

# Gopal Rao Patel Government Degree College, Bhinsa`

## PROGRAMME OUTCOMES (POs)

### GENERAL HIGHER EDUCATION PROGRAMS IN INDIA

**At the end of graduation, students of all undergraduate general degree programs will be able to**

**PO1.Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

**PO2.Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

**PO3.Effective Interaction:** Elicit views of others, mediate disagreements and help reach conclusions in group settings.

**PO4: Effective Citizenship:** Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

**PO5: Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

**PO6: Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.

**PO7: Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

## **PROGRAMME SPECIFIC OUTCOMES (PSO2s)**

### **B. A.**

PSO21: Students are able to use correct English in oral as well as written form.

PSO22: The inculcation of human values has resulted into transformation of behavior.

PSO23: Students could interpret the literary works by critical analysis.

PSO24: Students could differentiate the great philosophers using their logic and literary capacity.

PSO25: To increase vision regarding modern political issues.

PSO26: To know the concept and process of globalization.

### **B. COM.**

PSO21: Demonstrate a grasp of theory, technically based skills and ethical perspectives relevant to core business areas, including marketing, statistics, financial accounting, management, accounting, finance, economics, information systems, strategic management, organizational behavior, and commercial law.

PSO223: Show basic understanding of subject matter related to marketing, statistics, financial accounting, management accounting, finance, economics, information systems, strategic management, organizational behavior and commercial law.

PSO23: Develop their own principles on models useful in business and commerce.

PSO24: Show the understanding and ability to apply the subject matter in hypothetical situations.

PSO25: Evaluate strengths and weaknesses, solve problems and make recommendations in business and commercial practices.

PSO26: Show ability to influence people and/or organizations in relation to business and commercial practices.

### **B. Sc**

PSO1: The graduates will become successful professionals by demonstrating logical and analytical thinking abilities.

PSO2: The graduates will work and communicate effectively in inter-disciplinary environment, either independently or in a team, and demonstrate leadership qualities.

PSO3: The graduates will engage in life-long learning and professional development through self-study, continuing education or professional and doctoral level studies.

PSO4: B.Sc Botany, Zoology & Chemistry course enables the students to take up advanced studies in Botany, Zoology & Chemistry.

PSO5: The main goal of a B.Sc degree in any subject is to develop a deeper understanding of natural laws, inquiring about the reasons and logics which govern them through established methods of observation, modelling, experimentation and calculations.

PSO6: This makes B.Sc degree a very important weapon in your arsenal and opens a plethora of opportunities for further studies, research as well as lucrative employment opportunities across the globe.

PSO7: The key advantages that B.Sc graduates have are that of choice.

PSO8: They have a wide range of options available in terms of subjects, topics, fields and other associated as mentioned above to pursue their graduation degree in.

PSO9: B.Sc graduates can opt to join a postgraduate level degree programme in their respective field or subject to pursue further studies.

PSO10: Some students have also been known to opt for non-science master degree programmes like journalism, animation, computer technology, management, hospitality sector and many others as their field of study after completion of their B.Sc graduation.

PSO11: After completing BSc. degree one can get employed in non-scientific sectors in addition to scientific sectors.

PSO12: They can seek out for career in research laboratories, Government corporations, banking and finance sector and so on. Apart from this, science graduates can also find jobs in IT industry, business, BPO, marketing, technical writing and so on.

Study Options after B.Sc Graduation

## **COURSE LEARNING OUTCOMES (CLOs)**

### **ENGLISH**

#### **General Objectives of I Semester and II Semester**

CLO1: Aimed at improving not only the language abilities of students but also their life skills

CLO2: The curriculum offers a comprehensive, holistic package of literature, language skills, grammar, vocabulary, conversation and reading passages to suit the present-day needs of the students.

CLO3: The curriculum is envisaged to be an all-round skill development tool set.

CLO4: It enhances the abilities of learners to face classroom and real-life situations.

CLO5: Phonetics are introduced to improve the English pronunciation and communication abilities of the students.

#### **General Objectives of III Semester and IV Semester**

CLO1: It contains engaging and relevant pieces of literature, followed by extensive and elaborate exercises in language and life skills, presented in a user-friendly manner.

CLO2: It contains selected literary pieces, offering glimpses of life and the world from different perspectives.

CLO3: Passages in the Reading Comprehension section include information about eminent personalities as well as art forms indigenous to Telangana State such as mimicry and the Perini dance form.

CLO4: These are followed by a number of exercises in grammar in each unit.

CLO5: It goes beyond classroom teaching and attempts to help students in coping with real life challenges.

CLO6: It also covers etymology, vocabulary, LSRW skills and communication and soft skills.

CLO7: It is expected that at the end of the course students would be able to better their grasp of the language and increase their level of confidence in day-to-day activities in which English has come to play an integral role.

## **Course Learning Outcomes of General English**

### **Semester I:**

LO1: read the story “The Astrologer’s Day with comprehension

LO2: understand the theme/s and genre of the story

LO3: analyze the story for their structure and meaning, using correct terminology

LO4: discuss and evaluate the scene and outcome of the story

LO5: to understand the superstitions like palmistry that prevail in the Indian society.

LO6: understands the importance of the habit of reading in the essay by Francis Bacon “Of Studies”

LO7: Identify different types of ‘studies’

LO8: grasp the theme of the poem “The Poison Tree”

LO9: appreciate the beauty of the poem;

LO12: recite and memorize the poem

LO13: develop interest in poetry; develop values referred to in the poem

LO14: create interest in reading the play “The Rising of The Moon” by Lady Gregory.

LO15: understands and knows the main themes like freedom and liberty.

LO16: similarities between Indian and Irish freedom struggles.

LO17: universality of poverty pain and freedom.

LO18: Role play reading aloud the play in the class will enhance tone and intonation skills.

LO19: know the elements of language such as grammar, vocabulary, pronunciation etc.

LO20: learn use of articles, prepositions, correct spelling, one-word substitutes, antonyms and read the passage with comprehension and answer the questions about the passage.

**Semester II:**

LO1: read the story “With the Photographer” by Stephen Leacock with comprehension

LO2: understand the theme/s and genre of the story

LO3: analyze the story for their structure and meaning, using correct terminology

LO4: discuss and evaluate the scene and outcome of the story

LO5: relate the main theme of the story to his real life

LO6: understand the importance of good manners in the lesson A Treatise on Good Manners and Good Breeding” by Jonathan Swift.

LO7: role of good breeding in making an individual.

LO8: The usage and syntax of English in the late 17century.

LO9: know the elements of language such as grammar, vocabulary, pronunciation etc

LO10: learn use of question tags, phrasal verbs, degrees of comparison, suitable discourse markers, active and passive voice and read the passage with comprehension and answer the questions about the passage.

**Semester III:**

LO1: read the story “The Touch” with comprehension

LO2: understand the theme/s and genre of the story

LO3: analyze the story for their structure and meaning, using correct terminology

LO4: discuss the issues about the upbringing of a girl child.

LO5: relate the main theme of the story (i.e. Is the sense of helplessness experienced by the father in his old age?)

LO6: Identify the main responsibilities of the children towards their parents

LO7: Gets clear ideas for acquiring knowledge

LO8: Know about the truthfulness as the key to a pure life

LO9: Understands the role of students in politics

LO10: appreciate the beauty of the poem ‘The Bat Messenger’

LO11: recite and memorize the poem

LO12: develop interest in poetry; develop values referred to in the poem

LO13: understands and knows the main theme/s i.e., the pathetic condition of a social outcast

LO14: create interest in reading the play “Ramanujan”

LO15: Sums up the significance of Ramanujan’s contribution to the field of mathematics

LO16: develop faster rates of reading and comprehension

LO17: Identify the Ramanujan’s achievements in mathematics

LO18: know the elements of language such as grammar, vocabulary, pronunciation etc.

LO19: learn use of suffixes, prefixes, correction of sentences, dialogue writing, making notes expansion of proverbs and writing letters

#### **Semester IV:**

LO1: read the story “Arjun” with comprehension

LO2: understand the theme/s and genre of the story

LO3: analyze the story for their structure and meaning, using correct terminology

LO4: discuss the effects of deforestation.

LO5: Understands the saying” Save Tree, Save Earth

LO6: Identify the main responsibilities of the people towards plantation and deforestation

LO7: Discuss the women’s position and role in our culture

LO8: Points out the social codes applicable to widow and those meant for a widower

LO9: Comment on the changes coming up about women in contemporary scenario

LO10: appreciate the beauty of the poem ‘Father Returning Home ’

LO11: recite and memorize the poem

- LO12: develop interest in poetry; develop values referred to in the poem
- LO13: understands and knows the main theme/s i.e., the plight of an old man in a metro city
- LO14: create interest in reading the play “Jatra”
- LO15: Discuss the disadvantages of the absence of humanism in the society
- LO16: develop faster rates of reading and comprehension
- LO17: Elucidate their idea of Humanism with reference to the play ‘Jatra’
- LO18: know the elements of language such as grammar, vocabulary, pronunciation etc.
- LO19: learn use of (simple, Compound, Complex) sentences, Correction of Sentences, E-Correspondence, Description of a person/place, Prepare resume and writing a report on the given idea

## **HINDI**

### **Semester I:**

- LO1: read the lessons with comprehension “Utsaha”, Charitra Ka Sanghatan”, “Baazar Darshan”, Bhabhi, Bharath me Sanskriti Sangam and Rashtra ka Swaroop
- LO2: understand the theme/s of the lessons
- LO3: analyze lessons for their structure and meaning, using correct terminology
- LO4: discuss and evaluate the scene and outcome of the lessons
- LO5: relate the problem of the main characters
- LO6: create interest in reading the non-detailed stories such as “Sadgati”, “Chota Jadugar”, “Praaya Chitt”, “Parada” and “Chief ki Daavat”
- LO7: understands and knows the main theme/s of the stories
- LO8: cultivate social and emotional intelligence
- LO 9: develop faster rates of reading and comprehension
- LO10: know the elements of language such as grammar, vocabulary, pronunciation etc.
- LO11: learn to rewrite sentences as directed based on correct gender, number, tense, case and voice;
- LO12: correct grammatically incorrect sentences; learns the usage of words into sentences



LO13: learns official hindi

## **Semester II**

LO1: read the lessons with comprehension such as “Dharti ka Swarga”, “Taayee”, “Ande ke chilke”, “Raajaneetika Bantwara”, “Swami Vivekananda” and “Paryaavaran aur Hum”

LO2: understand the theme/s of the lessons

LO3: analyze lessons for their structure and meaning, using correct terminology

LO4: discuss and evaluate the scene and outcome of the lessons

LO5: relate the problem of the main characters

LO6: create interest in reading the non-detailed stories such as “Dipty Collectory”, “Gadal, Hansoo yaa Roun”, “Wapasi”, “Seva” and “Siliya”

LO7: understands and knows the main theme/s of the stories

LO8: cultivate social and emotional intelligence

LO 9: develop faster rates of reading and comprehension

LO10 know the elements of language such as grammar, vocabulary, pronunciation etc.

LO11: learns Sandhi vichched, antonyms, letter writing etc.

## **Semester III:**

LO1: grasp the theme of the poems “Nava Yuvakonse”, “Phul aur Kaanta”, “Bharath”, “Jeevan ka Adhikar”, “Mera Naya Bachpan”

LO2: appreciate the beauty of the poems

LO3: recite and memorize important lines of poems

LO4: develop interest in poetry; develop values referred to in the poem

LO5: knows and understands the history of Hindi literature from 1050 AD-1700 AD

LO6: reads and understands given essays

LO7: writes essays on various topics

#### **Semester IV:**

LO1: grasp the theme of the poems “Bhagvan Buddh ke Prati, “Ve Muskuraate Phul Nahi”, “Kalam aur Talwar”, “Tu Kyoun Bhaitgaya hi Path Par” and “Anubhav Paripakva”

LO2: appreciate the beauty of the poems

LO3: recite and memorize important lines of poems

LO4: develop interest in poetry; develop values referred to in the poem

LO5: knows and understands the history of hindi literature from AD 1700-till date

LO6: learns translation English and Telugu to Hindi

#### **TELUGU**

#### **Semester I:**

LO1: read the story “Yugantham”, and “Enkanna” with comprehension

LO2: understand the theme/s and genre of the story

LO3: analyze the story for their structure and meaning, using correct terminology

LO4: Discuss and evaluate the scene and outcome of the story

LO5: Relate the problem of the main characters

LO6: Grasp the theme of the poems “Shakuntalopakhyanam”, “Godaguchi Katha”, “Tyaga Nirathi”, “Gajendra Moksham”, “Kasulu”, “Raju-Kavi”, “Gangireddu” and “Jaya Bheri”

LO7: Appreciate the beauty of the poems;

LO8: Recite and memorize important lines from the poems

LO9: Develop interest in poetry; develop values referred to in the poem

LO10: Create interest in reading the Non-detailed story “Rudrama Devi”

LO11: Understands and knows the main theme/s

LO12: Discuss the greatness of Rudrama Devi

LO13: Cultivate social and emotional intelligence

LO14: Develop faster rates of reading and comprehension

### **Semester II:**

LO1: Grasp the theme of the poems “Samvaranudi Tapassu”, Sreeranga Kshetra Mahima”, “Hanumath Sandesham”, “Subhashitamulu”, “Antarnadam”, “ ‘Pra’panchapadulu”, “Roddu Roler” and “Alvida”

LO2: Appreciate the beauty of the poems;

LO3: Recite and memorize important lines from the poems

LO4: Develop interest in poetry; develop values referred to in the poem

LO5: Reads the lessons Mamidi Pandu”, “Maa Ooru Poindi”, and “Idee Oka Kale-Perulu, Daarulu Gurthunchukovadam”

LO6: understands the main themes of the lessons

LO7: discuss the main points in the lessons

LO8: gives answer to questions on the lessons

LO19: create interest in reading the Non-detailed story “Rudrama Devi”

LO10: understands and knows the main theme/s

LO11: discuss the greatness of Rudrama Devi

LO12: cultivate social and emotional intelligence

LO 13: develop faster rates of reading and comprehension

LO15 know the elements of language such as grammar, vocabulary, pronunciation etc.

LO16: learn use of Sandhulu and Samasaalu

### **III Semester:**

LO1: read the story “Konda Mallelu” with comprehension

LO2: understand the theme/s and genre of the story

LO3: analyze the story for their structure and meaning, using correct terminology

LO4: discuss and evaluate the scene and outcome of the story

LO5: understands the main thematic concerns in the lessons “Ardharatri Arunodayam ” and “C.P. Brown Sahitya Seva”

LO6: Identify the main themes of the lessons i.e., Telangana Vimochana Dinam and the contribution of C.P. Brown to Telugu Language and Literature

LO7: grasp the theme of the poems “Dharmajuni Vakchaturyam”, “Vibheeshanuni Sharanagati” and “Gunanidhi Katha” from ancient poetry; “Raitu Prashasti”, “Gudiselu Kalipotunnai”, and “Aarta Geetham” from modern poetry

LO8: appreciate the beauty and figures of speech in the poems;

LO9: recite and memorize important lines of the poems

LO10: develop interest in poetry; try to inculcate the values referred to in the poem

LO11: create interest in reading the play “Chali Cheemalu”

LO12: understand and discuss and knows the main theme/s

LO13: cultivate social and emotional intelligence

LO14: develop faster rates of reading and comprehension

LO15: know the elements of language such as grammar, vocabulary, pronunciation etc.

#### **IV Semester:**

LO1: read the story “Nivuru Tolagina Nippu” with comprehension

LO2: understand the theme/s and genre of the story

LO3: analyze the story for their structure and meaning, using correct terminology

LO4: discuss and evaluate the scene and outcome of the story

LO5: understands the main thematic concerns in the lessons “Mana Grama Naamalu” and

LO6: Identify the main themes of the lessons the story behind the names of many telugu villages

LO7: grasp the theme of the poems “Naarada Ganamatsaryam”, “Vagdhana Bhangam” and “Narasimha Shatakam” from ancient poetry; and “Guru Dakshina”, “Naruda Nenu Naruda Nenu” and “Devarakonda Durgam” from modern poetry

LO8: appreciate the beauty and figures of speech in the poems;

LO9: recite and memorize important lines of the poems

LO10: develop interest in poetry; try to inculcate the values referred to in the poem

LO11: know the elements of language such as grammar, vocabulary, pronunciation etc.

LO12: learn the use of Alankaralu and Chandassu

## **POLITICAL SCIENCE**

### **I Semester**

#### **Paper I: Political Theory**

LO1: Know the definitions, scope and importance of Political Science

LO2: Compare Political Science with other social sciences and know the relation between Political and other social sciences

LO3: develop familiarity with different approaches to study of politic and ability to apply these to political problem and political behavior

LO4: Learn various concepts used in the study of Political Science

LO5: Understand the process of Origin of State: know various theories of Origin of State

### **II Semester**

#### **Paper II: Political Institution**

LO1: Get to know the concepts of State, Nation and Civil Society

LO2: Comprehend the concepts and theories of Sovereignty, Monism and Pluralism

LO3: Learn about Liberty, Equality, Rule of Law and Kinds of Rights

LO4: Compare and Contrast various forms of Government such as Democracy, Unitary and Federal etc.

LO5: Get the knowledge of Theory of Separation of Powers between Legislature, Executive and Judiciary

### **III Semester**

#### **Paper III: Indian Constitution and Social Dynamics**

LO1: Know about Nationalist Movement and Constitutional Development, Making of Indian Constitution

LO2: Understand the importance of Fundamental Rights and Directive Principles

LO3: Learn about Union Government and the powers and functions of various heads of Government

LO4: Get to know State Government and the powers and functions of various heads of State Government

LO5: Know about Social and Political Movements in India

#### **IV Semester**

##### **Paper IV: Indian Political Process**

LO1: Understand the relations between Centre and the State Relations and know the Recent Trends in these relations

LO2: Know about the Local Self-Government in India, Panchayat Raj and Urban Local Bodies

LO3: Learn about Political Process, Political Parties, Pressure Groups, Media etc

LO4: Understand the Electoral Politics, Powers and Functions Election Commission, Voting Behaviour, Electoral Reforms etc.

LO5: Know about and Understand Statutory Commissions for Protection of Rights etc.

#### **III Year**

##### **Paper III: Political Thought**

LO1: Know about the Ancient Political Thought and Theories of various Thinkers such as Manu, Koutilya, Gautama Buddha etc

LO2: Know about the concepts such Varna Dharma, Danda Neeti, State and Society, Dhamma and Sangha

LO3: Understand the history of Modern Political Thinkers such as Gandhi, Nehru, Ambedkar, M.N.Roy etc.

LO4: Understand the concepts such as Ahimsa, Satyagraha, Democratic Socialism, Annihilation of Caste, Radical Humanism

LO5: Know and Understand Western Political Thoughts of Aristotle, Plato, St. Thomas, Machiavellie, Thomas Hobbes, John Locke, J.J. Rousseau, Bentham, J.S. Mill, Hegel, Marks, Gramsci etc.

#### **Paper IV: International Relations**

LO1: Know about the Scope, Nature, Evolution, Significance of International Relations

LO2: Understand History of International Relations and important incidents such as First World War, Second World War and their impact on International Relations

LO3: Learn about the concept of International Powers, Super Power, Regional Power, Elements of National Power etc.

LO4: Comprehend the elements of International Political Economy, International Financial Institutions such as World Bank, WTO and their functions and role

LO5: Understand the concepts of Globalization and its impact on developing nations,

LO6: Get the knowledge of International Organs such as UNO, its Structure and Role, the need for revision of Charter, Regional Organizations (European Union, SAARC, ASEAN etc.)

LO7: Learn about the importance and significance of International Security, Arms Race, Arms Control, Disarmament, Issues in Nuclear Politics, Foreign Policy and Recent Trends

LO8: Know about the Contemporary Issues such as Environment, Women Rights, and Terrorism etc.

### **PUBLIC ADMINISTRATION**

#### **Semester-I**

LO1: know the basic concepts, principles & Theories of Public Administration

LO2: appreciate the efforts and contribution of administrative thinkers to develop Public Administration as a subject

LO3: understand the historical evolution of Public Administration

LO4: acquire the Knowledge for preparation of competitive exams

LO5: understand the importance & role of Public Administration in the society & Public life

LO6: know the organization, Principles, Administrative Procedure policy making process & limitations

LO7: acquire the event organization skills & Administrative skills in real life

LO8: acquire skills to become good employees and good Administrators in future

### **Semester-II**

LO1: appreciate the development dynamics & emerging trends in Public Administration

LO2: Compare the Indian Administrative system with Administrative systems of other countries

LO3: understand the importance & role of Public services in the emergence and development of new state of Telangana

LO4: understand the role of civil society & Non Governmental Organizations in Administration

LO5: identify multi dimension problems in Governance

LO6: understand the present status of Public Administration in the Context of Liberalization & Globalization

LO7: improve Political Awareness and citizen participation in Govt Welfare Activities

### **Semester-III**

LO1: Understand the historical evolution and socio-economic, political, cultural and global context of Indian Administration

LO2: Identify the transformative role of Indian Administration

LO3: Bring out the multi-dimensionality of problems and processes of Indian Administration

LO4: Understand the form and substance of Indian Administration

LO5: Appreciate the emerging issues in Indian Administration in the context of changing role of state, market and civil society

### **Semester-IV**

LO1: know the Administrative history of Telangana State

LO2: appreciate the Administrative reforms taken place in Indian Administration

LO3: identify the role of state Govt in Indian Administration

LO4: understand the relationship between central state & Local Governments

LO5: appreciate the emerging issues, recent trends in state Administration

LO6: develop ability to solve problem, capacity & redress citizen grievances

LO7: apply (use) RTI ACT in real life when they are in trouble and injustice

## **III YEAR: III PAPER**

### **Management of Resources**

CLO1: Explain the importance of physical, human and financial resources and their effective management in organizations



CLO2: Demonstrate a basic understanding of different tools used in forecasting and planning physical, human and financial resource needs

CLO3: Describe the meanings of terminology and tools used in managing resources effectively

CLO4: Record governmental regulations affecting major stakeholders in management of resources

CLO5: Analyze the key issues related to administering the physical, human and financial elements

#### **IV PAPER: Rural and Urban Governance in India**

LO1: gets the knowledge of local self-government and different types of local governments

LO2: understand the composition and working process of local governments

LO3: understand the role of local governments in rural and urban development

LO4: identify the importance of decentralization of power in democracy

LO5: acquires the skills to become political leaders in future

LO6: responds to the local issues in real life situations

LO7: know the legal and administrative procedures of local governments

LO8: participate in welfare activities of government in future

#### **HISTORY**

##### **Semester I: HISTORY OF INDIA (FROM EARLIEST TIMES TO C.700 AD)**

LO1: knows about the definitions of history, its relationship with other social sciences and sources of Indian history

LO2: understand the ancient and Vedic period

LO3: comprehend the concepts of religious movements

LO4: knows about the foundation of different dynasties and developments

LO5: gets the knowledge of Gupta period and

##### **II SEMESTER: HISTORY OF INDIA (700 AD – 1526 AD)**

LO1: students will develop their knowledge about multiple culture life Rise of Regional States and Bhakti movement

LO2: Gets to know about the Arab and Delhi Sultanate conquest of Sind

LO3: comprehend the concept of Bhakti and Sufi Movements and their impact on society

LO4: understands various aspects of Kakatiya administration

LO5: acquires the knowledge of Vijayanagar Administration and Bahamanis and their contribution of the Deccan culture

### **III SEMESTER: HISTORY OF INDIA (1526 AD-1857 AD)**

LO1: knows about the establishment of Mughal Dynasty

LO2: comprehend the rise of regional powers

LO3: understand the Advent of European Powers

LO4: learns about the European policies

LO5: Compare the decline of rural cottage industries and urban handicrafts

### **IV SEMESTER: HISTORY OF INDIA (1858—1964 CE)**

LO1: Understand about the Beginning of Colonial Rule and impact of policies

LO2: Get to know about the Socio-Religions reforms movements

LO3: Get the knowledge about factors for the Nationalism and freedom struggle

LO4: Know about the Revolutionary Movements

LO5: Get the knowledge about emergence of communal policies

### **PAPER III: HISTORY OF THE MODERN WORLD (FROM 1453 AD TO 1950 AD)**

LO1: Know about the Renaissance and Geographical Discoveries

LO2: Get the knowledge of Emergence of Nation State in Europe

LO3: Compare and contrast various Revolutions

LO4: Understand the Industrial Revolution and its Impact

LO5: Get the knowledge about World War Courses and Consequences

LO6: Get to know the UNO, its contribution to world peace

### **PAPER IV: HISTORY AND CULTURE OF MODERN TELANGANA (FROM 1724 TO 2014 AD)**

LO1: Know the sources are History of Telangana

LO2: Get the knowledge about Foundation of Asaf Jahi Dynasty

LO3: Compare and contrast various Rules of Mir Usman Ali Khan

LO4: Understand the Role of Andhra Mahasabha and Constitutional Reforms

LO5: Comprehend the concepts of Anti Nizam and Anti Feudal Movements

LO6: Understand about discrimination, dissent and protest and formation of Telangana state

## **ECONOMICS**

### **Semester I**

LO1: understand nature, Definition and scope of economics concepts of wealth, Importance of growth and Analysis of static and dynamic methods etc.

LO2: recognize the utility analysis, cardinal and ordinal/approaches and understand the law of diminishing marginal activity

LO3: acquire knowledge of demand, Law of demand, elasticity of demand

LO4: understand the supply, Law of supply, Supply function supply curve in perfect and imperfect market conditions

LO5: know about the production, Linear and Non linear production function as well as law of variable production and internal and external economics etc

### **Semester II**

LO1: Understand the concept of costs, Revenue and their interrelation as well as learn the difference between average and marginal cost etc...

LO2: Learn concept of firm, Industry and classification of markets, Perfect competition and price determination etc...

LO3: Learn about monopolistic competition, Cournot model and kinky demand curve etc..

LO4: Acquire knowledge of concepts of marginal productivity such as marginal revenue product etc...

LO5: Know about the wage, Collective bargaining as well as classical and Neo-Classical theory of interest etc...

### **Semester III**

LO1: Be aware of meaning, Nature, Scope and importance of Macro Economics along with National Income etc...

LO2: Understand the classical theory of complement, Wage cut policy and Keynesian theory of employment etc...

LO3: Know about the money and money supply, M1, M2, M3, M4 theories of money etc...

LO4: Learn the trade cycles meaning and causes of inflation and understand the effects of inflation with measurer to control inflation

LO5: Acquire a knowledge of banking and stock market and its function as well as about NBFC

#### **Semester IV**

LO1: Understand the meaning and scope of public finance and difference between public and private finance etc...

LO2: Be aware of public revenue and its sources, Classification also direct and indirect taxes methods etc...

LO3: Know about the public expenditure, Determination of public expenditure and Wagner's Law etc...

LO4: Acquire the knowledge of International trade, Role of international trade in economic development etc...

LO5: Recognize the concepts, Components and determinants of balance of payment and disequilibrium in balance of payments etc...

#### **III Year Paper -III**

LO1: Know Concepts of Development meaning of Economic growth and development – Measures of Economic Development – GNP, PCI, PQLI and HDI

LO2: Understand Structure of the Indian Economy Demographic features – Size and growth of the population – Age and Sex composition- Rural and Urban population – Occupational distribution – Population policy etc...

LO3: Learn New Economic Reforms – Liberalization, Privatization and Globalization in India – Inclusive Growth

LO4: Analyze Indian Agriculture nature and importance; Trends in agricultural production and productivity; Factors determining productivity etc...

LO5: Discuss Indian Industry and Services structure and Growth of Indian – Industrial policies of 1956 and 1991, Growth and problems of Small Scale Industry etc...

### **III Year Paper –IV**

LO1: Understand the meaning and scope of public finance and taxation; distinguish between public and private finance; learn the principles of Maximum Social Advantage; identify the difference between Public goods and Private goods; trace the sources of Public revenue etc.

LO2: know about of public expenditure and public debt; classify public expenditure; come to know the reasons for the growth of public expenditure; analyze Wagner's law, Peacock-Wiseman hypothesis; classify Public debt; identify the causes and effects of the growth of India's public debt

LO3: Learn in detail the theories of International Trade; distinguish between inter-regional and international trade; understand the importance of international trade; know and analyze theories of international trade etc.

LO4: Acquire the knowledge of protection and balance of payments; define Tariffs; distinguish types of tariffs; know the effects of tariffs; learn the concept of Optimum Tariff; Balance of Payments, Disequilibrium in Balance of Payments and Measures to correct it and Depreciation

LO5: understand the recent trends in Foreign Trade in India, EXIM policy, changing role of IMF, IBRD, WTO and their impact on India; know the concept of outsourcing

### **COMMERCE**

#### **Semester I: Information Technology:**

LO1: learn the major concepts in the functional area of Accounting, Marketing, Finance information technology & Management

LO2: know Legal Social Ethical and Economic Environments of Business in a global context

LO3: understand and solve the business problems through information systems & technology

LO4: apply and solve the Organization problems using technology enhanced approaches

LO5: respond to Design & Implement the information systems

LO6: analyze Business Concepts and functions in an Integrated Manner

**Business Economics:**

LO1: Learn Business Economics concepts & principles which are useful in understanding the general economic environment

LO2: Know the concept of marginal cost, opportunity cost for analysis & decision making in the business environment

LO3: Understand the local and global business environment

LO4: Apply effective written and Oral Communication Skills to business Situations

LO5: Respond and acquire critical thinking skills in business situations

LO6: Analyze and apply and Ethical understanding and perspective to business situation

**Business Organization:**

LO1: Learn the basic forms of ownership organization such as sole trade, partnership, Joint Hindu Family & Joint Stock Company & mutual funds

LO2: Understand the nature and purpose of different types organization

LO3: Understand Basic Concept Organizational Structure

LO4: Apply Different ways in which Organizations may be structure

LO5: Describe the main departments or functions of Business Organization

LO6: Explain the advantages & Disadvantages of Centralized & Decentralized Organization

**Financial Accounting-1**

LO1: acquire conceptual knowledge of basis of Accounting

LO2: know and understand basic Accounting Concepts

LO3: Understand Accounting & Preparation of final Accounts of sole trader

LO4: apply process in Business transactions

LO5: Respond to Financial Accounting changing student learning style through a Variety of learning models and multi media

LO6: Analyze financial statements of sole trading

## **B.COM (CA): Information Technology**

### **Semester I**

LO1: Know the concepts of computer, MS-Office and Internet

LO2: Understand and Execute the programs like Ms-Office, Excel, Power Point etc..

LO3: Execute the programs like MS-Word, Excel and Internet

LO4: Able to a apply with help of daily life activities

### **Semester II**

#### **Principles of Management**

LO1: Learn the concept of planning, Organizing, Delegation and Decentralization, Co-Ordination & Control

LO2: Know and be able to communicate the management evolution and how it will affect further managers

LO3: Understand Major Internal processes of a business system and the environment in which it operates

LO4: Evaluate the influence of historical force on the current practice management

LO5: Analyze Quantitative and quantitative in information to isolate and formulaha best control/methods

#### **Foreign Trade**

LO1: Learn To gain knowledge of Indians foreign trade procedure policies and international institutions

LO2: Know comparative advantage and it formal expression and interpretation with in different theoretical models

LO3: Understand the major recent development in the world trading system

LO4: Apply BE able to apply partial equilibrium and general equilibrium models in analyzing the economic effects

LO5: Respond Develop Communication Skills through the presentation of work interactions during tutorial session and appropriate use of the discussion

LO6: Analyze the major models of international trade and be able to distinguish b/n them in terms of their assumptions of economic implications

### **Financial Accounting-II**

LO1: Learn the concepts of bills of exchange consignment and joint venture accounts from incomplete records and nonprofit organizations

LO2: Know the different type of Accounts belongs to various business

LO3: Understand Accounting & Preparation of various business forms

LO4: Apply the processing of accounting transaction of various business forms

LO5: Respond Learning styles can change through different learning models

LO6: Analyze Student can analysis the business forms Accounting statements

### **Managerial Economics**

LO1: Learn the nature and scope of managerial economics market analyses macro economics fiscal policy

LO2: Know the demand and Supply are part and parcel of fundamental analysis of economics

LO3: Understand the markets like oligopoly & duo poly & monopoly and business cycles and finance commission role

LO4: Make Optional business decisions by integrating the concepts of economics mathematics and statistics

LO5: Respond to real-world business problems with a systematic theatrical framework

LO6: Analyze the demand and supply conditions and assess the position of a company

### **Semester-III**

#### **Programme in C:**



LO1: Learn complete knowledge of 'C' languages learning basic programming constructs they can easily switch over to any other language in future

LO2: Know a defensive programming concept ability to handle possible errors during programme execution

LO3: Understand a concept of object thinking within the frame work of functional model

LO4: Apply this concept of programming and software code organization within the frame work and procedural programming paradigms

LO5: Respond a defensive programming concept ability to handle possible errors during program execution

LO6: Analyze to define and manage data structures based on problem subject domain

### **Business Statistics:**

LO1: Learn the concept of basic statistical concepts such as statistical collection, statistical series, measures of central tendency, dispersion and correlabon & regression analysis

LO2: Know statistical method for solving practical problems

LO3: Understand the place and role of statistical methods in monitoring economic phenomena

LO4: Apply knowledge to solve simple tasks using computer (MS Excel)

LO5: Respond Independency calculate basic statistical parameters

LO6: Analyze Modeling and analysis is frequently placed within a business context, with roughly equal emphasis on theory and its application

### **Entrepreneurial development & Business Ethics:**

LO1: Learn the major concepts in the functional areas of accounting, marketing, finance, information technology, and management

LO2: Know Leagal, Social, Ethical, and economic environments of business in a global context

LO3: Understand manage people, process, and resources within a diverse organization

LO4: Apply knowledge of leadership concepts in an integrated manner

LO5: Respond entrepreneurship/small Business option are prepared to pursue professional development opportunities

LO6: Analyze integral/external factors factor effecting a business organization to evaluate business opportunities

### **Advanced Accounting:**

LO1: Learn Accounting techniques and methods for the formation dissolution, partner changes, earnings distribution & liquidation of partners

LO2: Know identify current issues related to financial accounting and financial reporting

LO3: Understand awareness of the organizational social and environmental context of accounting

LO4: Apply acquire skills required to apply management accounting techniques to organizational cost

LO5: Respond demonstrates and determine the impacts on parent company's financial statements

LO6: Analyze information flows in an organization and develop conceptual models of organizational relationships

### **Semester III**

#### **B.COM (CA)**

#### **Programming with C:**

LO1: Know the concepts of Introduction to C, Data types, Functions, Arrays, User defined data types in C

LO2: Understand the concepts above

LO3: Execute the programs on above topics and Lab

LO4: Programmes in their daily life

#### **Semester IV: Income Tax II:**

LO1: Learn the concept of agriculture income, Income from salaries income from house property, profits and gains of Business or profession

LO2: Know a broad understanding of Tax

LO3: Understand summarize the tax environment and the federal tax compliance process

LO4: Apply principles of tax law to complex legal problems, and critique the tax

LO5: Respond measure taxable income

LO6: Analyze interpret tax aspects of individual investment planning and personal activities

### **Auditing:**

LO1: Learn concept of Audit process including the professional standards applicable to the financial statement

LO2: Know application of Auditing procedures to select transaction cycles

LO3: Understand sampling methodologies commonly used within the audit profession

LO4: Apply Ethical & legal responsibilities of financial statement auditors the public accounting profession

LO5: Respond, develop & demonstrate problem solving and critical thinking skills essential to solve unstructured auditing problems

LO6: Analyze and assess manual and information systems

### **Corporate Accounting:**

LO1: Learn this courses covers the characteristics of the corporate accounting environment and its financial reporting requirements for companies

LO2: Know the basic principles of accounting for investments in associates

LO3: Understand an understanding of the accounting requirements for a corporate group and familiarly with the theory underlying the methods used to account for inter-company investran

LO4: Apply to prepare consolidated accounts for a corporate group

LO5: Respond a communicate accounting policy and statutory recommendations and justify conclusions with reference to relevant laws and accounting standards

### **III YEAR**

#### **BUSINESS LAW**

LO1: Learn acts relating to business, i.e. contract act, sale of Goods act, consumer protection company law etc..

LO2: Know contract legality, consideration, contract of sale, discharge of a contract consumer rights

LO3: Understand acts and law of business, company related law, intellectual property, Management & winging up of companies

LO4: Apply cases of contract act and able to create a written contract filing a case on consumer protection

LO5: Respond knows the practical problems relating to the sale of Goods Act. Cases of companies act

LO6: Analyze students are expected to know the model for at a complaint & legal environmental

### **Corporate Accounting:**

LO1: Learn the knowledge of accounting standards preparation of final accounts preparation of financial statements of insurance & bank companies

LO2: Know basic accounts standards and financial statements of a company that may be bank or insurance company

LO3: Understand companies' amalgamation and internal Reconstruction and can understand transaction variance between banks & insurance and other companies

LO4: Apply the knowledge in different companies, Accounting process when Amalgamation & Reconstruction

LO5: Respond student can prepare final accounts using computers

LO6: Analyze student can analyze the differences between different corporate accounts

### **Auditing:**

LO1: Learn concepts of Auditing planning of Audit and control vouching Report writing

LO2: Know concept of Auditing, vouching, Rights duties of Auditor, Audit Report

LO3: Understand Audit reports, Business letters, and Business reports. Types of Audit, Audit planning & control

LO4: Apply use audit concepts and variables like risk assessment materiality internal controls documentation of evidence

LO5: Respond auditing and assurance concepts to read – world o evidence

LO6: Analyze issues currently facing the professional judgment and ethical implications

### **Business Communication:**

LO1: Learn basic communication process – organizational communication – verbal-non verbal communication and report writing

LO2: Know level communication in business organization Intra- Intra Personal communication business enquires – report skills

LO3: Understand communication importance in business organization dimensions of communication in organizations network

LO4: Apply preparation of written communication aids i.e. business letters for calling for a post for interviews appointment orders etc.

LO5: Respond student can prepare letters with the help of computers and get feedback from communication system

LO6: Analyze Communication process in business organization by using verbal- non verbal communication tools and feedback analysis

### **Business Communication:**

LO1: Learn essential business skills primary aims and knowledge of communication in the business environment

LO2: Know Oral, Written and visual communication

LO3: Understand capable of effectively monitoring, analyzing and adjusting their own communication behavior

LO4: Apply communication theories

LO5: Respond effectively to cultural communication differences

LO6: Analyze the concept will communicate ethically, responsibly and effectively as local, national, international and global citizens and leaders

### **Principles of marketing:**

LO1: Learn the concept develop a basic understanding of consumer market analysis marketing planning and marketing management

LO2: Know individual components of a marketing mix

LO3: Understanding of marketing terminology and concepts

LO4: Apply the organizational processes involved in the planning implementation and control of marketing activities

LO5: Respond knowledge of regulatory and ethical factors considered essential to making marketing decision

LO6: Analyze identify wants and environmental factors that shape marketing activities for certain target markets

### **Rural Marketing:**

LO1: Learn the concept like relevance and scope of rural market in India

LO2: Know to acquaint the students with the appropriate concepts and techniques in the area of rural marketing

LO3: Understand the concept and methodology for conducting the research in rural market

LO4: Apply adoptions to the rural marketing mix (4A'S)

To meet the needs of rural consumers

LO5: Respond to the environment prevailing these dynamic involved in the behavior of rural consumer

LO6: Analyze identify the challenges and opportunities in the field of rural marketing for the budding managers and also expose the student to the rural market environment

### **B.COM (CA)**

#### **Web Programming**

LO1: Student will know the concepts of HTML, VB Script, ASP, DHTML, and XML

LO2: Student will have to understand the above topics

LO3: Student will have to learn the programs on above topics

LO4: Student will execute the above topics

LO5: Student will learn how to create web page and execute on browser using tags

### **B.COM (CA) III YEAR**

#### **RELATIONAL DATABASE MANAGEMENT SYSTEMS**

LO1: know the concepts of Database, SQL, PL/SQL, E-R Models

LO2: understand and create database and various models of database

LO3: learn to create the database, modify database and drop the database

LO4: apply the concepts in daily life and create databases on general entities like college, hospital and company etc.

## **BOTANY**

### **Semester I: DIVERSITY OF LOWER PLANTS, BRYOPHYTA, PTERIDOPHYTE**

LO1: Learn Primitive Organisms Properties

LO2: Know about the Advantages the study of lower plants

LO3: Understand the Micro Organisms Internal Structure

LO4: Describe the Lower plants External & Internal Morphology

LO5: Analyze the Lower plants Live in Extreme Environmental Condition

LO6: Compose the Internal relations among Bacteria and Cyano Bacterial Study

LO7: Appreciate the usefulness of the lower organisms

LO8: Learn Bryophytes, Pternidophyte, Gymnosperms, and Fossils

LO9: Know about the life cycle of these classes

LO10: Understand the Internal, External features of these plants

LO11: Describe the Evolution of plants succession

LO12: Analyze the saprophytic evolution Bryophytes

LO13: Analyze the stellar evolution of Ptenidophyte

### **Semester II: GYMNOSPERMS AND FOSSILS, TAXANOMY& ECOLOGY**

LO1: Gymnosperms: General characters, structure, reproduction and classification ( Spome's), Distribution and economic importance of Gymnosperms.

LO2: Morphology of vegetative and reproductive parts, systematic position and life cycle of Pinus and Gnetum,

LO3: Geological time scale Introduction to Palaeobotany, Types of fossils and fossilization, Importance of fossils.

LO4: learn principles and classification of plants

LO5: know about the identification of different plants and different families

LO6: know how the plants are classified

LO7: know preparation of Herbarium techniques

LO8: understand the different medicinal properties of the medicinal plants

LO9: know about the various plants used in medicines

LO10: learn various types of medicines used in different methods

LO11: Acquire the knowledge and understanding of the traditional medicine and modern medicine

### **Semester III:**

#### **Paper: TAXANOMY OF ANGIOSPERMS AND MEDICINAL BOTANY**

LO1: learn principles and classification of plants

LO2: know about the identification of different plants and different families

LO3: know how the plants are classified

LO4: know preparation of Herbarium techniques

LO5: understand the different medicinal properties of the medicinal plants

LO6: know about the various plants used in medicines

LO7: learn various types of medicines used in different methods

LO8: Acquire the knowledge and understanding of the traditional medicine and modern medicine

### **Semester IV:**

#### **Paper: PLANT ANATOMY, EMBRYOLOGY AND PALYNOLOGY**

LO1: Component of eco system, energy flowm food chain and food webs.

LO2: Plants and environment, ecological adaptations of plants, Hydrophytes, Xerophytes and Mesophytes

LO3: Plant Succession serial stages, modification of environment, climax formation with reference to Hydrosere and Xerosere.

LO4: get the knowledge of internal structure of the plants

LO5: to understand the structures and functions of tissues

LO6: be able to analyse the topic of reproduction in plants



LO7: comprehend the development of plants

LO8: be informed of the knowledge of fossils in plants

LO9: classify pollen grains

### **III Year**

#### **Paper III: CELL BIOLOGY, GENETICS, ECOLOGY AND BIODIVERSITY**

LO1: To learn the cell structure of the plant

LO2: To know the cell divisions of the plants

LO3: To understand the hereditary characteristics of the plants

LO4: To learn various types of mutation in plants

LO5: To identify the different communities of the plants

LO6: To study the biodiversity of the plants

#### **Paper IV: PLANT PHYSIOLOGY, TISSUE CULTURE, BIOTECHNOLOGY AND HORTICULTURE**

LO1: Learn new knowledge about plant physiology

LO2: Know about Photosynthesis, Respiration in plants

LO3: Understand the Physiological activities like Photophosphorylation, Glycolysis, Electron transport system, Enzymes actions, Phytohormones

LO4: Appreciate the Bio Technology Advantages

LO5: Apply the Tissue Culture Techniques and use of Green Houses, Glass Houses, Shadenets

LO6: Appreciate the Horticulture Techniques Floriculture, Agriculture, Olenculture, Gardening, Lans , Plantations

LO7: Compare the Photophosphorylation & Oxidative Phosphorylation

LO8: Differentiate between Photosynthesis and Respiration

LO9: Appreciate the Photosynthesis Advantages

LO10: respond the different Techniques adopt in plant Tissue Culture, Anther Culture, Embryo Culture, Ovary Culture, Callus Regeneration, Nodal Culture and Organogenesis

### **ZOOLOGY**

## **I Semester: Animal Diversity – Invertebrates**

LO1: To know the Kingdom Animalia, Brief History of Invertebrates

LO2: To learn the General Characters Classification of Non- Chordates Protozoa to Echinodermate and Hemichordate

LO3: To understand the type study of Elphidium and Sycon

LO4: To get the Knowledge on type study of Hirudinaira granulose (leech) and prawn and schistosoma

LO5: To analyze the type study of Pila and Starfish

LO6: To identify the affinities of Balanoglossus (Hemi-Chordata)

## **II Semester: VERTIBRATES (Chordata)**

LO1: To evaluate the Ecosystem Structure and function

LO2: To understand the Biogeochemical Cycles and Animal Associations

LO3: To know about the Environmental Pollution and Wildlife Conservation

LO4: To get knowledge on Zoogeographical regions Wallace line Discontinuous distribution and Continental Drift

LO5: To analyze the Animal Behavior

## **Semester III: ANIMAL DIVERSITY-VERTEBRATES AND DEVELOPMENTAL BIOLOGY**

LO1: To understand the General Characters, Classification and Morphology of Protochordata and Chordata phylum

LO2: To learn about parental case in Amphibia, Flight Adaptation in Birds/Aves and Dentition in Mammals

LO3: To evaluate the process of Gametogenesis in Male and Female

LO4: To analyze the different types of Eggs and also different types of Cleavages

LO5: To get the Knowledge on Total Membranes and Placenta

## **Semester IV: CELL AND MOLECULAR BIOLOGY, GENETICS AND EVOLUTION**

LO1: To learn the structure and functions of cell Organelles

LO2: To know the differences in between Mitosis and Meiosis

LO3: To analyze about the DNA & RNA

LO4: To understand the CLoning Process

LO5: demonstrate the basic principles of genetics and Mendel's Law

LO6: gain knowledge of human evolution

### **III YEAR: Paper -III: ANIMAL PHYSIOLOGY, GENETICS AND EVOLUTION**

LO1: To compare the differences Among the Proteins, Carbohydrates and Lipids Digestion and to learn the Digestion process in ruminants

LO2: To understand the Human Respiratory System and Nervous System, Propagation of Nerve Impulse

LO3: To learn the Process of Formation of urine in Human along with structure and Function of Kidney

LO4: To indentify the different types of Muscles and to know the Knowledge on Muscle Contraction

LO5: To know the basic Principles of Genetics, Mendel's Law Epitasis, and Incomplete dominance & Co-Dominance

LO6: To understand the Impact of Hormones on different Metabolisms like Reproductive System etc.

LO7: To get the Knowledge of Human Evolution along with Horse Evolution

### **Paper- IV: AQUA CULTURE**

LO1: know about Fisheries and Aqua Culture

LO2: understand different elements of Harmatology, Immunology, and Human Paraliles

LO3: analyze different aspects of Animal Biotechnology – CLoning, Diabetes and Parkinson's disease

### **PHYSICS**

#### **Semester I:**

LO1: learns Vector analysis, Mechanics of particles and rigid bodies

LO2: knows about different theorems of Vector analysis, Motion of a Rocket, Motions of a symmetric top, central forces, gravitational field, gravitational potential, special theory of relativity

LO3: applies integration over vectors

LO4: analyze the theorems over vectors-central forces as gravitational forces, electrostatic forces, elastic forces etc.

LO5: compare and contrast different physical quantities

LO6: responds to real life situations in which the knowledge of these topics involved

### **Semester II:**

LO1: learns fundamentals of vibrations

LO2: knows about different oscillating bodies, vibrating strings and vibration of bars

LO3: understands principles of vibrating strings

LO4: compare between different types of oscillators and vibrations

LO5: applies the knowledge of these topics in real life situations

### **Semester III:**

LO1: know the postulates of kinetic theory, concept of heat and work and concept of ensemble

LO2: acquire the knowledge of the development of kinetic theory of gases, concept of temperature and entropy

LO3: understands the kinetic theory of gases, heat, temperature, reversible and irreversible processes, principles of refrigeration

LO4: analyze thermal conductivity, equation of state, internal energy, entropy of universe

LO5: comprehend the laws of thermodynamics and black body radiation

### **Semester IV:**

LO1: acquire the knowledge of properties of light, types of aberrations, theory of interference fringe, dispersion, polarization and laser light

LO2: knows about dispersion, interference, Newton's rings and polarization

LO3: understands properties of light and laser

LO4: compare interference and diffraction, polarized and un polarized light

LO5: applies the knowledge in understanding different phenomenon of light in daily life

### **III Year:**

#### **III PAPER: LIGHT**

LO1: acquires the knowledge of static electricity, capacitors, generator and semi-conductor

LO2: knows about capacitors, electromagnetic induction, and semiconductor devices etc.

LO3: understands working of capacitors, electric motor etc.

LO4: compare and analyze AC and DC currents

LO5: applies the knowledge in day to day life

#### **IV PAPER: MODERN PHYSICS (SOLID STATE)**

LO1: Learn about the Nature, Physical Properties of matter/material

LO2: Know the basis for formation of materials into forms

LO3: Understand the arrangement of atoms in basis of lattices of matter

LO4: Compare the structure arrangements to different materials and its behavior in nature

LO5: Apply the knowledge to understand the existence of different materials in Nature

### **CHEMISTRY**

#### **Semester-I**

LO1: Learn about P-Block elements, Structure of atom, Chemical bonds & Gaseous and liquid states

LO2: Know the characteristics of group elements, different type of chemical bonds,

LO3: understand about the inductive effect, acyclic and salicylic Hydrocarbons

LO4: analyze the difference between gaseous and liquid state

LO5: apply use of the scientific method of solving problems

LO6: respond can tell shapes of atomic orbital

#### **Semester-II**

LO1: Learn P-Block elements, Halogen Compounds, Solutions, Material Science

LO2: Know Transition elements, concept of aromaticity

LO3: Understand Theories of bonding in metals, Laws of Crystallography

LO4: Analyze and classify the materials types of Titrations

LO5: Respond explanation of conductors, semiconductors, strong weak acids and bases

### **III Semester**

LO1: acquire the knowledge of chemistry of f-block elements, symmetry of molecules and non-aqueous solvents

LO2: understand the preparation of alcohols, phenols, ethers and epoxides and carbonyl compounds

LO3: analyze the Phase Rule, Colloids and surface chemistry

LO4: learn the applications of nanomaterials

LO5: know the stereochemistry of carbon compounds and conformational analysis

### **IV Semester**

LO1: acquire the knowledge of Coordination Compounds-I, organometallic chemistry and metal carbonyls and related compounds

LO2: understand the carboxylic acids and derivatives, synthesis based on carbanions, Nitro hydrocarbons

LO3: analyze the elements of electrochemistry and EMF

LO4: learn the pericyclic reactions and synthetic strategies

LO5: get the overall understanding of asymmetric synthesis

### **III YEAR**

#### **PAPER III INORGANIC, ORGANIC & PHYSICAL CHEMISTRY**

LO1: Learn Werner theory, Magnetic Properties

LO2: Know Hard and Soft bases

LO3: Understand Bio inorganic chemistry, essential and trace elements, biological significance of NA, K, MG, CU, ZN, CR & Toxicity of AS, HG&PB

LO4: Analyze first order, second order of reaction, pseudo first order, half life determination of order of reaction

LO5: know NMR Spectroscopy, Number of signals, splitting of signals & applications

LO6: Apply state & path functions, concept of heat & work first law of thermodynamics & second law of thermodynamics

#### **PAPER IV CHEMISTRY & INDUSTRY**

LO1: Learn paper chromatography TLC column Chromatography

LO2: Know Lambert Law, Beer-Lambert Law & its applications

LO3: Understand drug chemistry – drug, disease Historical evolution, Terminology, Nomenclature

LO4: Analyze needs of green chemistry green synthesis, green catalysis

LO5: Respond classifications of polymers & chemistry of polymerization, PVC, Teflon, Biodegradability

LO6: Apply need of conversion of drugs into medicine, different type of formulations

#### **MATHEMATICS**

##### **Semester-I: Differential Calculus**

LO1: Know the definitions and importance of differential calculus

LO2: Learn successive differentiation and mean value theorems

LO3: Apply the theorems in solving the problems

LO4: Compare successive differentiation and partial differentiation

LO5: Understand maxima and minima of functions of two variables

LO6: Analyze Lagrange's method of multipliers

##### **Semester-II Differential Equations**

LO1: Know about differential equations of first order and first degree

LO2: Learn differential equations, integrating factors, change in variables

LO3: Understand higher order linear differential equations

LO4: Compare differential equations of first order and first degree & Differential equations first order but not of first degree

LO5: Analyze the method of underterminel Co- Efficient and method of variation of parameters

LO6: Apply the methods for solving problems

### **Semester-II Real Analysis**

LO1: Know the Definitions of sequences, Subsequences, Riemann Integration

LO2: Learn limit theorems for Sequences – Monotone Sequences and Cauchy Sequences

LO3: Comparison of power series with differentiation and integration of power series

LO4: Understand Alternating Series and Integrals Tests

LO5: Apply fundamental theorem of calculus for solving problems

### **Semester-IV Algebra**

LO1: Know about groups, subgroups, isomorphism's, introduction to rings

LO2: Learn some basic algebraic structures like groups rings etc...

LO3: Understand normal subgroups factor groups properties of rings subrings integral domains

LO4: Apply legranges theorem for solving problems

LO5: Analyze characteristics of a ring, Ideals and factor rings

LO6: To compare prime Ideals and maximal ideals

## **III YEAR**

### **PAPER-III: Linear Algebra, Multiple Integrals and Vector Calculus**

LO1: Know that Algebra, Liner Integral, Double Integral, Gradient Curl, Solenoidal Vector, Irrotational Vector

LO2: Understand evaluating line integrals, Calculation of Double Integrals

LO3: Learn Linear combination of vectors, Linear Span, Orthogonality

LO4: Compare Linear dependence and Linear Independence of vectors

LO5: Analyze Eigen values and Eigen vectors

LO6: Apply Gauss Divergence, Green theorem, Stokes theorem for solving problems



## **PAPER-IV: Numerical Analysis**

LO1: Know about Interpolation, Curve fitting, Numerical differentiation

Numerical Integration

LO2: Learn methods like least squares method (Straight line, Exponential Curves, Second degree Parabola)

LO3: Understand the process of methods- Bisection method, Regula Falsi Method etc...

LO4: Analyze maximum and minimum value of a function

LO5: Apply methods like Gauss Elimination, Gauss-Jordan, Triangular decomposition method for solving problems

## **B.Sc. (MPCS)**

### **Object Oriented Programming with C++**

#### **Semester I**

LO1: Know concepts of object Oriented Programming

LO2: Understand the concepts writing C++ Program

LO3: Able to write C++ Program in platform

LO4: Able to apply with the help of mathematical operations and software games

#### **Semester II Data Structure using C++**

LO1: Know the concepts of object Oriented programming Language

LO2: Understand the concepts of writing C++ program

LO3: Able to write C++ program in platform like turbo C++

LO4: Able to apply mathematical operations and games software's

## **B.Sc. (MPCS) III YEAR**

### **GUI PROGRAMMING (VB)**

LO1: know the concepts of VB, VB operations, functions, procedures, controls, Active X Control, Graphic Controls, Intrinsic Controls

LO2: understand the concepts of VB operations, functions etc.

LO3: learn to create or design graphical User Interface using controls

LO4: execute all the programs related to VB

## **B.Sc. (MPCS) III YEAR**

## **DATABASE MANAGEMENT SYSTEMS**

LO1: know the concepts of Database, SQL, PL/SQL, E-R Models

LO2: understand and create database and various models of database

LO3: learn to create the database, modify database and drop the database

LO4: apply the concepts in daily life and create databases on general entities like college, hospital and company etc.

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