

## **PROGRAMME:- BACHELOR OF ARTS (B.A.)**

### **PROGRAMME OUTCOME**

<b>Sr.No</b>	<b>Programme Outcome</b>
<b>PO1</b>	To understand and learn humanities at its core for the knowledge surrounds us.
<b>PO2</b>	To equip students with social science knowledge as to seek jobs in public service.
<b>PO3</b>	To make students aware about social, moral and ethical values through learning humanities.
<b>PO4</b>	To inculcate and propagate culture and world social heritage amongst the students
<b>PO5</b>	To enhance and develop student's ability to grasp, understand and utilise the knowledge of arts, and humanity into research.
<b>PO6</b>	To equip students of humanities for the opportunities in higher education.

### **PROGRAMME SPECIFIC OUTCOME:**

#### **DEPARTMENT OF ECONOMICS**

<b>SR.NO</b>	<b>PROGRAMME OUTCOME</b>
01	Economic graduates understand the knowledge and application of Micro economics and Macroeconomics concepts for the formulation of policies and planning, they are also made aware about basic economic tools used by the academicians, governments and policy makers.
02	Economics students in general will be able to understand and analyse the past present economic conditions of the country which enable them to forecast the future course of changes and development through the knowledge of policies and programmes of the government and other economic agents.
03	The department teach the various aspects of International Trade theories and practices and the issues of the real world.
04	Graduates are made aware about the system, functioning and reforms of Indian Financial System.
05	The department teach the Classical, Neo-classical and Modern Growth and Development theories to the students to make them aware about the real world situation of development.
06	Economics students in general will be able to understand the concepts, causes, challenges of the current economic scenario and are equipped with the techniques to find the solution with the available resources.

## COURSE OUTCOMES:

### B.A. ECONOMICS

SEM: I

MICRO ECONOMICS-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the concepts, scope, nature and limitations of Micro Economics and basic economic problems.	Students understand the concepts, tools of Micro Economics and also the role of price mechanism in the market economy.
02	To teach them Ten Principles of Economics.	Students understand the significance of opportunity in decision making, role of government in improving market.
03	To teach students the concept of market, demand, supply.	Students understand different types of market based on competition, market demand and market supply and the determination of equilibrium and elasticity of demand.
04	To introduce the cardinal and ordinal approach for understanding the consumer's behavior.	Students understand the consumer's equilibrium and consumer's surplus with the help of Indifference Curve and price line.

SEM: II

MICRO ECONOMICS

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the concepts of production functions, total average and marginal product, isoquants and producers equilibrium.	Students understand the concepts and determination of producers equilibrium and various factors determining production function.
02	To introduce the concepts of costs and revenue. To teach them the derivation and calculation of costs and cost curve.	Students understand the concept and calculation of cost and revenue in different markets.
03	To teach students the concept of factor pricing theories, Ricardian theory, Loanable fund theory and Innovation theory.	Students get the background of various classical theories of factor pricing.
04	To introduce the concept of equilibrium and features of different markets and their equilibrium in the short-run and long-run period.	Students understand the different types of markets based on competition and their equilibrium in short-run and long-run period.

## SEM: III

## MICRO ECONOMICS

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the concept of preferences, utility, indifference curve and consumer equilibrium.	Students understand the concept of utility analysis and consumer's equilibrium with the help in indifference curve and price line.
02	To teach the concept and theory of production analysis and producer's equilibrium.	Students learn the various concept and types of production function and producer's equilibrium.
03	To teach students the concept of cost and revenue and derivation of cost curve in the short-run and long-run period.	Students learn the concepts, calculation and derivation of cost, indifferent markets.
04	To understand the competitive markets, their equilibrium and concept of consumer and producer surplus and economic efficiency.	Students understand the features and short-run and long-run equilibrium under perfect competition and also learn about how an economy attains economic efficiency.

## SEM: III

## INDIAN ECONOMY: CONTEMPORARY CONCERNS

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach the students the concepts, objectives and analysis of demonetization in India.	Students understand the objectives of economic history, short-term cost and long term benefits and the future policy measures to maximizing benefits and minimizing the cost of demonetization.
02	To study the need for cyclical fiscal policy in India and the fiscal rules with the help of debt dynamics and budget process.	Students learn the FRBM Act and also understand the need for counter cyclical fiscal policy in India.
03	To teach students the concept of universal basic income and the arguments for and against UBI and issues and challenges in achieving UBI.	Students learn the concepts, issues and the measures for universal basic income.
04	To understand the income, health and fertility convergence within India.	Students understand and able to compare income, health and fertility convergence in Indian states.

## SEM: IV

## MACRO ECONOMICS-II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the concept of money supply and quantity theory of money.	Students understand the concept of money supply, determinants and constituents of money supply.
02	To teach students the motives for holding money and money market equilibrium.	Students learn the various motives for holding money and how money market attains equilibrium.
03	To teach students the concept of saving functions and investment demand, goods market equilibrium.	Students learn the concepts of MEC and investment function and the determination of goods market equilibrium.
04	To teach students the simultaneous equilibrium in the goods and money market and the effect of monetary policy and fiscal policy on equilibrium.	Students understand the significance and effectiveness of monetary and fiscal policy on simultaneous equilibrium in the goods and money markets.

## SEM: IV

## INDIAN ECONOMY

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the Maharashtra's economy with special reference to Demography, key indicators of Development and development of the region and paradigm shift.	Students understand the economy of Maharashtra, factors determining development and the macroeconomics development of the region.
02	To teach the importance of tribal areas, present status, comparison with other states, causes of deprivation and reforms undertaken.	Students learn the present status of the tribal areas with reference to PCI, poverty, nutrition, health and education and the causes deprivation and reforms undertaken for the tribal in the Maharashtra.
03	To teach them about water resources with reference to availability, overview of irrigation development, rural-urban water supply and recommendation for balanced development.	Students learn the issues, availability, government policy and recommendation for water distribution in the state of Maharashtra.
04	To teach students the health and connectivity, issues and government measures.	Students understand the health care system, regional disparities, general overview of connectivity required for development.

SEM: V

## MICRO ECONOMICS-III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach students sources, price discrimination, price and output determination under monopoly.	Students understand how a firm acquires monopoly status and the equilibrium of the monopoly with maximum profits.
02	To introduce the basic game theory to the students.	Students learn basic game theory which are applied in the practical decision making process.
03	To teach students about oligopoly market, models, collusion and cartels and the concept of price leadership.	Students learn various oligopoly model and the concept of collusion, cartel and price leadership.
04	To introduce the general equilibrium and welfare economics to the students.	Students understand the concept of general equilibrium and the Pareto-optimality condition of social welfare.

SEM: V

## ECONOMICS OF DEVELOPMENT

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach students concept of economic growth and development.	Students learn the concept of HDI, GDI, green GDP and sustainable development.
02	To teach students the structural issues in development process with development theories and growth model	Students learn various classical and neo-classical development theories and the role of education, health and nutrition in economic development.
03	To teach students the concept and theories of inequality, poverty and development.	Students learn concepts and the theories of inequality, poverty and inclusive growth and the importance of SHGs, microfinance.
04	To teach the role of technology and infrastructure in economic development and the type of technical progress.	Students understand the importance, types, issues of technology and infrastructure in economic development.

## SEM: V

## FINANCIAL ECONOMICS

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach students the basic theory of interest, discounting and present value for investment and portfolio analysis.	Students learn investment and portfolio analysis with the help of various theories of interest.
02	To teach students the concept of capital asset, pricing model in investment and pricing formula.	Students learn about capital asset pricing model, asset portfolio, security market line.
03	To teach students the concept, functions and types of derivative, forward and futures and options.	Students understand the concept and types of derivatives, options and futures.
04	To teach students the component structure and the types of corporate finance.	Students understand the functioning, financing components of corporate finance.

## SEM: VI

## MACRO ECONOMICS

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach students the goods market in an open economy, GDP and trade balance.	Students understand the concept of trade balance, real exchange rate and the exchange rate policy in an open economy.
02	To teach students the LM equation for open economy and MundellFlemming model.	Students learn LM equation in an open economy and the uncovered interest parity and its implications for exchange rate determination.
03	To teach students the concept of exchange rate regimes and exchange rate crises.	Students learn about the choice of exchange rate regime and the exchange rate crisis in an open economy.
04	To teach students the history of international monetary system since 19 <sup>th</sup> century.	Students learn about the monetary system since 19 <sup>th</sup> century and different international monetary institutions.

## SEM: VI

## INTERNATIONAL ECONOMICS

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce students international economics, overview of world trade and the trade theories.	Students learn about the component, issues of international economics.
02	To teach students the classical, neo-classical and modern theories of international trade.	Students get background knowledge of international trade theory and the recent trade issues and policies.
03	To teach students the importance of trade and recent trends.	Students learn the importance, types, supply chain, FDI and BPO.
04	To teach students the trade policies and regionalism.	Students learn about the instrument of trade policy , regional trade and agreements, controversies in trade policies and protectionism.

## SEM: VI

## INDIAN FINANCIAL SYSTEM

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach students the structure, trends, issues of Indian financial system.	Students learn the structure, components, indicators of financial development, reforms of Indian financial system since 1990.
02	To teach students the performance and development in commercial banking sector since 1990.	Students learn the development and reform in commercial banking and the changes in RBI monetary policy since 1990s.
03	To teach students the structure, features and reforms in money and capital market in India.	Students understand the structure, issues, reform of money and capital market in India.
04	To teach students the development and progress of NBFCs and credit rating agencies in India.	Students learn about the importance, progress , reforms in NBFCs.

## PROGRAMME SPECIFIC OUTCOME

### DEPARTMENT OF ENGLISH

Sr.No	Programme Specific Outcome
PS0 1	To understand the local, state, national and international literary contributions with its relevance in the studies of humanities.
PSO2	To develop an overall literary competencies of students through the genres of literary arts and interdisciplinary studies.
PSO3	To bring out the social, cultural and geographical elements through literary works and make students aware for its relevance in their lives.
PSO4-	To establish the balance of lives drawn from varied literary arts studied by the students.
PSO5-	To study literature for morals, teachings and pleasure.

## COURSE OUTCOMES

### B.A. ENGLISH

SEM: I & II

INTRODUCTION TO LITERATURE-I/II

Syllabus (Unit Wise)	Objectives	Outcome
<b>Module I Literary terms/ critical terms</b>	To familiarize learners with terms and concepts as measures or yardsticks to interpret, evaluate and analyse literature. Further to acquaint students with the characteristics of various literary genres.	The student start understanding the genres of literature by interpreting prescribed texts.
<b>Module II Novels/ Drama</b>	To understand various literary discourses and registers through novels and dramas. The close reading of the texts develops their critical thinking and analytical skill.	The students are able to make distinction between the said registers and understand various novelistic discourses as well as dramatic actions for the culture and context of the said literary work..
<b>Module III Short Stories/ poems</b>	To extract moral teachings and values from short stories/poems. This does enable students student's to understand that literature is an expression of human values within historical and social context.	The learners deploy learnt lessons into their practical lives drawn from stories and poems which sensitize then towards humans, animals and nature.

SEM: I &amp; II

## COMMUNICATION SKILLS IN ENGLISH PAPER I/II

<b>Syllabus (Unit Wise)</b>	<b>Objectives</b>	<b>Outcome</b>
<b>Module I Grammar/ tenses/ skills of language.</b>	To enhance the learner's communication skill by giving adequate exposure in reading, writing, listening and speaking skills and the related sub skills.	The students are able to categorize communication and use it practically in daily life.
<b>Module II Writing skills/ business correspondences</b>	To help the learner's to recognize and operate in various styles and registers in English.	The learner's will purposefully select appropriate channel to communicate. The students exhibit good behaviour and refined manners in writing activities like letters and reports.
<b>Module III Essay writing/ email writings</b>	To built up the learner's confidence in written/ oral and interpersonal communication by reinforcing writing activities and oral tasks.	The learners are able to aptly use different forms of written communication.

SEM: III &amp; IV

## AMERICAN LITERATURE

<b>Syllabus (Unit Wise)</b>	<b>Objectives</b>	<b>Outcome</b>
<b>Module I Literary terms/ critical terms</b>	To familiarize learners with terms and concepts as measures or yardsticks to interpret, evaluate and analyse literature	The student start understanding the genres of literature by interpreting prescribed texts.
<b>Module II Novels/ Drama</b>	To understand various literary discourses and registers through novels and dramas.	The students are able to make distinction between the said registers and understand various novelist discourses as well as dramatic actions.
<b>Module III Short Stories/ poems</b>	To extract moral teachings and values from short stories/poems.	The learners deploy learnt lessons into their practical lives drawn from stories and poems.

SEM: III & IV

INDIAN LITERATURE

<b>Syllabus (Unit Wise)</b>	<b>Objectives</b>	<b>Outcome</b>
<b>Module I Literary/ Critical Essays</b>	To familiarize learners to the uniqueness and indianness of Indian literature.	The learners understand and appreciate the history and development of Indian literature through the essays.
<b>Module II Novel/ Drama</b>	To develop a novelistic approach amongst students through given novelistic discourses.	The learner's are able analyse the prescribed novels.
<b>Module III Short Stories/ poems</b>	To extract morals and values based teachings from the short stories	The learners deploy lessons with purpose into their practical lives.

## PROGRAMME SPECIFIC OUTCOME

### DEPARTMENT OF HISTORY

SR.NO	PROGRAMME SPECIFIC OUTCOME
	On completion of the course B.A. in History students will be able to :-
01.	Understand the phases in Regional, National and International history.
02.	Understand the importance of Indian culture and heritage.
03.	Learn values and ethics like liberty, equality, fraternity, freedom etc.
04.	Take interest in archaeological and museology branches.
05.	Pursue post-graduation, then NET/SET for Teaching.
06.	Prepare for the competitive examinations like UPSC and State civil services.

## COURSE OUTCOMES:

### B A HISTORY

SEM-I

HISTORY OF MODERN INDIA (1857 – 1947)

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To make the student aware of the events between revolt of 1857 and the foundation of Indian National Congress	After the completion of this unit, the student must be able to know what were the causes and consequences of the revolt of 1857 Student must be able to understand the founding and working of various Provincial Associations Student must be able to understand the founding and working of the Indian National Congress in its initial stages
UNIT-2	To make student aware regarding moderates and extremist politics and the growth of revolutionary nationalism	After the completion of this unit, the student must be able to know the leaders of the moderate politics , its role , objectives and work in the growth of Indian National Movement Student must be able to know the leaders of the Extremist politics , its role, objectives and work in the growth of Indian National Movement Student must be able to understand revolutionary movements in different parts of India and their significance

UNIT- 3	To make student aware about the Gandhian movements	After the completion of this unit, the student must be able to know the Non co operation movement and it's significance. Students must be able to know the role of different sections of the society in civil disobedience movements Students must be able to know the causes, role and significance of the quit India movement
UNIT -4	To make students aware about the events that led to partition	After the completion of this unit, the student must be able to understand act of 1935, Cripps mission , cabinet mission and Mounbatten plan Student must able to understand independence and partition of india

SEM-II

HISTORY OF MODERN INDIA : SOCIETY & ECONOMY

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT - 1	To make students aware of socio religious reform movements:- Reforms and Revival	After the completion of this unit, the student must be able to understand various reforms movements of the Indian society and also it's impact
UNIT - 2	To make students aware of the Education, press and Transport in British period	After the completion of this unit, the student must be able to understand the education system and it's importance To understand development of Press , Means of Transport and Communication
UNIT- 3	To make students aware of the impact of the British on Indian economy	After the completion of this unit, the student must be able to understand Revenue settlements commercialization of Agriculture Students must be able to understand Drain theory, deindustrialization and growth of large scale industry
UNIT- 4	To make students aware of Nationalism and social Groups	After the completion of this unit, student must be able to understand the role of women , Dalits , Peasants and Tribals during National movement

## SEM-III

## LANDMARKS IN WORLD HISTORY/ II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT -1	To make students aware of Renaissance, Geographical Discoveries and reformation	After the completion of this unit, student must be able to understand the contribution and spread of renaissance movement to different parts of Europe Students must be able to understand geographical discoveries by eminent voyagers Students must be able to understand the reformation process, role of Martin Luther and protestants vs catholicism
UNIT - 2	To make students aware of different revolutions	After the completion of this unit, student must be able to understand the causes, course and consequences of American revolution, French revolution and Industrial revolution in Europe
UNIT - 3	To make students aware of nationalism and imperialism in Europe	After the completion of this unit, student must be able to understand the formation of nation - states in Europe Students must be able to understand nationalist movements in Italy and role played by Mazzini, Count Cavour and Garibaldi Students must be able to understand nationalist movement in Germany and Bismarck role in final unification of Germany Students must be able to understand the imperial expansion by various European powers in Asia
UNIT - 4	To make students aware of the transition phase in Europe (1914-1918)	After the completion of this unit, student must be able to understand the causes, course and consequences of world war I Students must be able to understand the Russian revolution and the role of Lenin Students must be able to understand the formation, organisation and works done by League of Nations

## SEM-III

## ANCIENT INDIA /III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To acquaint the students with different sources of ancient Indian History	After the completion of this unit, student must be able to understand Archaeological, literary and Foreign Travellers sources

UNIT-2	To enable the students to understand Indus valley civilization and it's evidences	After the completion of this unit, student must be able to understand socio - eco - religious life Students must be able to understand town planning and decline of the civilization
UNIT-3	To enable the students to understand the Vedic Age	After the completion of this unit, student must be able to understand the concept of janapada, social economic and religious life of the Vedic age
UNIT-4	To make students aware of the developments in india after 6th Century B.C.	After the completion of this unit, student must be able to understand the administrative structure of Mahajanapadas Students must be able to understand Rise and decline of Jainism and Buddhism Students must be able to understand foreign invasions

SEM-IV

LANDMARKS IN WORLD HISTORY/ II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT_1	To make students aware of events that took place in inte war period	After the completion of this unit, student must be able to understand the Modernization of Turkey through Kemal pasha Students must be able to understand reforms in Iran under Reza shah and formation of Israel as a nation
UNIT_2	To make students aware of the powerful personalities who ruled a s a dictator	After the completion of this unit, student must be able to understand the role of Mussolini in creating a fascist state in Italy Students must be able to understand the rise of Nazism in Germany under the dictatorship of Hitler Students must be able to understand the Militarism in Japan
UNIT_3	To make students aware of the development that led to disastrous consequences for Europe in particular	After the completion of this unit, student must be able to understand the causes, spread and the consequences of the World War II Student must be able to understand the Atlantic charter and formation of U.N.O.for world peace
UNIT_4	To make students aware of the circumstances that led to the rise of antionalist movements in Asia	After the completion of this unit, student must be able to understand the nationalist movements in China, India and Indonesia.

## SEM-IV

## ANCIENT INDIA /III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To make students aware of the Significance of Mauryan and post Mauryan dynasties	After the completion of this unit, student must be able to understand the expansion and policies under the Mauryan kings. Student must be able to understand the administration under the Mauryas. Student must be able to understand the role of post Mauryan dynasties.
UNIT-2	To make students aware about the contributions in the Gupta age	After the completion of this unit, student must be able to understand the expansion under the Gupta kings, administrative structure of gupta period. Student must be able to understand the concept of classical age under the Guptas.
UNIT-3	To make students aware of the Post-Gupta events in North India	After the completion of this unit, student must be able to understand the campaigns of Harsha and it's administration. Student must be able to understand the Rise of Rajput powers. Students must be able to understand the factors and consequences of Arab invasion of Sind.
UNIT-4	To make student aware of the various dynasties and culture of Deccan and South india	After the completion of this unit, student must be able to understand the powers of chalukyas , Rashtrakutas, Pallavas, Cholas Student must be able to understand the culture spread in South East asia

## SEM-V

HISTORY OF MEDIEVAL INDIA (1000 CE- 1526 CE) / IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To make students aware of the foundation, Expansion and decline of Delhi Sultanate	After the completion of this unit, student must be able to understand the socio- eco and political conditions before Turkish invasion Student must be able to understand the rise and fall of various dynasties in Delhi Sultanate
UNIT-2	To make students aware of the Administration during Delhi Sultanate	After the completion of this unit, student must be able to understand the administration, iqta system and reforms led by rulers of the Delhi Sultanate
UNIT-3	To make students aware of the Deccan powers like Vijaynagarkingdom and Bahamani Sultanate	After the completion of this unit, student must be able to understand the rise, growth and decline of Vijayanagarkingdom and Bahamani Sultanate Student must be able to understand the administration, socio-eco and cultural conditions in

		the Deccan states
UNIT-4	To make students aware of the progress and growth in various spheres of life during study period	After the completion of this unit, student must be able to understand the Society and Economy during the study period Student must be able to understand the religion and culture during the study period

SEM-V HISTORY OF MODERN MAHARASHTRA (1818 – 1960 A.D) / V

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To acquaint students with regional history under British rule	After the completion of this unit, student must be able to understand the socio-eco conditions, administration , judiciary, tribal and peasant uprising
UNIT-2	To make students understand the socio-economic awakening during 19 <sup>th</sup> and 20 <sup>th</sup> centuries	After the completion of this unit, student must be able to understand social and economic reformers
UNIT-3	To make students understand the political development during 19 <sup>th</sup> and 20 <sup>th</sup> centuries	After the completion of this unit, student must be able to understand moderates, extremists revolutionaries, Gandhian movements and Samyukta Maharashtra Movement
UNIT-4	To make students aware of reforms by enlightened leaders in various spheres	After the completion of this unit, student must be able to understand contribution of reformers in education, emancipation of women and upliftment of depressed classes

SEM-V INTRODUCTION TO ARCHAEOLOGY / VI

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To make students aware about aims and methods of Archaeology	After the completion of this unit, student must be able to understand the basic facets of Archaeology
UNIT-2	To make students aware about Pre, Proto and Early Historical periods	After the completion of this unit, student must be able to understand Palaeolithic, Mesolithic, Neolithic, Chalcolithic, Megalithic and early historical periods

UNIT-3	To make students aware of study of inscriptions during the study period	After the completion of this unit, student must be able to understand history, types ,evolution and importance of epigraphy
UNIT-4	To make students aware of study of coins during the study period	After the completion of this unit, student must be able to understand history, types ,evolution and importance of Numismatics

SEM-VI

HISTORY OF MEDIEVAL INDIA (1526 – 1707 A.D) / IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To make students aware of the political events during the Mughal period	After the completion of this unit, student must be able to understand beginning , expansion and decline of the Mughal rule
UNIT-2	To make students aware of the Administration of the Mughals	After the completion of this unit, student must be able to understand central and provincial Government Students must be able to understand the Mansabdari system and Revenue system during mughal
UNIT-3	To acquaint students to study the rise of the Maratha Power	After the completion of this unit, student must be able to understand role of shivaji in foundation of Swaraj Students must be able to understand role of Sambhaji, Rajaram and Tarabai
UNIT-4	To make students aware of the progress and growth in various spheres of life during study period	After the completion of this unit, student must be able to understand socio- economic , Cultural ,religious and Educational life during the Mughal period

SEM-VI

HISTORY OF CONTEMPORARY INDIA (1947 – 2000 A.D.) / V

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To acquaint students with the developments during Nehru era (1947 – 1964 CE)	After the completion of this unit, student must be able to understand the process of making the constitution and the integration of states

UNIT-2	To make students understand political, social and economic developments (1964-1984 CE)	After the completion of this unit, student must be able to understand developments under congress and janta party regime
UNIT-3	To make students understand political, social and economic developments (1984 -2000 CE)	After the completion of this unit, student must be able to understand political developments, LPG and India's relation with neighbouring countries
UNIT-4	To make students understand the emerging trends in contemporary India	After the completion of this unit, student must be able to understand communalism, separatist movements, reservation, women empowerment and development in science and technology

SEM-VI INTRODUCTION TO MUSEOLOGY AND ARCHIVAL SCIENCE / VI

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT-1	To inform the students about the role of Museology	After the completion of this unit, student must be able to understand museology, role of curator and types of museums
UNIT-2	To inform the students about the different methods used in the museums	After the completion of this unit, student must be able to understand methods of collection, conservation and preservation
UNIT-3	To make students understand the importance of Archival science in the study of history	After the completion of this unit, student must be able to understand archival science , its classification and also a value of records
UNIT-4	To make students aware of the management of Archives	After the completion of this unit, student must be able to understand appraisal, retention, conservation, preservation of records and digital archives

# PROGRAMME SPECIFIC OUTCOME

## DEPARTMENT OF POLITICAL SCIENCE

SR.NO	PROGRAMME SPECIFIC OUTCOME
PS0 1	Understanding the nature and developments instate, national and international politics.
PSO2	Analysing the Indian constitutional provisions, major legislations and reforms.
PSO3	Critical evaluation of social, economic and political variables for a proper understanding of the plurality of Indian society.
PSO4-	Building overall consciousness regarding national political history, international relations and present Indian and Western political thinkers.
PSO4-	Encouraging a comprehensive, comparative understanding of political structures and constitutions of developed and developing countries.
PSO5 -	Developing knowledge of administrative studies with special reference to Indian administrative structures and practices.
PSO6-	Examining India's foreign relations with her neighbours and great powers.

## COURSE OUTCOMES:

### B. A. POLITICAL SCIENCE

#### SEM-I & II

#### Paper I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Module I	To explain the brief history of the making of Constitution To explain the Preamble and its basic features	Learners get an idea about the making of Constitution and develop a knowledge about its silent features Learners understand the importance of preamble and features of Constitution.
Module II	To make Learners aware about their Fundamental Rights To explain the Directive Principles of state policy	Learners develop an understanding about citizens Fundamental rights Pupils understand the directive principles of state policy

Module III	To teach Learners about the legislature To make Learners aware about the Judicial system and Judicial Activism in India	Learners get to know about the legislature structure and process. They understand the working of single integrated judicial system of India
Module IV	To explain the role and functions of union executive To provide explanation about the local self government	Learners gain a knowledge about the role and functions of union executive They come to know about the importance of local self government and 73 <sup>rd</sup> and 74 <sup>th</sup> amendments
Module V	To teach Indian Federal System. To acquaint with Centre State Relations To discuss the Changing Dynamics of Centre-state Relations.	The learner relates the federal aspects with working of Centre State Relations Discuss and debate the Changing Dynamics of Centre-state Relations.
Module VI	To discuss the role and Importance of Pol. Parties. To examine the Electoral Performance and Party ideologies	Understands the Manifesto and Agenda of Regional Parties in Maharashtra.
Module VII	To examine the Social Dynamics of Caste, Religion and Gender politics	Realize the need to solve the social dynamics
Module VIII	To understand the Challenges to National Security like Terrorism and Insurgency	To relate the Challenges to National Security like Terrorism and Insurgency with current situation in nation.

### SEM-III & IV

### Paper II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Module I	To introduce the concept and meaning of political theory To explain the significance, nature and approaches related to political theory	Learners came to know about the meaning and concept of political theory Learners understand the importance of studying political theory
Module II	To teach the concept of state To explain the concept of Nation State and Civil Society	Learners gets aware about the concept of state Pupils developed an understanding about the Nation state and civil society
Module III	To introduce the concept of power and authority To examine the concept of legitimacy	Learners come across the meaning concept and importance of power and authority They Learn about the significance of legitimacy

Module Lv	To explain the concept of law To examine the meaning nature of political obligation and highlight the Right t to Resist	Learners gets familiar with the concept of Law They understand the political obligation and importance of resistance
Module V	To study Nature and Theories of Rights To examine the Three Generations Of Rights	The Learner gets information about nature and theories of Rights They understand the Three Generations Of Rights.
Module VI	To discuss the Basic Political Value To describe the concepts of Liberty, Equality and Justice	Learner relates the Basic Political Values in Day to Day life
Module VII	To explain the concept of Democracy To review the challenges to Democracy	Learner is acquainted with the concept of Democracy The challenges to Democracy are discussed and debated.
Module VIII	To understand the political Ideologies like Marxism, Fascism, Feminism	They relate the Political Ideologies and Political System

### SEM-III & IV

### Paper III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Module I	To introduce the meaning, scope and significance of Public Administration To explain the evolution of Public Administration as a discipline	Learners understand the meaning, scope and importance of Public Administration Learner developed an understanding about the various evolutionary paradigms of Administration
Module II	To make Learners aware about the various theories of Administration like: <ul style="list-style-type: none"> <li>○ Scientific Management theory of F. W. Taylor</li> <li>○ Bureaucratic Theory of Max weber</li> <li>○ Human Relation theory of Elton Mayo</li> </ul>	Learners came across the various theories of Administration Pupils gets to know the contribution of various thinkers in the theories of Administration
Module III	To explain the various theories of organisation To explain the Motivational and Leadership theories	Learners understand the theories of organisation They came to know the Motivational and leadership theories

Module IV	To teach about the contemporary Techniques of Administration like: <ul style="list-style-type: none"> <li>○ Good Governance</li> <li>○ E-Governance</li> <li>○ Public Private Partnership</li> </ul>	Learners gets aware about the contemporary Techniques used in Administration They came across the growing importance of Good – Governance , E-Governance and Public Private Partnership in the administrative practices
Module V	To study Salient Features of Indian Administration To examine role of District Administration	Understands Salient Features of Indian Administration and the role of District Administration
Module VI	To describe the recruitment and training process of All India Services.	The learner relates the theoretical and Practical process of recruitment and training of All India Services.
Module VII	To discuss the Budget making and Enactment process To review the working of Parliamentary Committees	Understands the Budget making and Enactment process The working of Parliamentary Committees is analysed
Module VIII	To teach about the concepts <ul style="list-style-type: none"> <li>○ Integrity oin Administration</li> <li>○ LokPal and Lokayukta</li> <li>○ Citizens Charter</li> </ul>	The Learner understands the concepts of <ul style="list-style-type: none"> <li>○ Integrity oin Administration</li> <li>○ LokPal and Lokayukta</li> <li>○ Citizens Charter</li> </ul>

### SEM:V& VI

### Paper IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Module I	To teach the concept and approaches to Int. Relations To clarify the relevance of Int. Politics	The student learn about the approaches to Int. Relations and relevance of Int. Politics
Module II	To explain the concept of Cold war To examine the phases of Cold war	The learner will get an idea the concept of Cold war Understanding of the various phases of Cold war
Module III	To explain types and nature of conflict in international order To aware the Learners about various concepts of peace and importance of collective security	The pupils understand the nature and type of conflicts Learner build an understanding about importance of peace and collective security

Module IV	To make Learner familiar about different Bretton Wood's institutions To examine the role of regional organisation and Globalisation in international relations	Learner learn about the various international institutions The learn get an idea about the role of regional organisation and develop an understanding about the Globalised world order
Module V	To discuss the Foreign Policy and Diplomacy To describe the Factors determining Indian Foreign Policy	Learns about the Foreign Policy and Diplomacy Understands the Factors determining Indian Foreign Policy
Module VI	To discuss India's Relation with Major Powers like USA, Russia and China	Identify the prospects in India's Relation with Major Powers like USA, Russia and China
Module VII	To discuss India's Relation with her Neighbour like Pakistan and Bangladesh. Also study SAARC	Understands and Coorelate India's Relation with her Neighbour like Pakistan and Bangladesh. And study the role of SAARC
Module VIII	To describe India and UN peacekeeping efforts To discuss about ASEAN	The learner studies India and UN peacekeeping efforts at UN Understands the working of ASEAN

**SEM:V& VI**

**Paper V**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Module I	To make Learners understand about the Niccolo Machiavelli 's views on modern powerful state and highlight his advices to the prince To examine John Locke's social contract theory	Learners gets to know the ideas of Niccolo Machiavelli on modern state  The Learners understand the social contract theory of John Locke
Module II	To explain john Stuart Mill's views on liberty and representative government To examine John Rawls theory of Justice	Learners became aware about the Mill's contribution towards liberty and representative government Learners learnt the Rawls theory of Justice
Module III	To explain the karl Mark's observation on revolution and class conflict To examine Antonio Gramsci thoughts about hegemony and counter hegemony	Learners came to know about the Mark's views on revolution Learners understand the concept of hegemony and counter hegemony
Module IV	To show the impact of Simone De Beauviour ideas on feminism and existentialism To highlight the Will Kymlicka's ideas on Liberal Multiculturalism	Pupils learnt about the contribution of Simone De Beauviour in strengthening feminism Learners developed an understanding about the Will Kymlicka's Multiculturalism

Module V	To explain The Concept of State with reference to views of M.K Gandhi and Ranade	The Learner develops an understanding of State as viewed by M.K Gandhi and Ranade.
Module VI	To highlight the ideas on Tagore And Savarkar on Nationalism	The Learner Coorelates the Idea of Nationalism and nation
Module VII	To examine Dr Ambedkars thoughts on Social and Cultural Transformation.  To explain Agarkars views on Radical reforms.	Learners developed an understanding about the Dr Ambedkars thoughts on Social and Cultural Transformation. Learners come to know about the views of Agarkar on Radical reforms.
Module VIII	To show the impact of Nehruvian ideas on Socialism and eco.Dev. To Examine M.N. Roy's Idea about Socialism	Analysed the impact of Nehruvian ideas on Socialism and eco.Dev. Realised the importance of M.N. Roy's Idea about Socialism

### SEM:V&VI

### Paper VI

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Module I	To teach historical background of Maharashtra To examine the idea of Samyukta Maharashtra	Pupils developed an understanding about the historical background of Maharashtra Learners gets to know the struggle behind the formation if Maharashtra
Module II	To enlighten the Learners about the regional disparities in Maharashtra To highlight the various steps taken to remove the regional disparities	The Learners aware about the regional imbalances in the state Learners came to know various development taken in the direction to overcome regional disparities
Module III	To make Learners aware about the various political institutions in Maharashtra To examine the role of Governor, Council of ministers headed by Chief Minister and importance of independent Judiciary	Pupils learnt about the Legislative assembly and Legislative council Learners understand the role and functions of Governor, chief minister and Judiciary
Module IV	To explain the dominance of Caste politics in Maharashtra To highlight various Dalit movement in shaping Maharashtra's politics	Learners understand the importance of caste politics in Maharashtra Learners came to know about the various Caste movements in Maharashtra

Module V	To discuss Politics-Economy Relationship Cooperative Sector Land Issues	Understand the Nexus between Politics-Economy . Learn about Cooperative Sector and Land Issues in Maharashtra.
Module VI	To Discuss the role and Importance of Pol.Parties, Electoral Politics and Party ideologies	Understands the Manifesto and Agenda of Regional Parties
Module VII	To understand the concept of Naxalism and Farmers Movement	To relate the challenges of Naxalism and Farmers Movement with current situation in nation.
Module VIII	To make Learner familiar about Alternate Models of Development To examine the Environmental policies in Maharashtra Review the RTI Act in Maharashtra	The learner studies the alternate models of Development in Maharashtra Also is familiarised by the Environmental policies in Maharashtra Analyse the RTI Act in Maharashtra

## PROGRAMME SPECIFIC OUTCOME

### DEPARTMENT OF ISLAMIC STUDIES

SR.NO	PROGRAMME SPECIFIC OUTCOME
IS01	To give the knowledge of socio-political and religious expression of the <i>Jahiliyyah</i> days, the prophets period, and Prophet Muhammad life at Makkah Understanding the basic tenets and social principles of Islam
IS02	To give the knowledge of Prophet Muhammad's life at Madinah and his efforts to establish Islamic state at Madinah
IS03	To develop the knowledge of Quranic studies, Hadith literature, Fiqh and cultural aspect of Islam.

### Course Outcomes:

#### B A ISLAMIC STUDIES

SEM-I

HISTORY OF ARABS-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
MODULE I	To teach social, political and religious conditions of pre-Islamic Arabia To discuss the lineage, birth, childhood and youth of Prophet Muhammad (SAW)	The students will get the knowledge of social, political and religious conditions of pre-Islamic Arabia Students will get the knowledge of lineage, birth, childhood and youth of Prophet Muhammad (SAW)

MODULE-II	To discuss the life of Prophet Muhammad at Makkah, his marriage, attainment of Prophethood, message of Islam and its propagation.	The students will learn about the life of Prophet Muhammad at Makkah, his marriage, attainment of Prophethood, message of Islam and its propagation.
Module III	To study pre-Islamic fairs, Makkah as religious and commercial center, management of Kabah, conflict between BanuHashim and BanuUmayyah and invasion of Makkah by Abrah.	Understanding the pre-Islamic fairs, Makkah as religious and commercial center, management of Kabah, conflict between BanuHashim and BanuUmayyah and invasion of Makkah by Abrah.
Module-IV	To discuss persecution and social boycott of Muslims in Makkah, migration to Abyssinia and Madinah, Miraj, year of sorrow Basic Arabic grammar and Islamic terminology	Students will learn about the discuss persecution and social boycott of Muslims in Makkah, migration to Abyssinia and Madinah, Miraj, year of sorrow Students will get the knowledge of basic Arabic grammar and Islamic terminology.

SEM-II

ISLAM AND ITS BASIC TENETS-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
MODULE I	To teach meaning of Islam and essential elements of Faith	The students will get the knowledge of meaning of Islam and essential elements of Faith
MODULE-II	To discuss the significance and importance of five pillar of Islam.	The students will learn the significance and importance of five pillar of Islam
Module III	To study the importance of piety in Islam and Quran's emphasis on piety To teach the status of women and their rights, institution of marriage and divorce in Islam, laws of inheritance	The students will be enable to understand the importance of piety in Islam and Quran's emphasis on piety They will also get the knowledge of the status of women and their rights, institution of marriage and divorce in Islam, laws of inheritance
Module-IV	To discuss the rights of parents, relative, neighbors, subordinate, widow and orphans, destitute and wayfarer in Islam.	Students will learn about the rights of parents, relative, neighbors, subordinate, widow and orphans, destitute and wayfarer in Islam

SEM-III THE PROPHET MUHAMMAD'S LIFE AT MADINAH AND THE ESTABLISHMENT OF THE ISLAMIC STATE-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
MODULE I	To study the arrival of prophet Muhammad at Madinah and his efforts to make a Muslim community in Madinah	The successful completion of this module will enable the students to understand the prophet's efforts to make a Muslim community
MODULE-II	to study prophet's strive to conclude the pact with other community and his characters as a commander in chief of an army, to study the institution of azan and change of Qiblah	the successful completion of this module will enable the students to understand the prophet's efforts to make a peaceful co-existence among the various communities and the significance of azan and change of Qiblah in Muslim society
Module III	To study the role of Jews to conspire against Muslims and breach the pact	Students will get the knowledge about the Jews efforts to break their pact with Muslims
Module-IV	To study the truce of Hudaibiyah and prophets messages to the Kings and the tribal heads for inviting towards Islam. To explain the basic Arabic grammar and Glossary of Islam	This module will enable the students to understand the methods for inviting towards the Islam. Students will get the knowledge of basic Arabic grammar and Islamic terminology.

SEM-III THE SOURCES OF ISLAMIC LAW & CULTURAL ASPECT OF ISLAM-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
MODULE I	To study the meaning, revelation, collection, compilation, arrangement of Holy Quran and its contribution to provide the guidelines about the natural science	The students will get the knowledge about the Quran.
MODULE-II	To study the Quran as preserver of Arabic Language and its influence on Arabic literature. Also discuss the origin and development of Tafsir and important Arab Tafsir writers	The students will learn the about the Quran as a preserver of Arabic language and its influence on Arabic literature. They will understand the contributions of Arab scholars towards Tafsir of Quran.
Module III	To discuss the contribution of Indian Tafsir write in Quranic Literature	Understanding the contribution of Indian Scholars to Tafsir Writers
Module-IV	To discuss the importance of	The students will get an idea of

	Education in Islam and Islamic Concept of Justice. Basic Arabic grammar and Islamic terminology	educational system of Islam and Islamic concept of justice. Students will get the knowledge of basic Arabic grammar and Islamic terminology.
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**SEM-IV THE PROPHET MUHAMMAD'S LIFE AT MADINAH AND ESTABLISHMENT OF ISLAMIC STATE-II**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
MODULE I	To teach the causes and strategies of conquest of Makkah, battle of Muthah and Hunain.	The students will get the knowledge about the causes and strategies of conquest of Makkah, battle of Muthah and Hunain.
MODULE-II	To discuss about the first Islamic pilgrimage, year of deputation and Tabuk expedition	The students will learn about the first Islamic pilgrimage, year of deputation and Tabuk expedition
Module III	To study significance and importance of farewell pilgrimage of prophet Muhammad (SAW) To discuss the last days of Prophet Muhammad(SAW)	Understanding significance and importance of farewell pilgrimage of Prophet Muhammad (SAW) Learners will be aware about the last days of prophet Muhammad (SAW)
Module-IV	To discuss the personality of Prophet Muhammad (SAW) as a reformer, law giver, founder of Islamic state and his achievements. Basic Arabic grammar and Islamic terminology	The students will get an idea the personality of Prophet Muhammad (SAW) as a reformer, law giver, founder of Islamic state and his achievements. Students will get the knowledge of basic Arabic grammar and Islamic terminology.

**SEM-IV THE SOURCES OF ISLAMIC LAW & CULTURAL ASPECT OF ISLAM-II**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
MODULE I	To study the meaning, collection, compilation, Codification and classification of Hadith.	The students will get the knowledge about the Hadith, methods to check genuineness of hadith, and types of hadith.
MODULE-II	To discuss about the book al-Muwattah and six authentic books of hadith.	The students will learn the about the al-Muwattah and six authentic books of Hadith.

Module III	To teach origin and development of Islamic Law and its sources. To explain Importance and features of Four school of Islamic jurisprudence.	Understanding the origin and development of Islamic Law and its sources. Students will get knowledge of Importance and features of Four school of Islamic jurisprudence.
Module-IV	To discuss the importance of Unity, Equality and Fraternity in Islam. Cultural aspect of Islam To explain Basic Arabic grammar and Islamic terminology	The students will get an idea of Unity, Equality and Fraternity in Islam. Cultural aspect of Islam Students will get the knowledge of basic Arabic grammar and Islamic terminology.

## PROGRAMME SPECIFIC OUTCOME

### DEPARTMENT OF URDU

PROGRAM	SPECIFIC OUTCOME
UG Programme T.Y.B.A. IN URDU	<p>The B.A. graduates can pursue B.Ed. course and opt teaching career in the schools. Also they can do Post Graduate Studies in their respective subjects studied in 'Under Graduate' level. After their Post Graduation they may do M.Phil or Ph.D. and take teaching as their career in higher education institutions like Degree colleges and Universities.</p> <p>Other Career options: - Journalism, Tourism, Judiciary (Law), Linguistics, etc. They are eligible to appear for any competitive exams conducted by Union Public Service Commission (UPSC) and other States Public Service Commissions, Indian Railway Board, etc for entering into the government services. They also pursue their studies in doing MBA, Post Graduate Diploma in Computer (PGDC), Certificate Courses of any discipline. Students interested in Urdu Language subject can do the job in the following areas:</p> <ul style="list-style-type: none"> <li>• Professional Writing</li> <li>• Research</li> <li>• Editing</li> <li>• Journalism</li> <li>• Media</li> <li>• School Teachers etc.</li> </ul>

## PROGRAMME SPECIFIC OUTCOME

(Academic Year 2018 -2019)

NAME OF THE PROGRAMME: **F.Y.B.A. & S.Y.B.A IN THE SUBJECT URDU**

PROGRAM	SPECIFIC OUTCOME
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<p>UG Programme F.Y.B.A. &amp; S.Y.B.A IN URDU</p>	<p>The students of first year and second year B.A. Urdu will be able gain the knowledge of :</p> <ul style="list-style-type: none"> <li>• Idioms of Language and art of Essay writing including the life and works of Prose &amp; Poetry writers. They also know about the different Genres of Urdu Language and Literature.</li> <li>• The Language, Grammar and very importantly <i>Mabadiyat-e-Arooz</i> and <i>Usool-e-Taqtee</i>.</li> <li>• The history and evolution of letter writing in Urdu, know about the unique styles of very famous Urdu Poet MirzaAsadullah Kahn Ghalib and also about the legendary figure, Sir Syed Ahmad Khan, the founder of AMU, Aligarh.</li> <li>• The very famous literary genres i.e. Urdu Ghazal, alongwith its History and Development.</li> <li>• The Urdu Travelogue, its beginning and gradual development and about the famous writer MujtabaHussain.</li> <li>• The History and Gradual development of Urdu Nazm, selected Nazms of AkhtarulIman and KhalilurRehmanAzmi.</li> </ul>
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## COURSE OUTCOMES:

### B A URDU

### F.Y.B.A. & S.Y.B.A IN URDU

Course Outcomes	
Courses	Outcomes
<p><b>F.Y.B.A. IN URDU</b></p> <p>Semester- I Semester – II</p> <p style="text-align: center;"><b>&amp;</b></p> <p><b>S.Y.B.A IN URDU</b></p> <p>Semester- III Semester – IV</p>	<p>The Students by studying Urdu at first year of undergraduate level will gain knowledge of the major literary genres of Urdu literature. They will develop an ability to read texts in order to gain a richer understanding of the subject and to become more aware of themselves about Urdu. Language and Literature</p>

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### T.Y.B.A. IN URDU

<b>Course Outcomes</b>	
<b>Courses</b>	<b>Outcomes</b>
<p><b>T.Y.B.A. IN URDU</b>            Paper IV            Paper V            Paper VI            Paper VII            Paper VIII            Paper IX</p>	<p>Students, at the end of the course, would be able to unlock the communicator in them by using Urdu language appropriately and with confidence for further studies or in professional spheres where this language is the indispensable tool of communication. Students can work anywhere in India, as they know Urdu which is the second official language of India. So they can easily be employed in Indian and other Countries also.</p> <p>As they are Practicing Translation from one language to another, they can become Translators in many Central Govt Offices. They are learning Poetry and Grammar -so they can become creative writers or poets are authors. By Reading and observing Drama's and one act plays they can become good actors. By having good communication skills and command over language one can become good speaker. Having good command over particular language one can present himself in better way.</p> <p>By studying Urdu at undergraduate level, the students will gain knowledge of the major traditions of literatures written in the national languages Urdu. They will develop an ability to read texts in relation to their historical and cultural contexts, in order to gain a richer understanding of both text and context, and to become more aware of themselves as situated historically and culturally.</p>

# **PROGRAMME: BACHELOR OF COMMERCE&MANAGEMENT (B.Com)**

## **PROGRAMME OUTCOME**

<b>SR.NO</b>	<b>PROGRAMME OUTCOME</b>
1.	After completing three years for Bachelor in Commerce (B.COM) program, students will gain knowledge and understanding of the fundamental concepts of Commerce, Accountancy and Finance.
2.	The commerce curriculum offers a number of specialization and practical exposure which will equip the students to face modern day challenges and prepare them for entrepreneurship and industrial needs.
3	Students can pursue research and higher education in M.Com. MBA. CA. M.Phil. Ph.D. as well as competitive exams.
4	The students are equipped with communication and professional soft skills to help them relate and adjust in business atmosphere.
5	Student insight about business ethics and values will sensitize them towards social responsibility and commitment.

## **PROGRAMME SPECIFIC OUTCOME**

### **DEPARTMENT OF ACCOUNTANCY**

<b>SR.NO</b>	<b>PROGRAMME SPECIFIC OUTCOME</b>
<b>I</b>	Learners will be able to apply different concepts in starting and managing the business and they will also realize their social responsibilities.
<b>II</b>	Learners will be capable in preparing financial statements of business using accounting principles, concepts, conventions and provisions.
<b>III</b>	Learners will be able to implement traditional and modern strategies and practices of costing, banking, economics, marketing, management, auditing and taxation.
<b>IV</b>	Learners will be able to use mathematical and statistical tools in academics, business and research.
<b>V</b>	Learners will be able to go for higher education and advance research in the field of commerce and finance or he/she can easily go for the future oriented professional exams like CA, CS, ICWA and other competitive examination.
<b>VI</b>	The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.
<b>VII</b>	Learners will be able to recognize features and roles of businessmen, entrepreneur, managers, consultant, which will help learners to possess knowledge and other soft skills and to react aptly when confronted with critical decision making.
<b>VIII</b>	Learners will aware of cultural differences and able to account for these in developing solutions to commerce related problems.
<b>IX</b>	Learners will gain systematic and subject skills within various disciplines of Finance, Auditing, Taxation, Accounting, Management, Communication and computer.

## COURSE OUTCOME:

### B.Com IN ACCOUNTANCY

SEM: I

#### ACCOUNTANCY AND FINANCIAL MANAGEMENT

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach provision of Accounting Standard- I, II and IX and its application.	The Students will learn the concept and provision of Accounting Standard I – Disclosure of Accounting policies, AS-2- Valuation of Inventory and AS-9- Revenue Recognition and its application in accounting procedure.
<b>II</b>	To teach the form and layout of Final Account of Manufacturing Concern.	The students will learn the Format, Entries and accounting procedures of preparation of Final Account of Sole Proprietary Concern.
<b>III</b>	To teach the concept and procedure of preparation of Departmental Final Account.	The students will understand the concept and accounting procedure of Departmental Final Account and its different adjustments.
<b>IV</b>	To teach the concepts, methods and accounting procedures of Hire Purchase System.	The students will understand the concept of Hire purchase System, different methods and accounting procedures applied in Hire Purchase System.

SEM-II

#### ACCOUNTANCY AND FINANCIAL MANAGEMENT

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach the concepts and accounting procedures of Accounting from Incomplete Records (conversion method of Single Entry System).	The Students will learn the concept of Accounting from Incomplete Records and they will also understand the methods of conversion of single entry system.
<b>II</b>	To teach the concepts, types and accounting procedures of Consignment Account.	The students will understand in detail the concepts of Consignment Account and the stages involved in accounting procedure of Consignment Account.
<b>III</b>	To teach the concepts, types and accounting procedures of Branch Account.	The students will be able to understand the concept of Branch Account and different types of Branch and accounting procedure to

		maintain the record of Branch Account.
<b>IV</b>	To teach the concepts, different terms involved and accounting procedures to calculate the Insurance claim in the case of loss due to fire.	The students will understand the concept and of fire insurance claim and they will also learn how the Insurance claim can be calculated by following accounting procedure in the case of loss due to fire.

SEM-III

**ACCOUNTANCY AND FINANCIAL MANAGEMENT**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach the formats and various adjustments applicable in partnership final account.	The students will understand the basic format and different adjustments applicable in partnership final account including adjustment of Admission, Retirement and Death of a partner.
<b>II</b>	To teach the concepts of piecemeal distribution of cash and its accounting procedure.	The students will understand the basic concepts and accounting procedure of piecemeal distribution of cash at the time of dissolution of partnership of firm.
<b>III</b>	To teach the concepts, objects and accounting procedure of Amalgamation of Partnership Firm.	The students will learn the concepts, objects and accounting procedures to be followed in the case of Amalgamation of Partnership Firm.
<b>IV</b>	To teach the concepts and the accounting procedure to be followed in conversion of partnership firm in to a Limited Company.	The students will learn the concepts and the accounting procedure to be followed in the case of conversion of partnership firm in to a Limited Company.

## SEM-III

**INTRODUCTION TO MANAGEMENT ACCOUNTING**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach the concept of management account and financial statements as well as different tools to analyze the financial statement of the companies.	The students will be able to understand the concept of management account and financial statement. They will also understand various tools available to analyze the financial statement of different companies.
02	To teach concept, different types of ratio and its interpretation.	The students will be able to understand the concept of ratio analysis and they will also understand different types of ratios available for analyse and interpretation of different companies financial statement of different companies.
03	To teach concept, types and accounting procedure of working capital.	The students will learn different types of working capital requirement for the smooth functioning. They will also learn the accounting procedure to calculate the working capital requirement for different situation.
04	To teach concept, types and techniques of capital budgeting.	The students will be able to understand the concept, different types and techniques available for capital budgeting before making any capital investment.

## SEM-IV

**AUDITING**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach the concept of auditing, errors and frauds, principle of audit and different types of audit.	The students will be able to understand the concept of auditing which will help them to understand different types of errors and frauds. They will also learn different types of audit.
02	To teach audit planning, audit program and audit working paper.	The students will understand audit planning, audit program and audit working paper in detail which will help them the role of audit plan and program in auditing procedure.

03	To teach concept, importance and role of test check, sampling technique, internal control and internal audit.	The students will understand in detail the concept, role and importance of test check, sampling techniques, internal control and internal audit.
04	To teach concept and procedure of vouching and verification.	The students will learn in detail the concept and procedure of vouching of income and expenditure and verification of assets and liabilities.

SEM-IV

**ACCOUNTANCY AND FINANCIAL MANAGEMENT**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach meaning, types and formation of company and accounting for issue of shares and debentures.	The students will learn different types of companies, procedures & formation of company, and will also understand the accounting procedure for issue of shares and debentures.
<b>II</b>	To teach the concept, method and accounting procedure of redemption of preference shares.	The students will be able to understand the concept, different methods and entire accounting procedure of redemption of preference shares.
<b>III</b>	To teach concept, terms, methods and accounting procedure for redemption of debentures.	The students will understand concept, terms, different methods and whole accounting procedure for redemption of debentures.
<b>IV</b>	To teach concept of Profit Prior to Incorporation (PPI), allocation of experts and its treatment and accounting procedure to calculate the profit prior to incorporation.	The students will understand the concept and accounting for calculation of Profit Prior to Incorporation (PPI) and will also learn the basis of allocation of expenditures.

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach the concepts and importance of Cost Accounting system.	The Students will understand the concept of cost Accounting system and will be able to differentiate between cost accounting and financial accounting.
<b>II</b>	To teach the concept of Stock Valuation, Purchasing function , stock level etc.	The students will learn Inventory valuation techniques, Material control techniques Stock procedure etc.
<b>III</b>	To teach the students Labour Costing, Labor Turnover Labour Idle Time and Remuneration methods of labour.	The students will be able to understand the concept and causes of Labour Turnover and idle time. They will also be able to understand the remuneration method.
<b>IV</b>	To teach the students the concept, Classification, Benefits and Allocation of Overheads.	The students will understand the concept and benefits of overheads for the purpose of correct cost calculation.
<b>V</b>	To teach the students concepts of Cost classification, treatment of non-cost item, Determination of total cost and preparation of cost sheet.	The students will be able to understand the basis of cost classification and treatment of non-cost item. They will also understand how the cost sheet is prepared to find the total cost of product.
<b>VI</b>	To teach the concepts, causes and procedure of Reconciliation of Cost and Financial records.	The students will understand the concept and causes of Reconciliation between Cost and Financial records and will also understand the accounting procedures of Reconciliation.

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach the format and accounting procedure of final account of the companies as per the revised schedule VI	The students will understand the provisions of Companies Act 2013 regarding the accounting procedure to be followed while preparing the final account of the

		companies.
<b>II</b>	To teach the concepts, legal aspect and the accounting procedure of internal reconstruction.	The students will be able to understand the concept, legal aspect and the accounting procedure to be followed in the case of Internal Reconstruction.
<b>III</b>	To teach the concepts, conditions and accounting procedure to be followed in Buy-Back of equity shares.	The students will be able to understand the concept and conditions of Buy-Back to be fulfilled as per the Companies Act 2013, further they will be able to follow the accounting procedure in the case of Buy-Back.
<b>IV</b>	To teach the basic concepts of investments, its type and accounting procedure to record the transactions related to investment accounts.	The students will be able to understand the basic concept of investments, its type and accounting procedure to be followed to record the transactions related to investment accounting.
<b>V</b>	To make the students aware with Ethical Behavior and its importance in financial reporting.	The students will be able to understand the basic concept of Ethical Behavior and its importance in the accounting system as well as at the time of financial reporting.

## SEM-VI

## Financial Accounting

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach the concepts, methods and accounting procedure of Amalgamation, Absorption and External Reconstruction with reference to A.S- 14	The students will be able to understand the concept, methods of Amalgamation, Absorption and External Reconstruction and they will also be able to understand the accounting procedure to be followed in amalgamation as per A.S-14
<b>II</b>	To teach the concepts, need of currency conversion and accounting procedure to record the Foreign Currency Transaction as per AS- 11	The students will be able to understand the concept, methods, need of currency conversion and accounting procedure to be followed to record the foreign currency transaction as per AS- 11

<b>III</b>	To teach the concepts, provision and the accounting procedure of Liquidation of Companies.	The students will be able to understand the concept, provision and the accounting procedure to be followed in the case of Liquidation of companies
<b>IV</b>	To teach the concepts of underwriting and the procedure to calculate the liability of underwriters in the case of Underwriting of Shares and Debentures.	The students will be able to understand the concept of underwriting and the accounting procedure to be followed to calculate the liabilities of underwriters in the case of underwriting of shares and debentures.
<b>V</b>	To teach the concepts of Limited Liability Partnership (LLP) and its formation and the accounting procedure to convert the partnership in to Limited Liability Partnership (LLP).	The students will be able to understand the concept of Limited Liability Partnership (LLP) its formation and the accounting procedure to be followed at the time of conversion of the partnership in to Limited Liability Partnership (LLP).

## SEM VI

## COST ACCOUNTING

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>I</b>	To teach the concepts of Cost Control, methods and importance of Cost Control Accounts.	The Students will understand the concept of Cost Control as well as they will be able to follow the accounting procedures of Cost Control Account.
<b>II</b>	To teach the concepts, methods of Contract Costing and its accounting procedures.	The students will be able to understand the concept, methods and the accounting procedure of Contract Costing.
<b>III</b>	To teach the concepts, methods of Process Costing and the Treatment of Process loss and determine the process cost including By product and Joint Product.	The students will be able to understand the concept, methods and the accounting procedure of Process Costing including treatment of By product and Joint Product.
<b>IV</b>	To teach the concepts of Marginal Costing and application of Marginal costing in Decision making.	The students will understand the concepts as well as the methodology to calculate the marginal cost of the product under varied situation.

<b>V</b>	To teach the students concepts of Standard Costing and variance analysis.	The students will be able to understand the concepts of Standard Costing and will be able to calculate the Actual Cost, Standard Cost and Variance analysis under different situations.
<b>VI</b>	To teach the Emerging concepts of Cost Account Like Target Costing , Life cycle costing etc.	The students will be aware about the Emerging Concepts of Cost Accounting and its importance as well as utilization in Cost A/c.

## **PROGRAMME OUTCOME:**

### **DEAPARMENT OF ECONOMICS**

SR.NO	PROGRAMME OUTCOME
01	Economic graduates understand the knowledge and application of Micro economics and Macroeconomics concepts for the formulation of policies and planning, they are also made aware about basic economic tools used by the academicians, governments and policy makers.
02	Economics students in general will be able to understand and analyse the past present economic conditions of the country which enable them to forecast the future course of changes and development through the knowledge of policies and programmes of the government and other economic agents.
03	The department teach the various aspects of International Trade theories and practices and the issues of the real world.
04	Graduates are made aware about the system, functioning and reforms of Indian Financial System.
05	The department teach the Classical, Neo-classical and Modern Growth and Development theories to the students to make them aware about the real world situation of development.
06	Economics students in general will be able to understand the concepts, causes, challenges of the current economic scenario and are equipped with the techniques to find the solution with the available resources.

## COURSE OUTCOMES:

### BUSINESS ECONOMICS

SEM-I

BUSINESS ECONOMICS-1

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the scope, importance and basic tools used in business economics and basics of market demand and market supply and equilibrium price.	Students understand the concepts and application of economic knowledge in business decision making and market equilibrium.
02	To introduce the concepts of demand functions, its determinants, demand forecasting and elasticity of demand.	Students understand the factors determining demand, significance and methods of measurement of elasticity of demand and demand forecasting.
03	To teach students the concept of supply and production decision, economies and diseconomies of scale.	Students learn various concepts of production function, law of variable proportion, law of returns to scale and factor influencing producer's equilibrium.
04	To introduce the concept of cost and derivation of cost curve in the short-run and long-run. To make them aware about cost reduction through experience and break even analysis.	Students understand the different types of costs and calculation of costs and also know the break-even point determination uses and limitations.

SEM-II

BUSINESS ECONOMICS-II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To give knowledge about features and equilibrium of perfect completion and monopoly market.	Students understand the various types of markets and their equilibrium in the short-run and long-run under different cost condtions.
02	To give knowledge about features and equilibrium of monopolistic completion and oligopoly market. To introduce the concept of product differentiation, selling cost and price leadership.	Students understand the various types of markets and their equilibrium and able to distinguish between different types of markets prevailing in real world and the reason for

		price and product variations.
03	To teach students the concept of price discrimination, types and conditions and various pricing practices.	Students learn how the firm decide the price for the product and also able to know why there is difference between public and private sector pricing practices.
04	To introduce the concept and significance of capital budgeting and various investment appraisal, technique, concept and calculation.	Students learn the concept of capital budgeting and also able to apply various techniques of capital budgeting for the selection of most appropriate and profitable projects.

### SEM-III

### BUSINESS ECONOMICS-III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the concept of macroeconomics, national income, circular flow of income, trade cycle and Say's law of market.	Students understand the various concepts of macroeconomics like circular flow of income, trade cycle in the real world in income-output determination and get background knowledge of income determination in classical theory.
02	To teach students Keynesian concept of determination of income and output, consumption function, multiplier, investment function and liquidity preference theory of interest.	Students learn the issues and factors determining equilibrium in an economy and marginal propensity to consume and marginal efficiency in capital determine investment and various motives for holding cash.
03	To teach students the concept of inflation, unemployment (Phillips curve), stagflation and supply side economics.	Students learn about the causes of inflation and unemployment and also the importance of government during stagflation.

04	To introduce the concept and measurement of supply of money and theories of demand for money, types causes and measures of inflation.	Students learn the concept of supply and demand for money and the various measures for money supply. Students are able to understand the nature, concept, causes and measures to control inflation.
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SEM-IV

BUSINESS ECONOMICS-IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach the students role of government in an economy, public finance, fiscal functions and role of markets.	Students understand the role of government and the concept of sound and functional finance and the component and theories of public finance.
02	To teach students the various sources of public revenue, shifting of tax burden, economic effects of taxation.	Students learn the main sources of public finance, objective Canons and effects of taxation.
03	To teach students the classification, Canons, economic effects of public expenditure and the concept and burden of public debt.	Students learn the types, causes of increase the effects of public expenditure and public debt on the economy.
04	To teach students to fiscal policy, budget, intra-governmental fiscal relations.	Students learn the government fiscal policy, its types, objectives and inter-governmental fiscal relation in the country and types of budget.

SEM-V

BUSINESS ECONOMICS-V

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To teach students role of social infrastructure, sustainable development goals and foreign investment policy measures in India in post reform period.	Students understand the significance of social infrastructure and government policy to achieve sustainable development goals in India and also the issues and

		benefits of FDI in India.
02	To teach students the agricultural development since 1991 with special reference to agriculture policy, finance and marketing developments.	Students learn about the agricultural sector during post reform period, pricing, finance and the marketing, issues and the government policies.
03	To teach students about the industry and service sector during the post reform period.	Students learn the importance of services sector, MSME and the growth of the sector during post reform period.
04	To teach the recent trends, issues and challenges in the banking and insurance sector and the structure and reforms introduce the money and capital market.	Students understand the structure, issues and challenges and reforms, introduce in Indian financial market.

## SEM-VI

## BUSINESS ECONOMICS-VI

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
01	To introduce the international trade theory and the terms of trade and the gains from international trade.	Students learn about various international trade theories and get the knowledge about terms of trade and the gains from trade.
02	To teach students the commercial trade policy, tariff and non-tariff barriers and the types and objectives of economic integration.	Students learn about the types and importance of commercial trade policies and the objectives and issues of tariff and non-tariff barriers and the importance of economic integration.
03	To teach students about the structure, types, causes and measures to correct disequilibrium in BOP and the agreements of WTO.	Students learn the concept, structure, causes of disequilibrium and corrective measures for BOP and understand the functioning, principles and agreements of WTO.

04	To teach students about functioning and dealers of foreign exchange markets, determination of exchange rate, role of central bank in foreign exchange rate management.	Students learn about foreign exchange market, foreign exchange rate in the role of central bank in foreign exchange rate management.
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## PROGRAMME SPECIFIC OUTCOME

### DEPARTMENT OF ENGLISH

Sr.No	Programme Specific Outcome
PSO 1	To understand the local, state, national and international business standards.
PSO2	To develop an overall corporate culture amongst students.
PSO3	To demonstrate and visualise them the interview techniques, public relations and also the official communication.
PSO4-	To establish the link between their professional and personal life by providing communication skills pertaining to business environment.

### COURSE OUTCOME:

### BUSINESS COMMUNICATION PAPER I/II

SEM: 1 & 2

### BUSINESS COMMUNICATION PAPER I/II

Syllabus (Unit Wise)	Objectives	Outcome
<b>Module I Communication Theory</b>	To understand communication definition, concept, need and importance. To understand communication types and process along with barriers.	The students are able to categorize communication and use it practically in daily life if they are involved in business.
<b>Module II Channels of Communication</b>	To understand the line of communication deployed at work place and listening skill. To imbibe values and ethics at work place.	The learner's will purposefully select appropriate channel to communicate at workplace. The students exhibit good behavior and refined manners in business or work place.
<b>Module III Business Correspondence</b>	To improve business correspondence.	The learners are able to aptly use different forms of written communication.

**Mass Communication paper I/II****SEM: 3 & 4****Mass Communication paper I/II**

<b>Syllabus (Unit Wise)</b>	<b>Objectives</b>	<b>Outcome</b>
<b>Module I</b>	To understand communication definition, concept, need and importance. To introduce the learner's to major aspects of communication.	The students are able to categorize communication and use it practically in daily life if they are involved in Media related practices.
<b>Module II</b>	To develop among the students a historical perspective of the development of various mass media.	The history of media is learnt by the students. The chronological development of media is core part of their understanding exhibits through their senses.
<b>Module III</b>	To develop a critical understanding of mass media with regard to their role, potentialities and impact in modern India.	Students exhibit their understanding of the roles of media, their importance and effects in present times.
<b>Module IV</b>	To introduce some practical skills necessary to take up careers in Media industry.	Students are attracted towards the career prospectus of mass media by understanding its relevance in present times.

**PROGRAMME SPECIFIC OUTCOME****DEPARTMENT OF MATHEMATICS**

<b>SR.NO</b>	<b>PROGRAMME SPECIFIC OUTCOME</b>
1.	The main objective of this course is to introduce mathematics and statistics to undergraduate students of commerce, so that they can use them in the field of commerce and industry to solve the real life problems.

**COURSE OUTCOME****SEM-I &II****MATHEMATICAL AND STATISTICAL TECHNIQUES**

<b>Syllabus (unit wise)</b>	<b>Objectives</b>	<b>Outcome</b>
<b>Unit – i Shares and mutual funds</b>	To familiarize the concept of shares, mutual funds, bonus shares, mutual funds and sip in real life	Enable learners to solve real life examples on shares and mutual funds

Unit – ii Permutation & combination Linear programming problems	To provide practical exposures of lpp problems to maximizes the profit or minimize the loss To provide guidelines in arrnaging and selection of objects/perons in real time	Enable learners to solves examples of lpp in real life Enable learners to find the possibilities and selection of objects in day to day life
Unit – iii Measures of central tendencies Measures of dispersion	To familiarizes the concept of statistics To provide practical exposure on calculation of measures of average, median , mode and standard deviation	Enable learners to solve basic of central tendency in real life situation Enable learners to solve examples on statistics
Unit – iv Probability theory Random variable	To introduce the students about the concept of probability and random variables	Enable learners to predict and able to find the probability of real life situations
Unit – v Decision theory	To focus on decision making criteria and investigate the decision through experimentation	Enable learner to take helpful decision based on requirement through experimentation
Unit – i Functions, derinatives and its applications	To solve problems involving rates of change of variables subject to a functional relationship	Enable learners to find changes of functions with respect to time
Unit – ii Interest and annuity	To provide an environment to solves examples on si,ci and annuity	Enables learners to know the calculation and concept of interest and annuity in banks and industries
Unit – iii Bivariate linear correlation and regression	To provide the concept of relation between data and prediction of future values from past values	Enable larners to find relationship between data in real life and industry
Unit – iv Time series & index numbers	To develop mathematical models that provide likely descriptions for sample data	Enable learners to predict the future value based on past experiences in industry and day to day life
Unit – v Elementary probability distribution	Providing students with a formal treatment of probability theory. Fostering understanding through real-world statistical applications.	Develop problem-solving techniques needed to accurately calculate probabilities. Apply problem-solving techniques to solving real-world events.

## PROGRAMME: BACHELOR OF SCIENCE (B.SC)

### PROGRAMME OUTCOMES:

SR.NO	PROGRAMME OUTCOME
1)	Learner would get an opportunity to explore the field of science through pursuing science.
2)	Science department offers realistic approach to the learners where theory and practical go hand in hand.
3)	Through the establishments of department of science, a learner can contribute her/his part in making advancement in the field of technologies for the betterment of life of all aspects.
4)	It also gives an opportunity for them to study and correlate the day to day events happening in their own life and surroundings.
5)	The field of science also encourages learners to aim high, develop inquiring minds and curiosity.

### COURSE OUTCOMES:

#### B.SC IN BOTANY

##### SEM-I

##### PLANT DIVERSITY 1

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<b>UNIT I ALGAE</b> 1 Structure, life cycle and systematic position of Nostoc and Spirogyra.	<ul style="list-style-type: none"> <li>Understand the identifying characters of the lower groups of plants. Have an idea on diverse groups of plants.</li> <li>to understand economical application of theoretical knowledge of algal biotic entity in various fields</li> <li>The course aims to provide an understanding the diversity of fungal world and its significance. Understand the various plant diseases and their impact on agriculture</li> <li>To understand economical application of theoretical knowledge of fungal biotic</li> </ul>	1] Students learn to identify various divisions of algae and compare their characteristics through microscopic observation. 2] Student gain awareness about economic importance of algae in various field like medicine, agriculture, research and industries which helps them to also understand the practical application of the algal studies. 3] Students get familiarised with identification of various divisions of algae through microscopic observation. 4] Student gain awareness about its role in controlling various plant diseases and get acquainted about economic importance of algae in various
2 Economic importance of Algae		
<b>UNIT II FUNGI</b> 1 Structure, life cycle and systematic position of Rhizopus and Aspergillus		
2 Economic importance of Fungi.		
3 Modes of nutrition in Fungi (Saprophytism and Parasitism).		

<p><b>UNIT III</b> <b>BRYOPHYTA</b> 1 General characters of Hepaticae 2 Structure, life cycle and systematic position of Riccia.</p>	<p>entity in various fields</p> <ul style="list-style-type: none"> <li>To understand the importance of biological entities in process of Decomposition and mutual associations between various organism.</li> <li>To understand various adaptations and modification in plants in course of journey of aquatic to terrestrial evolution.</li> </ul>	<p>field and its practical application in fields like medicine, agriculture, research and industries. 5] With this knowledge students understand adaptations of various organisms and relationships between them along with the environment for satisfying its basic nutritional requirements. 6] Students learn identification of various divisions of bryophyte and compare their characteristics through microscopic observation.</p>
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SEM-I

**FORM AND FUNCTION 1**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<p><b>UNIT I</b> <b>CELL BIOLOGY</b> 1 General structure of plant cell: cell wall Plasma membrane (bilayer lipid structure, fluid mosaic model) 2 Ultra structure and functions of the following cell organelles: Endoplasmic reticulum and Chloroplast.</p>	<ul style="list-style-type: none"> <li>To understand the basic principles related to various physiological functions in plant life</li> <li>Aims to make student understand role and structure of various cell organelles and its specificity to a particular function.</li> <li>To understand interdependence of various biological entities and to understand energy transfer mechanism in an ecosystem.</li> <li>It aims to study</li> </ul>	<p>1] Students get familiarised with basic skills and techniques of plant physiology by studying some cell organelles under microscope. 2] Student understands mechanism of transport within the cell and get acquainted with applied aspects of plant physiology. 3] Student understands importance of various organisms in maintaining balance in an ecosystem by studying food chain charts and energy flow models. 4] Help students to identify the nature and interactions of populations in the ecosystem. Various adaptations are studied through practical identification of various adaptive characters of plants of varied diversified habitat. 5] Student understand pattern of inheritance by performing and solving various crosses and through micrograph of various karyotype.</p>
<p><b>UNIT II</b> <b>ECOLOGY</b> 1 Energy pyramids energy flow in an ecosystem.</p>		
<p>2 Types of ecosystems: aquatic and terrestrial.</p>		

<p><b>UNIT III GENETICS</b> 1Phenotype/Genotype, Mendelian Genetics- monohybrid, dihybrid; test cross; back cross ratios. 2Epistatic and non epistatic interactions; multiple alleles.</p>	<p>organism and characteristics of different ecosystem.</p> <ul style="list-style-type: none"> <li>To study genetic laws and understand basic pattern of inheritance or heredity.</li> </ul>	<p>Students get familiarized with nuclear and extra nuclear inheritance.</p>
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SEM-II

**PLANT DIVERSITY 1**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<p><b>UNIT I PTERIDOPHYTES</b> 1 Structure life cycle, systematic position and alternation of generations in Nephrolepis</p>	<ul style="list-style-type: none"> <li>The course aims to develop an understanding about the diversity in habits, habitats and to understand structure of pteridophyte, gymnosperms and angiosperms.</li> <li>To understand phylogenetic relationship of</li> </ul>	<p>1] Students learn identification of various divisions of pteridophyte and compare their characteristics through macro and microscopic observation. 2] Student understands types of stele through identification practical by observing various types of stele under microscope. 4] Student gain awareness about economic importance of Gymnosperms in various field like medicine, agriculture, research and industries which helps them to also understand the practical application of the studies. 5] Students develop inductive and</p>
<p>2Stelar evolution</p>		
<p><b>UNIT II GYMNOSPERMS</b> 2 Structure life cycle systematic position and alternation of generations in Cycas</p>		
<p>2 Economic importance Gymnosperms.</p>		

<p><b>UNIT III</b> <b>ANGIOSPERMS</b></p> <p><b>1</b> Leaf: simple leaf, types of compound leaves, Incisions of leaf, venation, phyllotaxy, types of stipules, leaf apex, leaf margin, leaf base, leaf shapes. Modifications of leaf: spine, tendril, hooks, phyllode, pitcher, Drosera or insectivorous plants.</p> <p><b>2</b> Inflorescence: Racemose: simple raceme, spike, catkin, spadix, panicle. Cymose: monochasial, dichasial, polychasial. Compound: corymb, umbel, cyathium, capitulum, verticillaster, hypanthodium.</p> <p><b>3</b> Study of following families: Malvaceae, Amaryllidaceae.</p>	<p>various types of modifications in vascular bundle</p> <ul style="list-style-type: none"> <li>to understand economical application of theoretical knowledge of Gymnosperms in various fields</li> <li>Understand and study various shapes and modification in leaf and inflorescence of plants. To study distinguishing characters of families for taxonomical identification.</li> </ul>	<p>deductive reasoning ability through plant identification practical's by studying various morphological characters and modification observed in plants.</p> <p>Student Understands the life cycle pattern of most evolved group of plants.</p>
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SEM-II

**FORM AND FUNCTION 1**

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
<p><b>UNIT I</b> <b>ANATOMY</b></p> <p><b>1</b> Simple tissues, complex tissues</p> <p><b>2</b> Primary structure of dicot and monocot root, stem and leaf.</p> <p><b>3</b> Epidermal tissue system: types of hair, monocot and dicot stomata.</p> <p><b>UNIT II</b> <b>PHYSIOLOGY</b></p> <p><b>1</b> Photosynthesis: Light reactions, photolysis of water,</p>	<ul style="list-style-type: none"> <li>To study different types of tissue their structure, position and function</li> <li>To understand anatomical structure of dicot and monocot plants and study various cell outgrowth observed in plants and make student aware about its importance.</li> <li>To understand and</li> </ul>	<p>1] Helps Students to Identifies role of anatomy and familiarise students with various types of tissues by microscopic practical's by preparing temporary sections of various parts of plants.</p> <p>2] Through staining practical students can study to identify various types of vascular bundles and cells microscopically.</p> <p>3] Student also understands role and importance of various epidermal outgrowths like hair, stomata which are observed and studied by them under microscope.</p> <p>4] Student understands role of cell,</p>

<p>photophosphorylation (cyclic and non cyclic), carbon fixation phase (C3, C4 and CAM pathways).</p>		
<p><b>UNIT III</b> <b>MEDICINAL BOTANY</b> <b>1</b> Concept of primary and secondary metabolites, difference between primary and secondary metabolites.</p>	<p>study process of photosynthesis in plants and aware student about basic skills of plant physiology.</p> <ul style="list-style-type: none"> <li>• To study various primary and secondary metabolite.</li> <li>• To study medicinal importance and chemical compositions some medicinal plants.</li> </ul>	<p>cell organelle and its relations with vital physiological process of photosynthesis by studying various chemical cycle and anatomical studies of C3 and C4 plants. 5] Students understand role and importance of various secondary metabolites in plants even if their presence is in smaller quantities. Students get familiarised with its industrial and economical demand and application. 6] Student understand to identify medicinally important parts of these plants through identification practical's and also study presence of various secondary metabolites through minor experiments and test.</p>
<p><b>2</b> Grandma's pouch: Following plants have to be studied with respect to botanical source, part of the plant used, active constituents present and medicinal uses: <i>Oscimum sanctum</i>, <i>Adathodavasica</i>, <i>Zinziberofficinale</i>, <i>Curcuma longa</i>, <i>Santalum album</i>, <i>Aloe vera</i>.</p>		

# PROGRAMME SPECIFIC OUTCOME

## DEPARTMENT OF CHEMISTRY

SR.NO	PROGRAMME SPECIFIC OUTCOME
01	The students are capable of understanding scientific reasoning and analytical problem solving with molecular perspective.
02	The students understand the interdisciplinary nature of chemistry and integrate knowledge of other disciplines to a wide variety of chemical problems.
03	The students learned the laboratory skills needed to design, safely conduct and interpret chemical research.
04	The students understand the importance of the periodic table of the elements, how it comes to be, and its role in organizing chemical information.
05	The students developed the ability to effectively communicate scientific information and research results in written and oral formats.
06	The students acquire a foundation of chemistry of sufficient breadth and depth which enable them to understand and critically interpret the primary chemical literature.
07	The students learned professionalism, including the ability to work in team and apply basic ethical principles.
08	Students are capable of getting outcome of the reaction. They understand about synthesis of any compound. They are capable of applying these knowledge in industrial work.

## COURSE OUTCOMES:

### B.SC IN CHEMISTRY

#### SEM-I

#### CHEMISTRY-I

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical chemistry Thermodynamics. Chemical calculations.	To study information the First Law of Thermodynamics and to describe "spontaneous" processes.To describe the difference between "spontaneous" and "nonspontaneous" processes.To describe concept of "entropy".To provide knowledge about different terms involved in chemical calculations like Normality, Molality, Morality, Formality, Mole fraction, ppm, ppb etc.	Students will know the First Law of Thermodynamics and "spontaneous" processes. Students understand the difference between "spontaneous" and "nonspontaneous" processes.Students understand the concept of "entropy".Students know the different terms involved in chemical calculations like Normality, Molality, Morality, Formality, Mole fraction, ppm, ppb etc.
UNIT II: Inorganic chemistry	To study about atomic structure. To learn classification and	Students learned about structure of atom. They know about element and its

	periodicity of periodic table.	importance.
UNIT III: Organic chemistry IUPAC nomenclature of different organic compound. Bonding and structure of organic compound. Electronic effect and study of carbocation, carbanion and carbon free radicle.	It aims to study nomenclature of compounds. To understand structure and bonding of molecules.	Students are able to recognize name, structure and hybridization of compound.

SEM-I

**CHEMISTRY-II**

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical chemistry Chemical kinetics. Liquid state.	To provide information the first order and second order reaction including rate constants, half life time and units. To study about pseudo order reaction including rate constant, half life time and units. To study the different types of liquid crystal.	Students get information of the gaseous laws like Boyle law, Charles law, Avogadro's law, Ideal gas law etc. Students will study the difference between Ideal gas equation and Vanderwaal corrected gas equation. Students study the different types of liquid crystal.
UNIT II: Inorganic chemistry	Comparative study of main group elements and study of effect oxides of carbon, nitrogen and sulphur.	Students are familiar with main group elements which help them to work in industry.
UNIT III: Organic chemistry Stereochemistry. Different forms, optical activity and its stereochemical nomenclature	To understand concept of chirality, and to recognize conformational and configurational isomer.	Students are able to build different projection forms. They are able to assign conformation and configuration.

## SEM-II

## CHEMISTRY-I

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical Chemistry. Gaseous state.	To study information the gaseous laws like Boyle law, Charles law, Avogadro's law, Ideal gas law etc. To study the difference between Ideal gas equation and Vanderwaal corrected gas equation.	Students get information of the gaseous laws like Boyle law, Charles law, Avogadro's law, Ideal gas law etc. Students will study the difference between Ideal gas equation and Vanderwaal corrected gas equation.
UNIT II: Inorganic chemistry	To learn about types of qualitative analysis. To study about acid-base theories and their applications.	To study about semi-micro analysis of different compounds ,also study about different definition of acid – base theory and their applications.
UNIT III: Chemistry of alkanes, alkenes and alkynes. Its reactions and reactivity.	To gain understanding of reactivity of alkanes, alkenes and alkynes with different reagents in different conditions.	Students are capable to recognize the reaction processes involve.

## SEM-II

## CHEMISTRY-II

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical Chemistry. Ionic equilibria. Molecular spectroscopy. Solid state chemistry	To study Henderson equation of acid and base. To study the concept of pH and buffers. To provide information of the electro magnetic radiation, type of spectroscopy, region of electromagnetic radiation and application of different spectroscopic techniques.	Students will know the Henderson equation of acid and base. Students understand the concept of pH and buffers. Students get information of the electro magnetic radiation, type of spectroscopy, region of electromagnetic radiation and application of different spectroscopic techniques.
UNIT II: Inorganic chemistry	To study about the bonding and characteristics of ionic and covalent compounds. To study the applications of redox chemistry with respect to extraction of elements and reagents used in volumetric analysis.	To learn about different concept of bonding and their strength. To learn about oxidation number and oxidation state of different elements and also study about balancing redox reactions. To learn about
UNIT III: Stereochemistry.	To study the stability of	Students are able to

Concept of aromaticity, antiaromaticity and nonaromaticity. Electrophilic substitution reactions.	cycloalkane. To study basic concepts involve in reaction and its mechanistic pathway.	understand concept of stability. Students gained an understanding of predicting reaction mechanism.
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SEM-III

**CHEMISTRY-I**

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical Chemistry. Chemical Thermodynamics-II. Electrochemistry.	1. Improvement of efficiency processes. 2. Making the processes more non-polluting and environmental friendly. To provide experience in types of conductivity, know KOHLAUSCH LAW and application of conductance measurement. To study Transfer number and its determination by different methods.	Students understand the concept of improvement of efficiency processes. Students know the processes about non-polluting and environmental friendly. Students will study and research regarding alternative energy sources or transformation methods. Student learns about types of conductivity, KOHLAUSCH LAW and application of conductance measurement. Student understands the concept of Transfer number and its determination by different methods.
UNIT II: Inorganic chemistry	To learn lattice energy, VBT and its hybridization, MOT and its principle.	Students differentiate between directional and non-directional bonding.
UNIT III: Organic Chemistry Preparation, reactivity and Reaction of alkyl and aryl halide, organomagnesium and lithium compound, phenols, alcohols and epoxides.	To understand reactivity of compounds of different functional groups.	Students are capable of applying these knowledge in industrial work.

## SEM-III

## CHEMISTRY-II

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical Chemistry. Chemical Kinetics. Solutions.	To study rates of chemical processes. Chemical kinetics includes investigations of how different experimental conditions can influence the speed of a chemical reaction. To provide knowledge about thermodynamics ideal solution, Critical Solution Temperature.	Students understand the concept of chemical processes. Chemical kinetics includes investigations of how different experimental conditions can influence the speed of a chemical reaction. Student learns about thermodynamics ideal solution, Critical Solution Temperature.
UNIT II: Inorganic Chemistry	Study of boron, germanium and silica. Preparation of oxide of nitrogen.	Students learned about basics of boron, germanium and silica which have industrial and agricultural importance.
UNIT III: Organic Chemistry Carbonyl compound its reactivity, preparation and reactions. Name reactions and active methylene compounds.	To gain understanding of reactivity of carbonyl compounds with different reagents in different conditions.	Students are capable of getting outcome of the reaction. Students are capable of applying these knowledge in industrial work.

## SEM-III

## CHEMISTRY-III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit-1 Introduction to Analytical chemistry and Statistical treatment of Analytical Data.	To have better understanding of quality control and quality assurance and different types of samplings process.	Students understand the concept of Quality control and quality assurance. Also they learn term Sampling in brief.
Unit-2 Classical methods of analysis	To understand about different types of titration process. To study about basic instruments likes pH meter, Potentiometer. To study about Gravimetric Analysis.	Student understand about different types of titration process. Student learn about basic instruments likes pH meter, Potentiometer. Student know about Gravimetric Analysis.
Unit-3 Instrumental Methods-I	To provide experience in scientific analytical instruments likes Spectrometer and	Students learn about UV-visible spectrophotometry i.e. Spectrometer and colorimeter.

	colorimeter (UV-visible spectrophotometry)	
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SEM-IV

**CHEMISTRY-I**

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical Chemistry. Electrochemistry-II. Phase Equilibria.	To provide the knowledge of electrochemical Conventions, Nernst equation, Thermodynamics properties like Change in Entropy, enthalpy change and Free energy change. To provide knowledge about different terms involved in Phase rule likes Phase, Number of components, Number of freedom etc.	Students understand the concept of electrochemical Conventions, Nernst equation, thermodynamics properties like Change in Entropy, enthalpy change and Free energy change. Student learns about different terms involved in Phase rule likes Phase, Number of components, Number of freedom etc.
Unit II: Inorganic Chemistry Transition elements & coordination chemistry.	Identify the transition metals on the periodic table. Describe the characteristic electron configuration of the transition elements. To understand the key features of coordination compounds, including: the variety of structures, oxidation numbers and electronic configurations coordination numbers, ligands, chelates bonding, stability of complexes.	1) To understand the general characteristics of the d block elements 2) To know the structure and bonding of important coordination compounds · To understand the magnetic properties of complexes and to know how magnetic moments can be employed for the interpretation of their structure · To get an overview about the stereochemistry of coordination compounds.
UNIT III: Organic Chemistry Carboxylic acid and its derivative. Study of Sulphonic acid.	To study basic concepts involve in reaction and its mechanistic pathway. To understand reaction outcome.	Students are capable of getting outcome of the reaction. Students are capable of applying these knowledge in industrial work.

SEM-IV

**CHEMISTRY-II**

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Physical Chemistry.	To provide the knowledge of	Students knows the types of

Solid State. Catalysis	types of crystal and Laws of crystallography. To study the characteristics of Simple cubic, Face centre and Body centre etc. To study the determination of Avogadro's numbers. To provide knowledge about homogeneous and heterogeneous catalysis. To know the terms like catalytic activity, catalytic selectivity, inhibitors, promoters etc.	crystal and Laws of crystallography. Students know characteristics of Simple cubic, Face centre and Body centre etc. Students will study the determination of Avogadro's numbers. Students will study about homogeneous and heterogeneous catalysis. Students know the terms like catalytic activity, catalytic selectivity, inhibitors, promoters etc.
Unit II: Inorganic Chemistry Aqueous medium & environmental chemistry of volatile oxides & oxo-acids.	To understand the acidity of cations and basicity of anions in aqueous medium. To learn the properties and applications of oxoacids of N, P & S.	1) To understand the general classification of aqueous cation & anions also their pH classification which is useful in industry. 2) To learn about proportions of all elements in the form oxoacids present in environment which cause acid rain photochemical smog. Learn about how to control the amount of such a hazardous elements to prevent environment. sssss
UNIT III: Organic Chemistry Study of amines, diazonium and heterocyclic compound.	To study about amines, diazonium compound and heterocyclic compound its reactivity and synthesis.	Students are able to understand synthetic outcome of reactions.

SEM-IV

CHEMISTRY-III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit- 1 Analytical Separation	To have better understanding of Analytical separation techniques like Precipitation, Filtration, Centrifugation, Electrophoresis, Solvent Extraction and Classifications of Chromatography.	Students understand the concept of Precipitation, Filtration, Centrifugation, Electrophoresis, Solvent Extraction and Classifications of Chromatography.
Unit-2 Instrumental Methods-II	To provide experience in scientific analytical instruments likes pH meter, Conductometer.	Student learn about basic instruments likes pH meter, Conductometer.
Unit-3	Statistical Treatment of Analytical Data	Students learn about practical

Statistical treatment of Analytical data	provides a practical understanding of statistical treatment of data and how to apply it in actual day-to-day activities in the laboratory to improve the quality and reporting of analytical data	understanding of statistical treatment of data.
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SEM-V

CHEMISTRY-I(PHYSICAL CHEMISTRY)

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit 1:molecular spectroscopy	To learn the basics of all rotational ,vibrational ,translation spectroscopy as well as its application To understand the basics of Raman spectroscopy and comparison between IR & Raman spectra.	To impart the students for getting basic concept of all types of spectroscopy and its application.
Unit 2:chemical thermodynamics	To learn the colligative properties of dilute solution and the methods used to determine the molecular mass of it. To study the kinetics of fast reactions and its method.	Due to study colligative properties of all types its help to predict proportion of molar mass in biological reaction like sucrose reaction .also due to study of kinetics it is easy to predict rate of every reaction in day to day life.
Unit 3:Nuclear chemistry	To learn the basic terms involved in nuclear chemistry. To understand how the nuclear radiations are detected and measured by different instruments. To study the nuclear fission & nuclear reactors and the applications .	It helps study the nuclear radiation reaction which is widely use to convert nuclear energy into electrical energy. Due to study of nuclear reaction biological application for various disease are calculated cure also.
Unit 4:Surface chemistry	To learn about physical adsorption and chemical adsorption. To understand different adsorption and electrolysis	To study the adsorption helps to predict phase change with respect to temp and pressure.Electrolysis process helps to predict biological function.

SEM-V

CHEMISTRY-II (INORGANIC CHEMISTRY)

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit 1: chemical bonding	To make students aware about symmetry elements present in the molecules, to perform different operation on the molecules .	It is help to study different operation woeking to predict point group with respect to symmetry.
Unit 2:Solid state chemistry and Superconductivity.	To make students understand the packing density in crystals ,concept of voids . To understand the phenomenon of superconductivity and the properties of superconductors	To study details about crystal properties of solid ores and alloy n predict purification n stability of it. Also aware about use of superconductivity in 21 <sup>st</sup> century for current Production.
Unit 3:Inner transition elements	To study the of inner transition elements, their properties and separation methods.	It is help to predict study of inner transition elements with respect to its application. Like uranium.
Unit 4:Some selected topics like pseudohalogen, interhalogen	To study the acid – base and redon reactions in non-aqueous solvents, pr To study ofinterhalogen and xenon compounds of its properties .	To aware students about use of noble gases in current life .n learn reactivity of water as an universal solvent.

SEM-V

CHEMISTRY-III (**ORGANIC CHEMISTRY**)

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I: Mechanism of organic reactions, NGP,ArNu substitution, Pericyclic reaction and pyrolytic elimination. Photochemistry: Introduction and photochemical reactions of olefins and carbonyl compound.	The aim of this organic chemistry course is to introduce students to many of the key concepts of organic chemistry. Particular emphasis is placed on the underlying mechanistic pathways that are involved together with some of their stereochemical consequences.	Students recognize many functional groups and their reactivity, many fundamental bond forming reactions and how to apply them in synthesis Describe bonding models and appreciate how these impact on the properties of a simple molecule Apply curly arrow nomenclature to depict the mechanistic course of a reaction Appreciate when different reactions are likely to compete and ways to bias reactions towards a single outcome

		Understand and apply the concept of protecting groups
UNIT II : Stereochemistry I Molecular chirality and elements of symmetry. Chirality of compounds without stereogenic centre. Heterocyclic chemistry. Reactivity, preparation and reactions pyridine N-oxide, quinolone and Isoquinoline.	To understand stereoisomers of organic compounds, and recognise diastereomers, enantiomers, meso compounds and centres of symmetry, stereoisomers of chiral compounds that do not contain a stereogenic carbon centre and assign the configuration of the stereoisomers.	Students are able to recognise diastereomers, enantiomers, meso compounds and centers of symmetry, stereoisomers of chiral compounds.
UNIT III: IUPAC of Bicyclic compounds, Biphenyls, Cummulenes, Quinolines and isoquinolines. Synthesis of organic compounds.	To provide knowledge of systematic naming of organic compound. To emphasis on the underlying mechanistic pathways.	Students are able to recognize name and structure of compound. Students are able to do mechanism of reaction.
UNIT IV : Spectroscopy Introduction, UV-Visible and Mass spectrometry. Study of natural products.	To understand the principle of UV-Visible and Mass spectroscopy. To get information of structure and synthesis of certain natural products.	

## SEM-V

## CHEMISTRY-IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit-1 Concept of Quality Control and Quality assurance, Chemical Calculation and Sampling.	To have better understanding of quality control and quality assurance and different types of samplings process.	Students understand the concept of Quality control and quality assurance. Also they learn term Sampling in brief.
Unit-2 Titrimetric Analysis	To establish an appreciation of the role of Chemistry in quantitative analysis. To understand about different types of titration process.	Student understand the role of Chemistry in quantitative analysis. Also they know about different types of titration process.
Unit-3 Optical Methods	To provide experience in scientific analytical instruments likes	Students learn about UV-visible spectrophotometry

	Spectrometer(single beam and double beam spectrophotometer) and colorimeter (UV-visible spectrophotometry)	i.e. Spectrometer and colorimeter.
Unit-4 Methods of separation-I	To understand the terms like filtration, distribution, distillation etc.	Students understand about different methods of separation with basic separation terms.

## SEM-VI

## CHEMISTRY-I (PHYSICAL CHEMISTRY)

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit 1: Electrochemistry	To learn the basic terminologies involved in electro chemistry. To study the classification of cells. To understand the polarization process, decomposition potential and over voltage and application of it .	To imparts the students for getting basic concept of electrochemistry cell and also aware about the application of electrochemisty in day to day life.
Unit 2: polymer	1. To learn the basic terminologies involved in polymer chemistry. 2. To study the classification of polymers, molar masses and their determination. 3. To know what are light emitting polymers, antioxidants and stabilizers. POLYMERS	Identify strength of different polymer based on their classification. Estimate number and weight average masses of polymer samples given by degree of polymerization .
Unit 3: Quantum and Renewable energy sources	To study the limitations of classical mechanics. 2. To learn the basics of quantum mechanics and terminologies involved in it. 3. To study the renewable energy sources: solar energy and hydrogen as fuel.	To study the basic postulates of quantum mechanics To impart the students concepts of the fundamentals of quantum mechanics and its applications in the study of structure of atoms,
Unit 4:NMR and ESR	To study the principle, instrumentation, working and applications of NMR. 2. To study the principle, instrumentation, working and applications of ESR	To predict different structure of organic as well as inorganic compounds . To study the differences between NMR and ESR spectroscopy.

## SEM-VI

## CHEMISTRY-II( INORGANIC CHEMISTRY)

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit 1:Crystal	(CFT) a bonding model that explains	To understand the general

field theory	<p>many important properties of transition-metal complexes, including their colors, magnetism, structures, stability, and reactivity.</p> <p>The central assumption of CFT is that metal–ligand interactions are purely electrostatic in nature.</p>	<p>characteristics of the d and f block elements To give the students a thorough knowledge of the different theories to explain the bonding in coordination compounds</p>
Unit 2 :Theories of metal ligand bond	<p>Outline the basic quantum-mechanical approach to deriving molecular orbitals from atomic orbitals</p> <p>Relate these electron configurations to the molecules' stabilities and magnetic properties</p> <p>The main aim of this course is to teach the student the chemistry of complexes. So, learning the coordinate bond theory is one of the aims. The student must learn geometrical, optical, linkage, coordinate isomer and Jahn-teller distortion with electronic spectra of TM complexes.</p>	<p>To understand the basic concepts and mechanism in organic chemistry · To get an idea about the various kinetic and thermodynamic factors which control the organic reactions · To know stereochemistry and various possible conformations of organic compounds and how it affects the reaction outcome).</p>
Unit :3 organometallic chemistry	<p>The focus of this course is on the synthesis, structure and bonding, properties and reactivity of main group organometallics</p>	<p>Upon successful completion, students will have the knowledge and skills on satisfying the requirements of this course, students will have the knowledge and skills to Explain and rationalize the synthesis, structure, bonding, properties and reactivity of both main group and transition metal.</p> <p>To improve the level of understanding of the chemistry of organometallic compounds, metal carbonyls and metal clusters.</p>
Unit :4 Metallurgy	<p><i>Metallurgy</i> customarily refers to commercial as opposed to laboratory methods. It also concerns the <i>chemical, physical</i>, and atomic properties and structures of metals and the principles whereby metals are combined to form alloys.</p>	<p>To understand the basic concepts ,process to how separated and converted in pure metal into pure metal from alloy or ore.this course have importance in mining process.</p>

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit I) Stereochemistry : stereoselectivity and stereospecificity , topicity and stereochemistry of SN , E2 ,bromination,sy nhydroxylation and epoxidation. Amino acids and Proteins: General theory preparation and reactions. Study of polypeptide and proteins.	To understand the concept of basic terms such as selectivity, specificity, topicity. To understand the stereochemistry of some selected reactions. It aims to study about amino acids and proteins. How they are synthesized. It also include study of polypeptides.	The students are able to understand the concept of selectivity, specificity and topicity. Students are able to understand stereochemical outcome of the reaction.  Students are able to understand general theory and structure of amino acids and proteins. They studied about its preparation and reactions. They also understand about polypeptides.
Unit II) Molecular Rearrangement: mechanism of electron deficient carbon and nitrogen and carbanion and some name reaction. Carbohydrates: introduction, structure, stereoisomers, synthesis and reactions.	The main objective of this unit is to focus on reactivity and stability of certain electron deficient carbon and nitrogen also about electron rich carbon. This unit also emphasis on name reactions. To understand about sugars its open and cyclic forms, its stability, mutarotation, natural abundance, preparation, and reactions.	Students gained an understanding of reactivity and stability of organic molecule based on its structure including conformation and stereochemistry. Students are able to have knowledge of general structure and cyclic form of sugars its stereochemistry and synthesis of glucose and arabinose. They also studied about reactions of it.
Unit III) Spectroscopy: Theory and applications of IR and NMR spectroscopy. Spectral problems Nucleic acid: Structure of	To understand the principle of IR and NMR spectroscopy. Its characteristics, spectral data, theory behind that and spectral problems in interpretation of structure of compound. To get information of structure and function of DNA, RNA, Sugars, Bases, Nucleotides, Nucleosides and Nucleic acid.	Students are able to interpret UV- Visible, IR, NMR and Mass Spectroscopy. They will able to understand basic principle of these and handling method. Mainly they will be able to interpret the structure of compound by knowing spectral data. Students are familiar of structure and characteristics of DNA, RNA,

DNA and RNA and Nucleic acid.		Bases, Nucleotides and Nucleosides.
Unit IV) Polymers: Introduction, addition and condensation polymer, stereochemistry natural and synthetic polymer. Additives and biodegradable polymers. Catalyst and reagents: Raney Ni, Pt and PtO <sub>2</sub> , Rosenmund and Lindler's catalyst. Reagents for oxidation, reduction, epoxidation and bromination.	To study about structure and uses of addition and condensation polymers. To study biodegradable, natural and synthetic polymers. To understand stereochemical outcome by using Zeigler Natta Catalyst.  To understand use of reagents and catalyst in certain reaction and its selectivity.	On completion of course students will be to describe the general structure, uses and synthesis of polymer. They also gained information of biodegradable polymers.  Students are able to understand which types of catalyst and reagents are used on a suitable substrate.

SEM-VI

CHEMISTRY-IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
Unit-1 Electro Analytical Technique	To study an analyte by measuring potential and current in electrochemical cell.	Students know about potential measurements by electrochemical cells like Polarimeter and Amperometer.
Unit-2 Methods of Separation-II	To understand the Instrumentation of Gas Chromatography, HPLC.	Students study about Instrumentation of Gas Chromatography, HPLC in details.
Unit-3 Food and Cosmetic Analysis.	To enrich and enhance the quality of our daily lives by investigating the features of bio resources.	Students learn about quality of our daily lives by studying the features of bio resources.

Unit-4 Thermal methods Analytical Method Validation	To understand the different kinds of Thermal Methods and Instrumentation regarding Thermal process. To have better understanding of validation process used in industry.	Students understand the different kinds of Thermal Methods. Students have better understanding of validation process.
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SEM-VI

**CHEMISTRY-V( APLIED COMPONENT-DRUGS AND DYES).**

SALLABUS UNIT WISE	OBJECTIVES	OUTCOME
UNIT I DRUGS Drug discovery, designs and development. Drug metabolism, Chemotherapeutic agents, Anti- biotic, antiviral, Antifungal, Anthelmintic and Antimalarial Drugs.	To understand process involve in drug discovery and to make interest of students in that.	The students understand importance of drugs.
UNIT II DRUGS Antiamoebic, Antitubercular, Antileprotic, Antineoplastic, Anti HIV Drugs. Drug intermediates. Nano particle in medicinal chemistry. Drugs and environmental aspects.	To have idea of deferent drugs use in life generally its dosage, benefits and side effect.	Students are capable of knowing the use of mentioned drugs in deferent situations.
UNIT III DYES Classification of dyes based on chemical constitution and synthesis of selected dyes. Health and environmental	To understand the properties and application of dye on various substrate. To study health hazardous of dye and method to avoid this.	This study make students capable of understanding dyeing processes and help in future to work as chemist. Students have idea of health hazardous of dyes.

hazards of synthetic dyes and their remediation processes.		
UNIT IV DYES Biomedical uses of dyes. Dyes used in foods and cosmetics. Paper and leather dye. Hair and leaser dyes. Indicators, security ink .Pigments. Dyestuff industry.	To study the importance of dyes in medicine, foods, cosmetics, paper, leather, hair and laser.	Students now about different uses of drugs its importance and side effect.

## **PROGRAMME SPRCIFIC OUTCOME:**

### **DEPARTMENT OF ZOOLOGY**

SR.NO	PROGRAMME SPECIFIC OUTCOME
1)	Learners would be amazed to know and understand beautiful world of animals and their interactions with surroundings.
2)	They will be able to correlate their existence with the other forms of the life on the earth.
3)	They can learn about the physiology, Anatomy, structures of cells, regulation, evolution, hierarchy and fundamental of all life forms.
4)	They will also explore the process of formation of different life forms on cellular basis. They can also distinguished between the different animals and appreciate the biodiversity.
5)	They will acquire the knowledge about environmental concerns and will contribute to conservation, management and sustainability.
6)	Learners will gain and implement the lessons of coexistence with nature.
7)	They will understand the technological advancement being made in biotechnology, medicinal sciences and contribute their own part.
8)	`Learners can also embark on an excursion of research through research ethics and methodology.

## COURSE OUTCOME:

### B.Sc. IN ZOOLOGY

SEM-I

ZOOLOGY-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Wonders of animal world	1) To get learners fascinated by the world of animals.	1) Learners will be fascinated by the amazing world of animals.
	2) To take them through a captivating journey hoarded with marvelous facts about animals.	2) Learners will have their interest enhanced through the captivating journey.
	3) To develop their interest in the subject.	3) They will develop love for the zoology subject.
UNIT II: Biodiversity and its conservation	1) To orient learners about rich heritage of biodiversity.	1) Learners would appreciate treasure of biodiversity.
	2) To guide them in detail through the various aspects of flora and fauna.	2) Learners will gain the knowledge of different levels and forms of biodiversity.
	3) To make them understand the significance of its conservation.	3) They will learn to contribute their best for the conservation and management for the same.
UNIT III: Footsteps to be followed	1) To impulse learners to think out of the box.	1) Learners mind would be triggered to think differently (from the entrepreneur point of view).
	2) To teach learners innovative and novel work of scientists/philosophers/entrepreneurs.	2) Learners will learn astonishing stories of great personalities who had contributed to the field of science and technology.
	3) To invoke in them the ideas to make advancement in biological sciences.	3) They would come up with their own crude ideas for the advancement of biological sciences.

SEM-I

ZOOLOGY-II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
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UNIT I: Laboratory safety, Units and Measurements.	1) To educate learners about the safety measures in the laboratory.	1) Learners would gain knowledge about how to work safely in the laboratory.
	2) To make them aware about the importance of being alert and cautious during an experiment.	2) They will boost up their scholastic performance by being cautious.
	3) To instill in them the skill of preparing chemicals precisely and avoiding wastage during an experiment.	3) They will learn meticulous preparations of chemical to maintain the economy of the materials.
UNIT II: Animal Biotechnologies	1) To expose the emerging field of biotechnology to the learners.	1) Learners would understand the recent advancement in biotechnologies.
	2) To give them practical knowledge regarding various aspects of animal biotechnology.	2) They will also learn its application for the betterment of mankind or society in general.
	3) To inspire them to take the field of biotechnology as their future research topics.	3) Their minds would be ignited to think out of the box in terms of biotechnology.
UNIT III: Instrumentation	1) To teach them to operate various instruments for experiments.	1) Learners will develop skills to operate suitable instruments for their practical protocols.
	2) To give them an insight about practical zoology.	2) They will learn about different components of practical zoology.
	3) To prepare them for meticulous experimentations in the future.	3) They will gain a better insight of future research experimentation.

SEM-II

ZOOLOGY-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Population ecology	1) To facilitate the learning of population ecology.	1) Learners would be exposed to the nature of population ecology.
	2) To teach them dynamics and regulatory factors important for the sustenance of population.	2) They will understand various factors affecting the growth of population.
	3) To highlight the need of studying concepts related to population	3) They will gain a deep insight into population related phenomenon.
UNIT II: Ecosystem	1) To impart knowledge of different components of ecosystem.	1) Learners will grasp the concept of physical, chemical and biological factors of environment.
	2) To educate learners about the relationship of biotic and abiotic factors.	2) They will learn about interdependence of biotic and abiotic components.

	3) To teach learners about conservation of all flora and fauna.	3) They will learn about the effect of loss of flora and fauna on human being.
UNIT III: National Parks and Sanctuaries of India	1) To enlighten learners about national parks, sanctuaries and its inhabiting wildlife.	1) Learners would study about various national parks and sanctuaries of the country.
	2) To guide them through the current status of wildlife in the light of guidelines from different governing agencies.	2) They would get to know about the current status of biodiversity and its conservation.
	3) To help them choose a career in wildlife related fields.	3) They would be inspired to choose a career in specific conservation, photography and ecotourism.

SEM-II

ZOOLOGY-II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Nutrition and health	1) To make learners understand the importance of balanced diet and essential nutrients.	1) Learners would be given knowledge about sound health and its importance.
	2) To encourage them to make and lead a healthy life and environment.	2) They would be inspired to take up healthy life style.
	3) To guide them to eliminate unhealthy eating habits from daily routine at different stages of life.	3) They will learn to prevent the risk of developing health hazards due to faulty dietary habits.
UNIT II: Public health and hygiene	1) To impart knowledge about source, quantum and need for conservation of various resources.	1) Learners would be encouraged to conserve water and electricity.
	2) To teach them essentials of maintaining proper sanitation and hygiene.	2) They would be inspired to maintain adequate personal hygiene and avoid addiction of all sorts.
	3) To make learners grow into healthy, aware and independent individuals.	3) They would learn to achieve goal of healthy young India in true sense.
UNIT III: Common human diseases and disorders	1) To educate learners about various disorders related to stress.	1) Learners would study about stress related problems and their relevant solutions.
	2) To make them able to promptly recognize stress related symptoms at initial stages.	2) They would be encouraged to develop a sound psychological state of mind.
	3) To teach them about various infectious diseases and help them develop positive attitude important for academics.	3) They will acquire knowledge of causes, symptoms, precautions of infectious diseases.

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Fundamentals of Genetics	1) To make learners able to learn the concept of heredity and inheritance.	1) Learners would comprehend and apply the principles of inheritance to study heredity.
	2) To make them aware about the principles of alleles, linkage, recombination and crossing overs.	2) Learners would understand the concept of multiple allele, linkage, crossing over.
	3) To give them knowledge about the work of Mendel and his contribution to genetics as Mendelian inheritance.	3) Learners would develop conceptual clarity of Mendelian Inheritance.
UNIT II: Chromosome and Heredity	1) To teach them the basic structure and types of chromosome.	1) Learners will comprehend the structure of chromosome and its different types.
	2) To make them understand the concept of sex determination by the combination of sex chromosomes in different animals.	2) Learners will understand the mechanism of sex determination in different life forms.
	3) To make them learn about various chromosomal aberrations and its effect.	3) Learners would be able to understand and correlate disorders with chromosomal abnormalities.
UNIT III: Nucleic acids	1) To teach them the basic structure of nucleic acids.	1) Learners will understand the concept of nucleic acids as genetic material
	2) To get them fascinated about the whole concept of gene expression in the form of proteins.	2) Learners will study the concept of gene expression and regulation.
	3) To make them understand the theory of central dogma of molecular biology and hierarchy of biomolecules.	3) Learners will grasp the idea and significance of central dogma.

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Nutrition and Excretion	1) To introduce the concepts of physiology of nutrition, excretion and osmoregulation.	1) Learners would understand the concept of physiology of nutrition, excretory system along with functions and osmoregulation.
	2) To expose the learners to various nutritional apparatus, excretory and osmoregulatory structures.	2) Learners would be able to correlate the importance of various nutritional apparatus, osmoregulatory structures.
	3) To teach them evolution related to physiology of nutrition and excretion.	3) Learners would be exposed to the concept of evolutionary hierarchy in physiology of nutrition, excretion.
UNIT II: Respiration and circulation	1) To introduce the concepts of physiology of respiration and circulation.	1) Learners would understand the complexity of respiratory and circulatory physiology.
	2) To expose the learners to various respiratory and circulatory organs in different classes of organisms.	2) Learners would be able to correlate the habit and habitat of animals with respiratory and circulatory organs.
	3) To teach learners about the evolutionary pattern seen in physiology of respiration and circulation.	3) Learners would be exposed to the concept of evolutionary hierarchy seen in physiology of respiration and circulation.
UNIT III: Control, Coordination locomotion and Reproduction.	1) To make learners understand about the concept of control and coordination involving nervous and endocrine system.	1) Learners would understand the process of control and coordination by nervous and endocrine regulation.
	2) To teach them about various locomotary structures.	2) Learners would be astonished by various locomotary structures of animal kingdom.
	3) To give them knowledge about reproductive processes in animals	3) Learners would be acquainted with various reproductive strategies in animals.

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Ethology	1) To teach learners about basic ethology through different behavioral pattern.	1) Learners would gain an insight into different types of animal behavior.
	2) To give them knowledge regarding various adaptations in animals.	2) Learners will understand the biological adaptations of various animals.
	3) To acquaint them to the process and significance of instrumental learning.	3) Learners would be sensitized to the concept of instrumental learning.
UNIT II: Parasitology	1) To acquaint the learners with the concept of parasitism.	1) Learner will understand the epidemiology of various types of parasites.
	2) To introduce the learners to modes of transmission of parasites.	2) Learners would be gaining knowledge about the life cycles and sources of dreadful parasites.
	3) To teach the learners about how simple preventive measures can be taken to tackle the infections.	3) Learners will learn to take simple prevention measures of these parasitic infections.
UNIT III: Economic Zoology	1) To disseminate information on economic aspects of animals like apiculture, vermiculture and dairy science.	1) Learners would gain knowledge about various animals useful to mankind.
	2) To acquaint them with all the aspects of animal husbandry.	2) Learners would learn the modern concepts and techniques of animal husbandry.
	3) To encourage young learners for self-employment.	3) Learners would know the concepts or ideas of pursuing entrepreneurship as a career.

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Origin and Evolution of life	1) To impart scientific knowledge to the learners about how life originated on planet earth.	1) Learners will gain insights into the concept of origin of life.
	2) To teach them about various theories of evolution.	2) Learners will also analyze different theories of evolution.
	3) To make them understand about the significance of evolutionary history on earth.	3) Learners will critically view the topic of origin of life.
UNIT II: Population	1) To develop an understanding in the learners about genetic variability	1) Learners will understand the forces that caused evolutionary

Genetics and Evolution	within a population.	change.
	2) To teach them about how the change in gene pool leads to evolution of species and speciation.	2) Learners would enjoy studying the mechanism of speciation.
	3) To acquaint them about various types of evolution.	3) Learners will be able to distinguish between micro-evolution, macro-evolution and mega-evolution.
UNIT III: Scientific Research, attitude and Methodology	1) To inculcate scientific temperament in the learners.	1) Learners will develop qualities such as critical thinking and analysis.
	2) To make them understand about various tools of research methodology.	2) Learners will imbibe the skills of scientific communications.
	3) To teach them about the correct procedure of how to conduct an ethical research.	3) Learners will understand the ethical aspect of Research.

## SEM-IV

## ZOOLOGY-II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Cell biology	1) To study the structural and functional organization of cell.	1) Learners will acquire knowledge about cellular organization.
	2) To teach them about various cellular organelles with an emphasis on nucleus, plasma membrane and cytoskeleton.	2) Learners will be able to know about various organelles.
	3) To give them knowledge about cytoplasmic components and various transport mechanisms.	3) Learners will gain insight into the composition of cytoplasm and transport mechanisms.
UNIT II: Endo-membrane system	1) To acquaint the learners with the ultra-structure of cell organelles and their functions.	1) Learners would appreciate the intricacy of endo-membrane system.
	2) To teach them about the regulatory factors required for smooth functioning of cell	2) Learners would understand the interlinking of endo-membrane system for functioning of cell.
	3) To imbibe in them the concept of energy production and expenditure at cellular level.	3) Learners would gain knowledge about energy production in cell.
UNIT III: Bio-molecules	1) To give learner insight into the structure of biomolecules.	1) Learner will realize the importance of various bio-molecules.
	2) To make them understand the role of biomolecules in the sustenance of life	2) Learners will understand the critical significance of bio-molecules.

	3) To teach them about micro molecules and macro molecules.	3) Learners will acquire knowledge about the monomers and their polymers.
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SEM-IV

ZOOLOGY-III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Comparative Embryology	1) To acquaint the learners with key concept of embryology.	1) Learners will be able to understand the concept of egg and sperm.
	2) To teach them to compare the different pre-embryonic stages.	2) Learners will gain insights into the stages of pre-embryonic development.
	3) To give them knowledge about entire process of formation of neo-natal stages.	3) Learners will be amazed by the knowledge of formation of life, from the single cell form.
UNIT II: Aspects of Human Reproduction	1) To acquaint the learners with different aspects of human reproduction.	1) Learners will understand human reproductive physiology.
	2) To teach them about various causes of infertility and techniques to overcome it.	2) Learners will become familiar with the revolutionary advances in 'IVF' and other 'ART' procedures.
	3) To make them aware of the ethical aspects of birth control, ART.	3) Learners will be acquainted with the ethical issues related to natural process of reproduction and ART.
UNIT III: Pollution and its effect on organism	1) To provide a panoramic view of human activities leading to pollution.	1) Learners would be sensitized about the alarming issue of pollution and its various types.
	2) To give them insight into various implications of pollutions.	2) Learners will understand the adverse effects of pollution on all walks of life.
	3) To sensitize learners about adverse effects of pollution and measures to control it.	3) Learners would be triggered to think and learn about the controlling measures for the same.

SEM-V

ZOOLOGY-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I : Principles of Taxonomy	1) To introduce the learners the principle of taxonomy.	1) Learners will understand the principles of taxonomy and modern system of

		classification.
	2) To teach them modern system of classification to give them an evolution point of view.	2) Learners will catch up the basis of classification and modern classification of the lower invertebrate animals.
UNIT II: Kingdom: Animalia I	1) To teach them general characters and classification of kingdom Animalia from Porifera to Nematode.	1) Learners will understand the classification of animals from Phylum Porifera to phylum Nematoda along with representative examples.
	2) To familiarize the learners with the interesting examples of specific phylum.	2) Learners will get chance to apprehend the general characters and specific characters of each example of phylum.
UNIT III: Kingdom : Animalia II	1) To teach learners basic concept of classification from Phylum Annelida to hemichordate.	1) Learners will get an idea of higher groups of invertebrate animal life, along with their habitat and their peculiar aspects
	2) To familiarize them with the general and specific characters of the specific phylum.	2) Learners will be introduced to the basic concepts of classifications of Phylum annelid to phylum hemichordate.
UNIT IV: Type study: Sepia	1) To acquaint learners with the details of Sepia as a representative of invertebrate animals.	1) Learners will get an idea of general habitat, various systems of this animal in detailed manner.
	2) To teach them general characters of Sepia.	Learners will get an idea of general characteristics of this animal.

SEM-V

ZOOLOGY-II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Basic Hematology	1) To teach learners the composition of blood, hematopoiesis and hemorrhage.	1) The learners would be introduced to basics of hematology.
	2) To acquaint the learners with the basic concept of physiology of blood clotting, clinical aspects of hematology.	2) The learners will be able to identify various components of haemostatic systems

UNIT II: Applied Hematology	1) To introduce the learners the basic concept of applied hematology.	1) The learners shall be acquainted with diagnostic approach in hematological disorders.
	2) To impart them knowledge about diagnostic techniques in pathology.	2) The learners will be better equipped for further pathological course or working in a diagnostic laboratory
UNIT III: Basic Immunology	1) To introduce the learners to the topic of immunology by emphasizing on the basics to build a strong foundation.	1) The learners shall comprehend the types of immunity and the components of immune system.
	2) To impart them knowledge about significance of immune system in disease resistance.	2) The learners will realize the significant role of immune system in giving resistance against diseases.
UNIT IV: Applied immunology	1) To introduce immunopathology and immunological perspectives of organ transplantation.	1) The learners will develop basic understanding of immunology of organ transplantation
	2) To introduce the concept of vaccines and vaccinations.	2) The learners shall understand immune-pathology and the principles and applications of vaccines.

## SEM-V

## ZOOLOGY-III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Mammalian histology	1) To introduce learners to the concept of planned organization of tissues and cells.	1) Learners would be familiarized with the cellular architecture of the various organs in the body
	2) To make them understand the need and importance of various types of tissues in vital organs.	2) Learners would appreciate the well planned organization of tissues and cells in the organ systems
UNIT II: Toxicology	1) To introduce the learner to the principles of toxicology with emphasis on toxic response to chemical exposures.	1) The learners will be able to develop broad understanding of the different areas of toxicology.
	2) To develop amongst learners an introductory understanding of regulatory affairs in toxicology.	2) The Learners will also develop critical thinking that will assist students in preparation for employment in pharmaceutical industry.

UNIT III: General pathology	1) To teach them about the basics of general pathology.	1) The learners will be allowed to have a deep understanding of general pathology.
	2) To impart knowledge of retrogressive, necrotic, pathological conditions and repair mechanisms of the body.	2) Learners will be exposed to various medical terminologies pertaining to pathological condition of the body caused due to various diseases.
UNIT IV: Biostatistics	1) To familiarize learner with biostatistics as an important tool of analysis.	1) The learners will be able to collect, organize and analyze data using parametric and nonparametric tests.
	2) To teach them about the wide application of biostatistics.	2) The learners will be able to set up a hypothesis and verify the same using limits of significance.

SEM-V

ZOOLOGY-IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Integumentary system and derivatives	1) To introduce the learners the concept of different integumentary structures.	1) Learners will be able to understand the importance of various types of epidermal and dermal derivatives along with their functions.
	2) To teach them about various derivatives of integument in vertebrates.	2) The learners would be acquainted with special derivatives of integument and their structures along with specific origin.
UNIT II: Human Osteology	1) To introduce the learner to different types of bones of human skeleton.	1) Learners will be studying the structure, types and functions of human skeleton
	2) To give them knowledge about functional importance of human skeleton and associated structures.	2) Learners would identify and learn different bones of human skeleton and their functional importance.
UNIT III: Muscles of long bones of Human limbs	1) To study long limbs muscles involved in body movements.	1) Learners will be able to understand the types of long limb muscles and their role in body movements.
	2) To identify various arrangements of long limb muscles and to relate it with the contraction and motion.	2) Learners will be in a position to identify various arrangements of the long limb muscles along with contraction and motion.

UNIT IV: Developmental biology of Chick	1) To introduce the basic concept of developmental biology with reference to chick as a model.	1) Learners will be able to understand the processes involved in embryonic development.
	2) To make them understand about the processes involved in embryonic development and practical application of studying chick embryology.	2) Learners will also study practical applications of chick embryology and its development stages.

SEM-V

ZOOLOGY (APPLIED COMPONENT- FISHERY BIOLOGY).

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Oceanography	1) To enable learners learn about oceanographic, navigational and sea safety instrument.	1) Learners shall understand and learn about the use of sea safety, navigational equipments and oceanographic instruments.
	2) To teach them about basic physical, chemical and biological parameters of oceans.	2) Learners shall understand basic physical, chemical and biological oceanography.
UNIT II: Crafts and gear	1) To acquaint learners about techniques of boat building and engine designing.	1) Learners shall comprehend boat building techniques and design of engines used in mechanized boats.
	2) To make them understand about various types of nets and fishing method.	2) Learners shall understand the operations of various types of nets and fishing method.
UNIT III: Farming of major carps	1) To develop skills of breeding techniques, hatchery management and management of major carps.	1) Learners will comprehend hatchery and nursery management of major carps.
	2) To study and explore various techniques used in fishery poly culture.	2) Learners will understand breeding techniques and skills for culture of major carps.
UNIT IV: Introduction to other commercial aquaculture practices in fresh water	1) To develop skills and understanding of breeding and rearing of sewage-fed fishery, Basa cat fish and tilapia by novel ways.	1) Learners will gain knowledge about how to breed and rear ornamental fishes and commercially viable fish species.
	2) To teach learners about various entrepreneurial operations to make them able to work in fishery units.	2) Learners will be equipped to carry out entrepreneurial operations or gain confidence to work in freshwater prawn unit.
UNIT V: Culture of shell fishes and fin- fish	1) To study rearing practices of fin-fish and shell fishes.	1) Learners shall understand breeding techniques, hatchery and management of finfish and shell fishes.

	2) To study culture of brackish water shrimp.	2) Learners shall understand the rearing techniques.
UNIT VI: Quality control and packaging	1) To comprehend various aspects of quality control.	1) Learners will be oriented towards understanding the various stages of quality control.
	2) To acquaint learners about various packaging processes involved in fish processing and marketing.	2) Learners shall comprehend the value of maintaining and taking sanitary precautions during the processing and packaging operations.
UNIT VII: Quality control and packaging	1) To acquaint learners with the fundamentals of marketing and finance.	1) Learners shall acquire knowledge about traditional marketing practices and role of co-operatives in selling fish.
	2) To instill in them the knowledge of various aspects of entrepreneurship in fishery related enterprises.	2) Learners shall be exposed to the avenues and procedure for raising funds for fishery related entrepreneurial practices.
UNIT VIII: Case Study and Simulation	1) To inculcate entrepreneurial abilities and skills so as to make learners confident and prepare them to raise new projects in the realm of fishery biology.	1) Learners will gain technical and financial knowledge in fishery biology business ventures.
	2) To assess varying dimensions while taking decisions in fishery biology.	2) Learners will develop better acumen so as to take wise and necessary decisions while participating in fishery biology related projects.

SEM-VI

ZOOLOGY-I

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Phylum Chordata: Group Protochordata and Group Euchordata I	1) To introduce basic concept of modern chordate classification with evolution point of view.	1) Learners will get glimpse of origin of Chordates, its taxonomy with reference to phylogeny and their special features.
	2) To make them understand the concept of taxonomy in higher animal kingdom.	2) Learners would be in a position to understand the concept of taxonomy in higher animal kingdom.
Unit II: Group Euchordata II	1) To teach learners about the characters of Euchordata division.	1) Learners will be studying the position of mouth and development of habitats.

	2) To give them knowledge about habit, habitat, external and internal characters of lung fish.	2) Learners would also know as to how historical lung-fishes survived on land with respiratory organs.
UNIT III: Group Euchordata III	1) To introduce the learners to the distinguishing characters of class reptilian, aves and mammalia	1) Learners will understand the characteristic features and examples of each class of Reptilia, Aves as well as Mammalia.
	2) To teach them about their adaptive features with reference to their habitat.	2) This will help learners to study distinguishing characters of classes Reptilia, Aves and Mammalia and their adaptive features with reference to their habitats.
UNIT IV: Type Study: Shark	1) To study in depth one vertebrate animal type	1) Learners will get an idea of vertebrate animal life (one representative animal which is shark).
	2) To study the general characteristics and salient features of shark.	2) Learners would be getting chance to study salient features and general characters of shark.

SEM-VI

ZOOLOGY-II

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I : Enzymology	1) To introduce learners to the fundamental concept of enzyme biochemistry.	1) The learners shall understand fundamentals of enzyme structure, action and kinetics.
	2) To enable learners realize the applications of enzymes in basic and applied sciences.	2) The learners shall appreciate the enzyme assay procedures and the therapeutic applications of enzymes.
UNIT II: Homeostasis	1) To introduce to the learners the concept of homeostasis and stable internal environment.	1) The learners shall be studying concept of homeostasis-thermoregulation and osmoregulation.
	2) To teach them the significance of thermoregulation and osmoregulation.	2) The learners shall comprehend the adaptive responses of animals to environmental changes for their survival strategies.
UNIT III: Endocrinology	1) To introduce to the learners the details of endocrine glands.	1) The learners shall understand the types and secretions of endocrine glands and their respective functions.
	2) To teach them about the various	2) The learners will realize the

	disorders associated with faulty functioning of endocrine glands.	significant role of endocrine glands and its disorders in human body.
UNIT IV: Animal tissue culture	1) To introduce to the learners the fundamental concept of tissue culture.	1) The learners would be studying the importance of tissue culture in specialized areas of research.
	2) To guide them progressively through certain areas of animal tissue culture.	2) The learners would be in position to appreciate applications of tissue culture in various industries.

SEM-VI

ZOOLOGY-III

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Molecular Biology	1) To introduce learners to chemical and molecular processes that affect genetic material.	1) Learners shall get an insight into detailed manner of chemical and molecular processes which affects genetic material.
	2) To make learners understand the concept of DNA damage and repair and how gene control is necessary for cell survival.	2) The learners would study in-depth about significance of molecular biology as a basis for the study of other areas of biology and biochemistry.
UNIT II: Genetic Engineering	1) To introduce learners set of techniques related to genetic engineering.	1) The learners will get acquainted with the vast options of techniques used to manipulate genes.
	2) To acquaint them to procedures required to modify an organism's genome for producing novel genes.	2) The Learners will study techniques to modify an organism's genome to manufacture improved or novel genes and organisms.
UNIT III: Human genetics	1) To introduce learners to genetic manipulations significant in the study of human genetics.	1) The learners should understand genetic alterations in human genome and their diagnosis.
	2) To make them aware about the impact of changes taking place at gene level on human health.	2) The leaners would become aware of the effects of changes occurring at genetic level on human health and its diagnosis.
UNIT IV: Bioinformatics	1) To introduce learners to the magnificent tool of bioinformatics.	1) The learner will be introduced to Bioinformatics which is a latest and ongoing

		research topic in today's world.
	2) To teach them about the computational approach to learn more about structure, organization and phylogeny of organism.	2) The learner will become aware of the computational tools, different websites, sequencing methods and predictive applications.

SEM-VI

ZOOLOGY-IV

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Environmental Management	1) To introduce the learners to the concept of environmental management through detailed analysis of various causative agents of environmental degradation.	1) Learners will be able to understand different factors affecting our environment. In addition, they will learn various methods to improve environmental stewardship.
	2) To learn the impact of factors and overviewing the environment management laws.	2) The learners will understand the different factors affecting environment, it's impact and environment management laws.
UNIT II: Wildlife Management	1) To sensitize learners regarding various threats to wildlife.	1) Learners will be studying various methods of wildlife conservation.
	2) To introduce learners various ways that can help in the protection, conservation, management and enhancement of wildlife populations.	2) Learners would be able to apply knowledge to overcome the issues related to wildlife conservation and their management.
UNIT III: Bio- prospecting and Zoo- pharmacognosy	1) To introduce learners to the concept of bioprospecting and zoopharmacognosy leading to the discovery and commercialization of new products.	1) Learners will be able to understand the paradigms of discovery and commercial utilization of biological resources and knowledge gained from self-medication observed in animals.
	2) To learn about various ways of self-medication in animals, throwing light on the significance of naturally available biological resources.	2) Learners will be studying various ethological aspects by which non-human animals apparently self-medicate themselves.

UNIT IV: Zoogeography	1) To introduce the learner about the geographic distribution of animal species.	1) Learners will be acquainted with many aspects of different animal species which are scattered around the globe.
	2) To teach learners various theories about animal distribution, barriers, dispersal patterns and zoogeographical realms	2) Learner will study geographic distribution with respect to present and past of animal species around the globe.

SEM-VI ZOOLOGY(APPLIED COMPONENT- FISHERY BIOLOGY)

SYLLABUS (UNIT WISE)	OBJECTIVES	OUTCOME
UNIT I: Marine Fin-fish of India	1) To study coastal and deep sea fishes.	1) Learner shall understand deep sea and coastal fishes.
	2) To study commercial potential and major landing centers.	2) Learner shall understand commercial potential and know about the major landing centres of the fishes.
UNIT II: Marine Shell of India	1) To develop an in-depth understanding of crustaceans and molluscan fisheries.	1) Learner shall understand crustacean and molluscan fisheries.
	2) To study about performances of landing centers of various fisheries.	2) Learner shall understand the performance of landing centres of above fisheries.
UNIT III: Nutrition	1) To study and discover the growing market for fish nutrition.	1) Learner will get acquainted with basics of nutritional requirements at various developmental stages of crustaceans.
	2) To acquaint learners with different nutritional requirements of fishes at different stages.	2) Learner will study basics of nutritional requirements at different developmental stages of fishes.
UNIT IV: Diseases	1) To acquire knowledge of the various aspects of diseases affecting fishes.	1) Learners will get a chance to acquire knowledge of the various aspects of fish diseases.
	2) To give them an insight into the preventive measures and prophylaxis of fish related disorders.	2) Learners would be getting sound understanding of causes, pathogenicity, prophylaxis and preventive measures of various fish diseases and their physiological disorders.

UBIT V: Preservation and Processing	1) To derive knowledge about various fish preservation and processing methods.	1) Learners will acquire the knowledge and would put in to practice the preservation and processing techniques for commercial ventures
	2) To teach learners about various preservation and processing techniques for commercial centers.	2) Learners will derive knowledge about various fish preservation and various processing methods.
UNIT VI: By-products and Value Added Products	1) To acquire knowledge about fish by-products, value added products.	1) Learner will gain sound knowledge about the fish by-products and value-added products.
	2) To teach them about various good manufacturing practices.	2) Learner will explore good manufacturing practices while manufacturing these products
UNIT VII: Farm engineering	1) To acquire knowledge about farm engineering and novel fish culture practices.	1) Learner will understand the selection process of hatchery sites and various types of designs and construction of aquaculture farm practices.
	2) To teach learners about selection process of hatchery sites and various types of design of aquaculture farm.	2) Learners will comprehend the uses of equipment and accessories involved in aquaculture farms
UNIT VIII: Open unit	1) To teach any one of the units prescribed in the syllabus with more details and in depth knowledge leading to specialization in the capsule of units selected.	1) Learner to give scope to creativity and wisdom of a teacher who wants to deal with the latest developments in the subject without waiting for the university to revise the syllabus.
	2) To incorporate the topics of special need of the area which are otherwise not covered in the syllabus.	2) Learners to incorporate the topics of special need of the area which are otherwise not covered in the syllabus.