemical reactions, the types of catalysis and its mechanism
			CO1	Compare ideal and non-ideal solutions and perform calculations on colligative properties
		Physical	CO2	Explain Debye-Huckel theory and applications of conductance measurements.
Semester VI	CH6CRT12	Chemistry	CO3	Derive Nernst equation for electrode and cell potential
		IV	CO4	Understand photochemical reactions and related laws
			CO5	Recognize elementary ideas about group theory
			CO1	Recall the basic principles and concepts of polymer chemistry
			CO2	Interpret the Mechanisms of Polymerization
			G02	Understand different polymerization
			CO3	techniques
			GO 4	Elucidate the structure-property relationship
		D 1	CO4	of polymers
Semester VI	CH6CBT01	Polymer	CO5	Understand the reactions of polymers
		Chemistry	CO6	Describe different types of polymer degradation reactions
			CO7	Recognize different polymer processing techniques
			CO8	Develop an idea about the chemistry of commercial polymers
			CO9	Realize the role of speciality polymers
VI CH6CRP03			PRAC	TICALS
		Qualitativa	CO1	Identify systematically various ions present in a given inorganic sample
	CH6CDD02	Qualitative Inorganic	CO2	Explain confirmatory and spot tests for ions
	CHOCKPU3	Analysis	CO3	Identify and eliminate interfering anions in a given sample
		CO4	Develop basic laboratory skills and standard report	

Semester V & VI	CH6CRP04	Organic Preparations and Laboratory	CO1	Separate and identify various organic compounds using chromatographic techniques  Perform different Organic Preparations
		Techniques	CO3	Deduce the quantitative yield of reactions
			CO1	Find out percentage composition of a mixture using viscosity methods
Semester V &	VI CH6CRP05 Chem	Physical	CO2	Determine the equivalent conductance of an electrolyte
VI		Chemistry Practical	CO3	Find out critical solution temperature of phenol-water system
			CO4	Determine the equivalence point of potentiometric and conductometric titrations using spreadsheet program
			CO1	Estimation of Barium as barium sulphate
Semester V & CH6CRP06			CO2	Estimation of Iron as Fe2O3
	CH6CRP06	Gravimetric	CO3	Estimation of Sulphate as barium sulphate
		Analysis	CO4	Estimation of Copper as cuprous thiocynate
			CO5	Estimation of Nickel as nickel dimethyl glyoxime



## **B. Sc. PHYSICS (MODEL II)**

SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
		Mathadalagy	CO1	Understand the Scientific Concepts and developments in Physics
Semester I	PH1CRT01	Methodology and Perspectives of	CO2	Differentiate Number systems and its significance.
Semester 1	IIICKIUI	Perspectives of Physics	CO3	Apply vector algebra in Physics.
		i flysics	CO4	Apply basic measurement techniques in Physics and experimental data.
			CO5	Understand error analysis.
		Dain sin la se	CO1	Familiarization of various passive electronic components
Semester I	AE1VOT01	Principle of Electronic	CO2	Understand various active electronic components
		Components	CO3	Describe switches and relays
			CO4	Understand the working of Display devices
		Electronics Application	CO1	Understand the components of various measuring devices
			CO2	Analyse the characteristics of tuning circuits.
Semester I	AE1VOT02		СОЗ	Understand the concepts and working of various time base circuits
			CO4	Understand the working of CD and transducers
			CO5	Understand concept of Printed circuit board and Soldering
			CO1	Understand the general nature of waves and its characteristics.
			CO2	Illustrate various types of motions.
Semester II	PH2CRT02	1 *	СОЗ	Calculation of moment of inertia and application in flywheel.
		Matter	CO4	Analyse the concepts of elasticity and different modulus of elasticity.
			CO5	Understand the concepts of surface tension & viscosity
			CO1	Understand the basic structures of an FET
Semester II AE2VO			CO2	Analyse different parameters of JFET
	AE2VOT03	Basics of power Electronics	CO3	Understand the basic structures and working of a MOSFET amplifier
		Liectionics	CO4	Understand the various biasing techniques of FET
			CO5	Analyse the different types of FET Amplifiers
Semester II	AE2VOT04		CO1	Realise different type of thyristors

			CO2	Interpret the structure and operation of UJT.
		D	CO2	Explain the construction and operation of
		Electronics	CO3	Silicon Switches
			CO4	Design Power control circuits using thyristors
			CO5	Understand the basic idea of inverter.
		M 1	PRAC	TICALS
Semester II	PH2CRP01	Mechanics and Properties of	CO1	Understand and apply the concept of inertia and
Semester II	FIIZCKFUI	Matter	COI	elasticity
			CO2	Identify the different types of dynamics
		Basic and	CO1	Identify various electronic component and
Semester II	AE2VOP01	Power	COI	instruments
Semester II	7112 7 01 01	Electronics	CO2	Design and study different electronic circuits
			CO1	Apply the concepts of interference in different
			COI	practical cases.
			CO2	Analyse the different types of diffraction and
				the theory of transmission grating
Semester III	PH3CRT03	and Fiber Optics	CO3	Understand the different types, production and
Semester III	THISCRIUS			detection of polarized light.
			CO4	Analyse the properties, characteristics,
				applications of laser and lasing actions
			CO5	Illustrate the propagation of light through
				optical fiber.
			CO1	Understand the basics of Microprocessor
~	. =====================================	Microprocessor		Recognise the architecture of 8085
Semester III	AE3VOT05	and Interfacing		Familiarize Instruction sets of 8085
			CO4	Solve simple programs
			CO5	Familiarize various Interfacing devices.
			GO 1	Understand various components of the
			CO1	communication system, basics of radio wave
		Communication		communication and terms relating to it.
Semester III	AE3VOT06	Communication Electronics	CO2	Discuss the concept of Modulation and Detection
		n Electronics		
			CO3	Illustrate circuits for achieving amplitude modulation and frequency modulation
			CO4	Understand basic idea of Antenna, RADAR
			CO <sub>4</sub>	Analyse of p-n junction diode
			CO2	Explain various wave shaping circuits.
		Semiconductor		Illustrate various biasing circuits of a transistor
		Physics	CO3	and the concept of feedback.
Semester IV	PH4CRT04			Design single stage transistor amplifier circuits
			CO4	and oscillators.
		<u> </u>	and obtinion.	

			CO5	Discuss the basics of FET, Op amp and Modulation
		Lingon	CO1	Understand the basic parameters of an Opamp.
Semester IV	AE4VOT07	Linear Integrated Circuits	CO2	Analyse different types of Op-amp applications.
		Circuits	CO3	Understand various Timer IC circuits.
			CO4	Understand the concepts Phase - Locked Loops
			CO1	Familiarize various application of microprocessor
		Applications of	CO2	Understand the basics of Microcontroller.
Semester IV	AE4VOT08	Microprocessor s	CO3	Recognize the architecture of Microcontroller 8051
			CO4	Classification of various registers of 8051.
			CO5	Solve delay subroutine programs.
			PRAC'	ΓICALS
Semester IV	PH4CRP02	Optics and Semiconductor Physics		Understand the various optical phenomenon through experiments
			CO2	Construct and design various basic circuits
Semester IV		Microprocessor and Linear		Design basic circuits using Op amp
		Integrated Circuits	CO2	Learn to write basic programs
Semester IV	AE4VOP03	Microprocessor and	CO1	Learn to construct basic connection circuits
Semester IV	Communicat	Communication Electronics	CO2	Learn to write advanced programs
			CO1	Apply the concepts of alternating current in various circuits.
Semester V PH5CR7	DUSCDT05	Electricity and	CO2	Understand the concept of transient current and thermo electricity
	PH3CK105	Electrodynamic	CO3	Express the relevance of Electrostatics
		s	CO4	Understand the concepts of Magnetostatics
			CO5	Illustration of Maxwell's Equations and Electromagnetic wave propagation
Semester V	PH5CRT06		CO1	Apply Lagrangian and Hamiltonian formulation to various systems.

		Classical and Quantum	CO2	Explain various quantum mechanical phenomena.
			CO3	Apply quantum mechanics to various problems.
			CO4	Formulate Schrodinger equation and its solutions
			CO5	Analyze quantum mechanical systems by finding eigenvalues and eigenvectors.
			CO1	Understand Boolean Algebra, logic gates, SOP & POS, Karnaugh map
		Digital	CO2	Analysis of different types of combinational logic circuits
Semester V	PH5CRT07	Electronics and Programming	СОЗ	Analysis of different types of sequential logic circuits
			CO4	Understand basic C++ program structure and key words.
			CO5	Write C++ programs.
			CO1	Realise water resources, environmental pollution
			CO2	Understand EIA and waste management
Semester V	PH5CRT08	•	CO3	Compare the various renewable and non-renewable sources of energy.
		Human Rights	CO4	Identify the environmental aspects of solar energy resources.
			CO5	Recognise various fundamental rights, constitution rights and Human rights.
			CO1	Illustration of thermodynamics laws.
			CO2	Realize the functions of different heat engines.
Semester VI	PH6CRT09	Thermal and Statistical	CO3	Understand entropy, thermodynamics relations.
		Physics	CO4	Understand the basic idea of statistical mechanics.
			CO5	Differentiate BE, MB & FD statistics
			CO1	Understand the basic concepts of relativity and Galilean Transformation.
Competer III	DILCOPT10	Relativity and	CO2	Illustrate Lorentz transformation and general theory of relativity.
Semester VI	PH6CRT10	Spectroscopy	СОЗ	Understand the concepts of atomic spectroscopy
			CO4	Understand the basic concepts of molecular Spectroscopy

			CO5	Understand the basic principles of instrumentation techniques
			CO1	Understand the concept of nuclear structure and nuclear forces.
		Nuclear,	CO2	Illustrate various radiation detectors, counters and particle accelerators.
Semester VI	PH6CRT11	Particle and Astrophysics	CO3	Analyse different types of radioactive decays and radioactive detectors
			CO4	Understand the concept of cosmic rays, stellar evolution and the classification of stars.
			CO5	Understand the concept of elementary particles.
			CO1	Understand different types crystalline structures and bonding in solids.
Semester VI	PH6CRT12	Solid State	CO2	Explain the basic concepts of free electron theory and band theory of solids,
Semester vi	111001112	Physics	CO3	Discuss different optoelectronic devices.
			CO4	Illustrate the concepts of polarization and
				magnetism in materials.
			CO5	Analyse the concepts of superconductivity.
	РН6СВТ02	Choice Based Course Material Science	CO1	Understand the structure and properties of materials
			CO2	Explain different modern engineering materials and their optical properties
Semester VI			CO3	Implementation of advanced materials in the modern engineering applications
			CO4	Understand properties of nano materials and its applications
			CO5	Understand the various modern characterisation techniques
			PRACT	TICALS
Samastan VI	DIJ4CDD02	Electricity,	CO1	Calibration and conversion of standard meters
Semester VI	PH6CRP03	Magnetism and	CO2	Calculate the various constants of magnetism
		Laser	CO3	Determine the different parameters related to LASER and optical fibre
		Digital	CO1	Verification of universal gates
Semester VI	PH6CRP04	Electronics	CO2	Construction of Multivibrators, Flip Flops & Registers
Comostor VII	DUCCE POS	Thermal Physics, Spectroscopy	CO1	Verification of laws and effect in thermal Physics
Semester VI	PH6CRP05		CO2	Determination of optical constants of prism and grating using spectrometer

		and C++ Programming	СОЗ	Design and execution of C++ programs
Compater VI		Acoustics, Photonics and	CO1	Determine of acoustical constants using various devices
Semester VI	PH6CRP06	Advanced	CO2	Analysis of various photonic devices
		Semiconductor	СОЗ	Design semiconductor devices for various applications
Semester VI	PH6PRO01	Project & Industrial Visit	CO1	Understand the basic concepts of Physics involved in the topic selected and illustrate it using methodology
	industriai visit	CO2	Create a practical perspective of various concepts gathered during the programme	



## **B. Com. FINANCE AND TAXATION**

SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
			CO1	Recognize the preparation of various accounts and the financial statements.
			CO2	Prepare final accounts of sole trader.
Semester I	CO1CRT02	Financial	CO3	Identify the various concepts of farm accounting.
		Accounting - I	CO4	Prepare accounts of consignment.
			CO5	Study the preparation of royalty accounts.
			CO6	Calculate profits or losses from incomplete records.
			CO1	Understand how the environment affects the working of a business.
	CO1CRT01	Dimensions and Methodology of Business Studies	CO2	Explain the business ethics and importance of doing business ethically.
Semester I			CO3	Identify the technological integration in business.
			CO4	Illustrate the importance Corporate Social Responsibility.
			CO5	Explain how government policies have transformed business in India
			CO1	Explain the principals, regulations and practice of Joint Stock Companies management and administration in India as per companies Act,2013
		Corporate Regulations	CO2	Study the procedure of Promotion and formation of a company.
Semester I	CO1CRT03	and Administration	CO3	Understand the legal framework with regards to issue of prospectus and various types of Share Capitals.
			CO4	Discuss the modes of acquiring membership in a company.
			CO5	Examine the different modes of winding up of a company.
Semester I	CO1CMT01	Banking and Insurance	CO1	Understanding the basic concepts and practice of banking.

			CO2	Study new banking techniques and schemes and investment system.
			CO3	Recognize an idea about insurance and its types.
			CO4	Analyse how to buy an insurance policy and its relevance in this era.
			CO5	Determine the recent developments and government initiatives in the field of banking and insurance.
			CO1	Prepare the accounts of branches.
			CO2	Illustrate the concepts of dissolution of partnership firms.
Semester II	CO2CRT04	Financial	CO3	Outline the application of important accounting standards.
		Accounting - II	CO4	Examine the steps involved in the preparation of hire purchase accounts.
			CO5	Describe the different aspects of departmental accounting
		Principles of Business Decisions	CO1	Determine the basic principles and theories of economics and to meet managerial challenges.
Semester II	CO2CMT02		CO2	Apply Demand Theory in order to evaluate and estimate current and future demand of a product.
Semester II	CO2CW1102		CO3	Explain the cost - output relationship with the help of cost analysis.
			CO4	Evaluate the concept of pricing theory, price mechanism and price determination
			CO5	Identify the different markets in economy.
			CO1	Determine the basic concepts and legal framework of mercantile law
Semester II	CO2CRT05	Business Regulatory Framework	CO2	Explain the general principles underlying contracts of bailment and pledge
			CO3	Discuss the Context and rationale of Indemnity and Guarantee

			CO4	Trace the Law of Agency
			CO5	Describe the Laws related to the Sales of Goods Act, 1930 including performance of contract of sale
			CO1	Discuss the concepts and principles of management.
		D :	CO2	Indicate the management functions and social responsibility of management in the present era.
Semester II	CO2CRT06	Business Management	CO3	Explain how planning can be done effectively, types of plans and MBO.
			CO4	Observe the components of direction, leadership and motivation.
			CO5	list out the modern management techniques.
	CO3CRT07	Corporate Accounting - I	CO1	Understand the redemption of preference shares and types of issues.
			CO2	Prepare company's final accounts.
Semester III			СОЗ	Determine the liability of underwriters in respect of underwriting contract.
			CO4	Compute insurance claims in various situations.
			CO5	Illustrate the preparation of investment accounts and to discuss the treatment of bonus shares and right shares.
			CO1	To identify the role of statistics and its importance in business.
Semester III	CO3CRT08	Quantitative Techniques for Business - I	CO2	To identify appropriate sampling survey methods for collecting the data and analysing it.
			CO3	To determine measures of central tendency and its role in data analysis
			CO4	To familiarize measures of dispersion and different techniques.
			CO5	To identify interpolate and extrapolate value from a series and use it for forecasting

			CO1	Elucidate different components of Indian financial system and its recent developments.
		Einanaial	CO2	Describe the different methods of issuing shares and role of intermediaries in the primary market.
Semester III	CO3CRT09	Financial Markets and Operations	CO3	Describe the instruments, participants and operations of secondary market.
			CO4	Discuss mutual funds, its types, benefits and limitations of mutual fund.
			CO5	Classify the various types of derivative instruments and features
			CO1	Understand the basic principles of marketing management.
			CO2	Discriminate type of markets and state the factors on which market segmentation is done.
Semester III	CO3CRT10	Marketing Management	CO3	Understand the product lifecycle, branding and packaging.
			CO4	Discuss various factors influencing and strategies adopted by business pricing of a product.
			CO5	Describe various intermediaries in distribution and also elucidate emerging trends in marketing.
			CO1	Explain the GST Laws in India.
		Goods and Services Tax	CO2	Explain the prevailing Tax system in India and Kerala related with the Levy and collection of Tax and input tax Credit.
Semester III CO3OCT01	CO3OCT01		CO3	Recognize the process of registration, Returns and Payments, Refunds under GST.
			CO4	Identify the various assessment, audit and laws relating to GST.
			CO5	Study about the various appellate authorities under GST regime and its powers.

		CO1	Prepare financial statement of banking companies.	
			CO2	Prepare financial statement of Insurance companies.
Semester IV	CO4CRT11	Corporate Accounting –	CO3	Explain the procedure for internal reconstruction.
		II	CO4	Describe the aspect of amalgamation, absorption and external reconstruction.
			CO5	Explain corporate accounting procedure for liquidation of companies
			CO1	Develop entrepreneurial spirit among students
			CO2	Examine the role of entrepreneur in economic development
		Entrepreneurs hip	CO3	Compare and classify types of entrepreneurs
Semester IV	CO4CRT13	Development and Project Management	CO4	Generalize the idea on project identification, project formulation and project evaluation.
			CO5	Identify the entrepreneurial support in India and to discuss on special institutions in India for entrepreneurial development and assistance in India.
		Quantitative	CO1	Illustrate with more advanced tools of data analysis and forecasting
			CO2	Explain correlation and determine the relationship between variables using correlation and regression.
Semester IV	CO4CRT12	Techniques for Business –II	CO3	Construct appropriate index numbers.
			CO4	Explain the parameters of time series analysis of data
			CO5	Determine the probability of simple events
			CO1	Explain the overall idea of financial services available in the country.
	Financial	CO2	Assess the various aspects of Venture Capital and Securitization in financial services sector.	
Semester IV	CO4OCT01	Services	CO3	Explain the role of leasing and factoring in Financial System.

			CO4	Determine the need and importance of credit rating and role of agencies involved in credit rating.
			CO5	Assess the central ideas and theories of recent trends in Mergers and Acquisition in financial services
			CO1	Develop the basic concepts of cost and its presentation in financial statements
		Cost	CO2	Articulate the fundamentals of cost accounting as separate system of accounting.
Semester V	CO5CRT14	Accounting –	CO3	Apply the different methods and techniques of costing.
			CO4	Explain the management of working capital.
			CO5	Illustrate the preparation of cost sheet.
			CO1	Develop a wide understanding on financial management.
			CO2	List out various sources of finance and types of leverage.
Semester V	CO5CRT16	Financial Management	CO3	Illustrate an idea about capital budgeting.
			CO4	Examine the management of working capital.
			CO5	Assess the need and importance of dividend decisions.
			CO1	Collect the basic terms and concepts of Income Tax Act 1961.
			CO2	Determine the Residential Status of different Persons.
Semester V	CO5OCT01	Income Tax – I	CO3	Computation of Income from Salary.
			CO4	Computation of Income from House Property.
			CO5	Determine the Profits and Gains of Business or Profession.
			CO1	Understand the basic ideas about environment, emerging issues about environmental problems and also give Knowledge about the structure, concept and function of Ecosystem.

Semester V	CO5CRT15	Environment Management RT15 and Human	CO2	Describe the various Biodiversity and their conservation, local and global environmental issues, need for disaster management, Environmental laws and legislations involved in India.
		Rights	CO3	Explain the recent developments in the field of commerce and management relating to environment.
			CO4	Identify the basic terms, practical applicability, procedure for seeking information (also on special issues), disposal procedure, appeal, exemption from disclosure of the right to information Act,2005.
			CO5	Assess the needs and importance of national and international Human Rights.
			CO1	Explain the theory base of accounting.
		Fundamental	CO2	Prepare journal and record transactions in the books of original entry.
Semester V	Semester V CO5OP03 of	of Accounting	CO3	Compute the various ledger accounts.
			CO4	Calculate arithmetical accuracy by preparation of trial balance.
			CO5	Prepare the financial statement.
		Cost Accounting –	CO1	Explain the different concept of job costing and contact costing
			CO2	Understand the service costing
Semester VI	CO6CRT17		CO3	Create an awareness regarding process accounts and their treatments.
		II	CO4	Develop various cost concepts like fixed cost, variable cost, breakeven point, break even analysis
			CO5	Identify different types of budgets and various aspects of budgetary control

			CO1	Determine the classification, Scope and functions of Management accounting.
			CO2	Explain the methods and techniques used in financial statement analysis.
Semester VI	CO6CRT20	Management Accounting	CO3	Explain the concept of ratios and ratio analysis.
			CO4	Prepare fund flow statement.
			CO5	Prepare cash flow statement.
			CO1	Examine the different heads of income such as Capital Gain and Income from other Sources.
		Income Tax –	CO2	Discuss the various deductions under Chapter VI A of Income Tax act,1961.
Semester VI	CO6OCT01	II	CO3	Illustrate clubbing of income and set off and carry forward of losses.
			CO4	Compute the various concepts of Assessment procedures.
			CO5	Study the Authorities of Income Tax.
			CO1	Understanding the basic concepts, principles and procedure of auditing.
			CO2	Study the duties and responsibilities of auditors.
Semester VI	CO6CRT19	Auditing and Assurance	CO3	Apply different ways and means to undertake the work of auditing.
			CO4	Examine the different parameters of audit of limited companies.
			CO5	Identify the recent trends in auditing.
		Administra	CO1	Discuss the process in developing an advertisement programme.
Semester VI	CO6CRT18	Advertisement and Sales Management	CO2	Study legal, economic and social aspect of advertisement.
			CO3	Explain the Parameters of advertising research.

			CO4	Determine the concept of sales promotion.
			CO5	Outline the various concepts of personal selling, sales force management etc.
		CO1	Examine the learning and generation of research aptitude	
Semester VI CO6PRT01	CO6PRT01	Project and	CO2	Learn about the industrial environment and gain practical knowledge
	Viva	CO3	Develop critical thinking and team work among students.	
		CO4	Create an attitude to manage obstacles more effectively	



## **B. Voc. APPLIED ACCOUNTING AND TAXATION**

SEMESTER	PAPER CODE	TITLE OF PAPER	СО	COURSE OUTCOME
Semester I			CO1	Make the students capable of managing the office activities with the help of information technology.
			CO2	Understand about formatting techniques.
	BOCG102	IT For Business	CO3	Explain the various concepts of operating system.
			CO4	Identify various packages and its operation.
			CO5	Acquire deep practical knowledge about IT for business.
			CO1	Explain the principles, management and administration of joint stock companies in India as per Companies Act 2013.
			CO2	Identify various classifications of companies.
Semester I	AATS104	Corporate Regulations and	CO3	Clear cut view of promotion and formation of a company.
		Administration	CO4	Acquire deep knowledge about share capital.
			CO5	Understand the preparation of Articles of Association, Memorandum of Association, Registration procedure, prospects, Share certificate etc.
	AATS105	Computerized Accounting I	CO1	Define computerized accounting environment.
			CO2	Understand the computerized accounting features, merits and benefits.
Semester I			CO3	Develop the skills necessary to do general ledgers and vouchers
			CO4	Understand the various concepts and principles relating to accounts payable, accounts receivable etc.
			CO5	Adapt the skills of preparing financial statements, inventories, pay roll etc. in tally platform.
	AATS106	Financial Accounting - I	CO1	Create the skill of preparing accounts and financial statements of various types of business units other than corporate undertakings.
Semester I			CO2	Observe various accounting principles and concepts.
			CO3	Explain Accounting Standards.
			CO4	Illustrate the concepts of royalty, consignment and farm accounts.
			CO5	Show how to prepare final accounts of a sole trader.
Semester II	AATG202	Banking and Insurance	CO1	Identify the basic concepts and practice of banking and insurance.
			CO2	Understand the various services offered and various risks faced by banks.

			СОЗ	Justify the various banking innovations after nationalization to give them an overview about insurance industry.
			CO4	Explain the various principles and provisions that govern the life general insurance contracts
			CO5	Develop the dextrin of skills with which modern banking and Insurance is run.
			CO1	Explain the legal framework influencing business decisions.
			CO2	Understand the essentials of a valid contract.
Semester II	AATS203	Business Regulatory	СОЗ	Identify various principles and concepts of contract and agreement.
		Framework	CO4	Point out the online registration process of partnership and sole proprietorship firm.
			CO5	Construct the Sale of Goods Act, 1930.
			CO1	Reproduce computerized accounting environment.
			CO2	Describe the inventory categories and groups in Tally.
Semester II	AATS204	Computerized Accounting II	CO3	Develop the skills necessary to do cost categories ledgers and centers.
			CO4	Understand voucher types TDS TCS etc.
			CO5	Integrate the skills of GST terminologies in Tally and payroll system.
	AATS205	Financial Accounting II	CO1	Describe the preparation of books of accounts of various types of business activities and application of important accounting standards.
			CO2	Practice the skill of preparing final accounts of sole trader.
Semester II			СОЗ	Identify the difference between hire purchase and installment.
			CO4	Analyse the preparation of books of accounts of various types of business.
			CO5	Generalize the application of important accounting standards.
	AATS206	Vocational Training and Reporting.	CO1	Practice the skill of preparing quarterly accounts.
Semester II			CO2	Produce company environment and gain practical knowledge
			СОЗ	Create the skill of preparing financial statements of various companies.
			CO4	Acquire accounting experience in tally.
			CO5	Develops problem solving skill.
Semester III	BOCG301	Principles of Management	CO1	Identify the different Schools of Management thoughts thought
			CO 2	Create the skill of decision making.
			CO3	Develop organising skill

			CO4	Generalise the recruitment and selection procedure
			CO5	Impart controlling methodology
Semester III	AATG302	Stenography and computer applications	CO1	Familiarize the students with stenography and short hand machine
			CO2	Understand students more and familiarize with the keyboard and shortcut keys.
			CO3	Create the skill in advanced stenography
			CO4	Training students to prepare e-mails, resumes, and application letters.
			CO5	Practice to type at the speed of 20 words per minute.
			CO1	Define Business Statistics
			CO2	Impart knowledge about statistical survey
Semester III	AATS303	Business	CO3	Practical skill in Uni-Variate Data Analysis I
Semester III	11115505	Statistics	CO4	Understand the measures of dispersion.
			CO5	Explain the meaning and significance of interpolation and extrapolation.
			CO1	Impart knowledge about accounting for shares
Semester III	AATS304	Corporate Accounting I	CO2	Practical skill in preparing final accounts of joint stock companies
Semester III			CO3	Defining underwriting of shares and debentures.
			CO4	Preparation of investment account
			CO5	Application of average clause
	AATS305	Computerized Accounting III	CO1	Impart knowledge about MIS reports in Tally ERP9.
Commenter III			CO2	Understand accounts receivable and payable management.
Semester III			CO3	Define GST and tax details
			CO4	Practical skill for maintaining charts of accounts in tally.
			CO5	Record vouchers with TDS
	AATS306	Goods and Services Tax I	CO1	Introduction and evaluation of GST
Semester III			CO2	Defining the registration and payment of tax.
			CO3	Describe the collection of GST
			CO4	Explain the procedure of tax invoice
			CO5	Identify the basic concepts of customs law
Semester IV	BOCG401	Softskills and Personality Development	CO1	Identify personal skills ,creative thinking and personal values
			CO2	Develop interpersonal and problem solving skills
			CO3	Implement etiquettes
			CO4	Apply presentation skills
			CO5	Develop team work

			CO1	Emploin Indian financial contain
Semester IV			CO1	Explain Indian financial system
		Capital Market	CO2	Analyse the functions of new issue market.
	AATG402	and Financial	CO3	Examine the functions of intermediaries in the new
		Service		issue market.
			CO4	Creation of DEMAT account.
			CO5	Practical skill in online trading.
			CO1	Define E-Commerce and its features
			CO2	Application of E-Commerce
Semester IV	AATS403	E-Commerce	CO3	Analyse E-Payment system
			CO4	Understand E –Commerce security
			CO5	Setting up E-Commerce Business
			CO1	Identify the accounts of insurance companies
		Cornorata	CO2	Deep knowledge in accounts of banking companies
Semester IV	AATS404	Corporate	CO3	Impart knowledge in internal reconstruction
		Accounting II	CO4	Practical knowledge in amalagamation, absorption
				and external reconstruction.
			CO5	Identify the concepts of liquidation
			CO1	Define input tax credi
		GST and GST return filing	CO2	Illustrate on calculation of GST
C TY	A A TEG 405		CO3	Practical skill in GST Accounting
Semester IV	AATS405		CO4	Explain the types of assessment and audit inspection
			CO5	Practical skill in GST returns filing and its
			COS	procedure.
	AATS405	Industry training and report	CO1	Expert in GST and consultancy service
			CO2	Produce company environment and gain practical knowledge
Semester IV			CO3	Create the skill of preparing GST return and filing
			CO5	Acquire accounting experience in tally.
			CO5	Develops problem solving skill.
	BOCG501	Environmental Studies	CO1	Explain environment science
Semester V			CO2	Identify the concepts of an ecosystem
			CO3	Impart knowledge about environmental pollution
			CO4	Develop the knowledge about environment protection
			CO5	Understand environmental movements
Semester V	AATG502	Auditing	CO1	Define the meaning and basic concepts of audit.
			CO2	Practical knowledge in documentation and evidence.
			CO3	Understand the concept of internal control

			CO4	Identify the qualification and disqualification of company auditor
			CO5	Explain special audit and investigation.
			CO1	Impart knowledge about financial management
			CO2	Develop financial decision
Semester V	AATGS03	Financial	CO3	Explain capital structure and financial risk
		Management	CO4	Identify capital budgetting
			CO5	Estimation of working capital.
			CO1	Explain basic concepts, three golden rules of accounting.
Semester V	AATS504	Quick Book	CO2	Creation and modification of chart of accounts
			CO3	Practical skill in bill transaction and vendor credits.
			CO4	Identify finance functions
			CO5	Understand different reports in quick book.
			CO1	Define Cost Accounting, cost concepts and classifications.
		Cost	CO2	Application of cost control techniques
Semester V	AATS505	Accounting I	CO3	Acquire deep knowledge in labour cost control.
			CO4	Understand classification of overhead
			CO5	Impart knowledge in preparation of cost sheet.
			CO1	Explain income tax in India
			CO2	Point out incidence of tax.
Semester V	AATS506	Income Tax I	CO3	Computation of income from salary
Semester v			CO4	Practical knowledge in computation of income from house property
			CO5	Analyse profit and gain of business or profession.
	BOCG601	Entrepreneursh ip Development	CO1	Understand about entrepreneurs and different classifications.
Semester VI			CO2	Awareness about identification of project financing new enterprises
3011103t01 v1			CO3	Identify different discuss opportunities in business
		F	CO4	Understand about project report to small business.
			CO5	Create awareness about EDP.
Semester VI	AATG602	Tax Planning and Management	CO1	Explain the concepts of tax planning
			CO2	Create awareness about tax planning with reference to salary income.
			СОЗ	Computation of taxable income of self-occupied and let-out house.
			CO4	Understand tax planning in relation to capital vs. revenue receipts and expenditure relating to lease or own assets

			CO5	Develop skill in tax planning
Semester VI	AATS603	Management Accounting	CO1	Define nature and characteristics of management accounting
			CO2	Identify the nature and limitations of financial statement
			CO3	Analysis of different ratios.
			CO4	Explain fund flow management.
			CO5	Create awareness about cash flow statement.
			CO1	Identify different concepts of specific order costing
			CO2	Understand operating costing
		Cost	CO3	Develop knowledge about process costing
Semester VI	AATS604	Accounting II	CO4	Create deep knowledge about marginal costing and break even analysis
			CO5	Practical knowledge about budget and budgetary control.
	AATS605	Income Tax II	CO1	Understand capital gain and basis of charge
			CO2	Computation of income under the head, income from other source
Semester VI			CO3	Awareness about clubbing of income.
			CO4	Identify assessment of individuals
			CO5	Explain powers and functions of income tax authorities.
Semester VI	AATS606	Industry Training and Report	CO1	Expert in Income Tax consultancy service
			CO2	Produce company environment and gain practical knowledge
			CO3	Create the skill of preparing accounting and tax consultancy.
			CO4	Acquire accounting experience in tally.
			CO5	Develops problem solving skill.