



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

### PROGRAMME OUTCOME

| Sr.No      | Programme Outcome  |
|------------|--|
| <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

| 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:

#### B.A. ECONOMICS

SEM: I

MICRO ECONOMICS-I

| SYLLABUS<br>(UNIT<br>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 |



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|----|---|---|
|    |   | 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. |



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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. |



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|----|---|---|
| 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.                                      |



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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<br/>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<br/>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.. |



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|--|--|---|
| <b>Module III<br/>Short Stories/<br/>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 them towards humans, animals and nature. |
|--|--|---|

SEM: I & II

**COMMUNICATION SKILLS IN ENGLISH PAPER I/II**

| Syllabus (Unit Wise)  | Objectives  | Outcome  |
|---|---|--|
| <b>Module I<br/>Grammar/<br/>tenses/ skills of<br/>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<br/>Writing skills/<br/>business<br/>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<br/>Essay writing/<br/>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 & IV

**AMERICAN LITERATURE**

| Syllabus (Unit Wise)                                   | Objectives  | Outcome  |
|--|---|--|
| <b>Module I<br/>Literary terms/<br/>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<br/>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<br/>Short Stories/<br/>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**

| Syllabus (Unit Wise)                              | Objectives   | Outcome   |
|---|--|---|
| <b>Module I<br/>Literary/<br/>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<br/>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<br/>Short Stories/<br/>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<br>Student must be able to understand the founding and working of various Provincial Associations<br>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<br>Student must be able to know the leaders of the Extremist politics, its role, objectives and work in the growth of Indian National Movement<br>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 its significance.<br>Students must be able to know the role of different sections of the society in civil disobedience movements<br>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 Mountbatten plan<br>Student must be able to understand independence and partition of India   |





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SEM-II

HISTORY OF MODERN INDIA : SOCIETY & ECONOMY

| SYLLABUS<br>(UNIT<br>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<br>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<br>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<br>(UNIT<br>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<br>Students must be able to understand geographical discoveries by eminent voyagers<br>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<br>Students must be able to understand nationalist movements in Italy and role played by Mazzini, Count Cavour and Garibaldi<br>Students must be able to understand nationalist movement in Germany and Bismarck role in final unification of Germany |



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|          |  | 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<br>Students must be able to understand the Russian revolution and the role of Lenin<br>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<br>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<br>Students must be able to understand Rise and decline of Jainism and Buddhism<br>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<br>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<br>Students must be able to understand the rise of Nazism in Germany under the dictatorship of Hitler<br>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<br>Student must be able to understand the Atlantic charter and formation of U.N.O.for world peace   |



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| 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.<br>Student must be able to understand the administration under the Mauryas.<br>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.<br>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.<br>Student must be able to understand the Rise of Rajput powers.<br>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<br>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<br>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 Vijaynagarkingdoman dBahamani Sultanate | After the completion of this unit, student must be able to understand the rise, growth and decline of Vijayanagarkingdom and Bahamani Sultanate<br>Student must be able to understand the administration, socio-eco and cultural conditions in the Deccan states |



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| 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<br>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 |



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|        |  |   |
|--------|--|---|
| 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<br>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<br>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<br>(UNIT WISE) | OBJECTIVES  | OUTCOME   |
|-------------------------|---|---|
| Module I                | To explain the brief history of the making of Constitution<br>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<br>Learners understand the importance of preamble and features of Constitution.           |
| Module II               | To make Learners aware about their Fundamental Rights<br>To explain the Directive Principles of state policy                              | Learners develop an understanding about citizens Fundamental rights<br>Pupils understand the directive principles of state policy   |
| Module III              | To teach Learners about the legislature<br>To make Learners aware about the Judicial system and Judicial Activism in India                | Learners get to know about the legislature structure and process.<br>They understand the working of single integrated judicial system of India  |
| Module IV               | To explain the role and functions of union executive<br>To provide explanation about the local self government                            | Learners gain a knowledge about the role and functions of union executive<br>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.<br>To acquaint with Centre State Relations<br>To discuss the Changing Dynamics of Centre-state Relations. | The learner relates the federal aspects with working of Centre State Relations<br>Discuss and debate the Changing Dynamics of Centre-state Relations.   |



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|             |  |   |
|-------------|--|---|
| Module VI   | To discuss the role and Importance of Pol. Parties.<br>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<br>To explain the significance, nature and approaches related to political theory | Learners came to know about the meaning and concept of political theory<br>Learners understand the importance of studying political theory |
| Module II            | To teach the concept of state<br>To explain the concept of Nation State and Civil Society  | Learners gets aware about the concept of state<br>Pupils developed an understanding about the Nation state and civil society               |
| Module III           | To introduce the concept of power and authority<br>To examine the concept of legitimacy  | Learners come across the meaning concept and importance of power and authority<br>They Learn about the significance of legitimacy          |
| Module IV            | To explain the concept of law<br>To examine the meaning nature of political obligation and highlight the Right to Resist                   | Learners gets familiar with the concept of Law<br>They understand the political obligation and importance of resistance                    |
| Module V             | To study Nature and Theories of Rights<br>To examine the Three Generations Of Rights   | The Learner gets information about nature and theories of Rights<br>They understand the Three Generations Of Rights.                       |
| Module VI            | To discuss the Basic Political Value<br>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<br>To review the challenges to Democracy   | Learner is acquainted with the concept of Democracy<br>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<br>To explain the evolution of Public Administration as a discipline | Learners understand the meaning, scope and importance of Public Administration<br>Learner developed an understanding about the various evolutionary |



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|             |   |   |
|-------------|---|---|
|             |   | 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<br>Pupils get to know the contribution of various thinkers in the theories of Administration  |
| Module III  | To explain the various theories of organisation<br>To explain the Motivational and Leadership theories  | Learners understand the theories of organisation<br>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 get aware about the contemporary Techniques used in Administration<br>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<br>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<br>To review the working of Parliamentary Committees   | Understands the Budget making and Enactment process<br>The working of Parliamentary Committees is analysed  |
| Module VIII | To teach about the concepts <ul style="list-style-type: none"> <li>○ Integrity in 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 in 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<br>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<br>To examine the phases of Cold war   | The learner will get an idea the concept of Cold war<br>Understanding of the various phases of Cold war                                    |
| Module III           | To explain types and nature of conflict in international order<br>To aware the Learners about various concepts of peace and importance of collective security | The pupils understand the nature and type of conflicts<br>Learner build an understanding about importance of peace and collective security |



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|-------------|---|---|
| Module IV   | To make Learner familiar about different Bretton Wood's institutions<br>To examine the role of regional organisation and Globalisation in international relations | Learner learn about the various international institutions<br>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<br>To describe the Factors determining Indian Foreign Policy  | Learns about the Foreign Policy and Diplomacy<br>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<br>To discuss about ASEAN   | The learner studies India and UN peacekeeping efforts at UN<br>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<br>To examine John Locke's social contract theory | Learners gets to know the ideas of Niccolo Machiavelli on modern state<br><br>The Learners understand the social contract theory of John Locke                          |
| Module II            | To explain john Stuart Mill's views on liberty and representative government<br>To examine John Rawls theory of Justice   | Learners became aware about the Mill's contribution towards liberty and representative government<br>Learners learnt the Rawls theory of Justice                        |
| Module III           | To explain the karl Mark's observation on revolution and class conflict<br>To examine Antonio Gramsci thoughts about hegemony and counter hegemony                                    | Learners came to know about the Mark's views on revolution<br>Learners understand the concept of hegemony and counter hegemony  |
| Module IV            | To show the impact of Simone De Beauviour ideas on feminism and existentialism<br>To highlight the Will Kymlicka's ideas on Liberal Multiculturalism                                  | Pupils learnt about the contribution of Simone De Beauviour in strengthening feminism<br>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   |





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|-------------|--|--|
| Module VII  | To examine Dr Ambedkars thoughts on Social and Cultural Transformation.<br><br>To explain Agarkars views on Radical reforms. | Learners developed an understanding about the Dr Ambedkars thoughts on Social and Cultural Transformation.<br>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.<br>To Examine M.N. Roy's Idea about Socialism                | Analysed the impact of Nehruvian ideas on Socialism and eco.Dev.<br>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<br>To examine the idea of Samyukta Maharashtra   | Pupils developed an understanding about the historical background of Maharashtra<br>Learners gets to know the struggle behind the formation if Maharashtra                        |
| Module II            | To enlighten the Learners about the regional disparities in Maharashtra<br>To highlight the various steps taken to remove the regional disparities   | The Learners aware about the regional imbalances in the state<br>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<br>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<br>Learners understand the role and functions of Governor, chief minister and Judiciary                      |
| Module IV            | To explain the dominance of Caste politics in Maharashtra<br>To highlight various Dalit movement in shaping Maharashtra's politics   | Learners understand the importance of caste politics in Maharashtra<br>Learners came to know about the various Caste movements in Maharashtra                                     |
| Module V             | To discuss Politics-Economy Relationship<br>Cooperative Sector<br>Land Issues  | Understand the Nexus between Politics-Economy .<br>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<br>To examine the Environmental policies in Maharashtra<br>Review the RTI Act in Maharashtra  | The learner studies the alternate models of Development in Maharashtra<br>Also is familiarised by the Environmental policies in Maharashtra<br>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<br>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<br>(UNIT WISE) | OBJECTIVES  | OUTCOME  |
|-------------------------|---|--|
| MODULE I                | To teach social, political and religious conditions of pre-Islamic Arabia<br>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<br>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<br>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<br>Students will get the knowledge of basic Arabic grammar and Islamic terminology. |

SEM-II

ISLAM AND ITS BASIC TENETS-I

| SYLLABUS<br>(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 | The students will learn the significance and importance of five                         |



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|            |   |   |
|------------|---|---|
|            | Islam.  | pillar of Islam   |
| Module III | To study the importance of piety in Islam and Quran's emphasis on piety<br>To teach the status of women and their rights, institution of marriage and divorce in Islam, laws of inheritance | The students will be able to understand the importance of piety in Islam and Quran's emphasis on piety<br>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.<br>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.<br>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.<br>They will understand the contributions of Arab scholars towards Tafsir of Quran. |



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|            |   |  |
|------------|---|--|
| 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 Education in Islam and Islamic Concept of Justice.<br>Basic Arabic grammar and Islamic terminology | The students will get an idea of educational system of Islam and Islamic concept of justice.<br>Students will get the knowledge of basic Arabic grammar and Islamic terminology. |

**SEM-IV THE PROPHET MUHAMAMD'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 Mutah and Hunain.   | The students will get the knowledge about the causes and strategies of conquest of Makkah, battle of Mutah 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)<br>To discuss the last days of Prophet Muhammad(SAW)                                    | Understanding significance and importance of farewell pilgrimage of Prophet Muhammad (SAW)<br>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.<br>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.<br>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.<br>To explain Importance and features of Four school of Islamic jurisprudence.            | Understanding the origin and development of Islamic Law and its sources.<br>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<br>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<br>Students will get the knowledge of basic Arabic grammar and Islamic terminology. |



## PROGRAMME SPECIFIC OUTCOME

### DEPARTMENT OF URDU

| PROGRAM                                | SPECIFIC OUTCOME   |
|--|--|
| UG<br>Programme<br>T.Y.B.A.<br>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

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

| PROGRAM  | SPECIFIC OUTCOME  |
|--|---|
| UG<br>Programme<br>F.Y.B.A.<br>&<br>S.Y.B.A<br>IN URDU | <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> |

### COURSE OUTCOMES:

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

| Course Outcomes   |   |
|---|---|
| Courses   | Outcomes  |
| F.Y.B.A.<br>IN URDU<br><br>Semester- I<br>Semester – II | 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 |





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|  |            |
|--|------------|
| <b>&amp;</b><br><br><b>S.Y.B.A</b><br><b>IN URDU</b><br>Semester- III<br>Semester – IV | Literature |
|--|------------|

**T.Y.B.A. IN URDU**

| <b>Course Outcomes</b>  |  |
|---|--|
| <b>Courses</b>  | <b>Outcomes</b>  |
| <b>T.Y.B.A. IN URDU</b><br><br>Paper IV<br>Paper V<br>Paper VI<br>Paper VII<br>Paper VIII<br>Paper IX | <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.   |





## COURSE OUTCOME:

**PAPER NAME/NUMBER: I (COMMERCE)**

**SEM: I**

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME   |
|----------------------|--|---|
| 01                   | To provide information about concept and objective of business.<br>To know about new trends in business.           | Students will analyse the concept of business and the impact of LPG on an economy.  |
| 02                   | To teach about constituents and international business environment.  | Students will be able to evaluate the business environment and their impact on Indian business.                                       |
| 03                   | To understand the project planning, business unit promotion and statutory requirements in promoting business unit. | Students will develop the ability of analysing the project plans and accordingly gain from the opportunities available in the market. |
| 04                   | To provide information about concept and different types of entrepreneur.  | Students learn and inculcate entrepreneurial skill.   |

**PAPER NAME/NUMBER: II (COMMERCE)**

**SEM: II**

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME   |
|----------------------|---|---|
| 01                   | To provide information about concept and marketing mix for services.                          | Students will be able to provide theoretical basis for assessing service sector.  |
| 02                   | To teach about concept, retail format and retail scenario of retailing.                       | Students will be able to define the different format of retailing. They will be able to analyse current retail scenario at international level. |
| 03                   | To provide information about ITES, banking and insurance sectors and importance of logistics. | Students will be able to identify critical issues in ITES and banking insurance sectors.  |
| 04                   | To provide information about E-Commerce.  | Students will be able to develop basic ideas of E-commerce and its challenges through marketing research.                                       |

**PAPER NAME/NUMBER: III (COMMERCE)**

**SEM: III**

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 01                   | To provide information about evolution of management thought and modern management approach. | Students will understand the concept of management and develop the use of ethos in the organisation.   |
| 02                   | To teach about planning and decision making.   | Students will develop the ability to take correct and timely decision.   |
| 03                   | To provide information about organising, departmentation and delegation of authority.        | Students will be able to understand the steps and structure of organising. They will also understand the main focus of departmentation is to keep the right person in the right place. |
| 04                   | To teach about directing, motivation, leadership and controlling.                            | Students will be able to encourage and develop situational leadership style. They also have knowledge about different techniques of controlling.                                       |



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PAPER NAME/NUMBER: IV (COMMERCE)

SEM: IV

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME  |
|----------------------|---|--|
| 01                   | To provide information about production and inventory management.                               | Students will be able to understand the concept of productivity and scope of production management.  |
| 02                   | To teach about quality management and service quality management.                               | Students will be able to define the different dimension of quality. They will also be able to analyse service quality management with the help of SERVQUAL Model.                        |
| 03                   | To provide information about Indian financial market, SEBI and credit rating agencies.          | Students will be able to understand the Indian Financial System and its functioning. They will also understand the role of different credit rating agencies.                             |
| 04                   | To provide information about mutual fund, commodity and derivative market and start-up venture. | Students will be able to understand the real estate market without having to invest directly in physical property with the mutual fund and also know the importance of start-up venture. |

PAPER NAME/NUMBER: V (COMMERCE)

SEM: V

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME   |
|----------------------|---|---|
| 01                   | To provide information about marketing, strategic marketing management and recent trend in marketing. | Students will understand the concept of marketing and implement in real life industry. Apply the knowledge and understand the challenges and issues of marketing in a growing global context. |
| 02                   | To teach about MIS, consumer behaviour and market segmentation.                                       | Students will be able to analyse the business need for customer orientation and market opportunities.   |
| 03                   | To understand the elements of product and pricing decisions   | Students will be able to evaluate and integrate product pricing decision.   |
| 04                   | To provide information about the components of distribution and elements of promotion.                | Students will be able to identify the recent trends in distribution and logistics. They will develop the ability to create and design best promotion strategy.                                |

PAPER NAME/NUMBER: VI (COMMERCE)

SEM: VI

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME   |
|----------------------|---|---|
| 01                   | To provide information about the functions of HRM.  | Students will contribute to the evaluation process of recruitment and selection process.  |
| 02                   | To introduce about the HRD and its elements.  | Students will be able to evaluate the technique of performance appraisal and will be able to develop themselves in the dynamic environment.     |
| 03                   | To understand the theories of motivation and leadership and the employees welfare measures and to understand the factors affecting EQ and SQ. | Students will be able to encourage and develop situational leadership style. They will be able to understand their behaviour through EQ and SQ. |



|    |   |  |
|----|---|--|
| 04 | To study the recent trends and challenges of HRM. | Students will be able to identify the recent trends and challenges in HRM and will develop the competencies require in the changing environment. |
|----|---|--|

### PROGRAMME SPECIFIC OUTCOME

BACHELOR OF BANKING & INSURANCE and Management

|    |   |
|----|---|
| 1  | Learners will be able to demonstrate progressive learning of various company formation formalities issues and accounting.   |
| 2  | Learners will learn relevant financial & managerial accounting career skills applying both quantitative and qualitative knowledge to their future careers in business.                |
| 3  | Learners will acquire the skills like effective communication, decision making, problem solving in day to day business affairs, especially leadership qualities.                      |
| 4  | Learners will be able to do higher education and advance research in the field of banking and non-banking, sectors.   |
| 5  | Learners will gain systematic and subject skills within various disciplines of commerce, financial accounting, economics, finance, logistic ,marketing, entrepreneurial skills etc.   |
| 6  | Learners will be able to understand the challenges faced by manager in the dynamic environment.   |
| 7  | Learners will involve in various co- curricular activities to demonstrate relevancy of foundational and theoretical knowledge of their academic major and to gain practical exposure. |
| 8  | Learners will be able to prove their proficiency by engaging themselves in preparation of competitive exams and PG Courses like M.Com, MBA.   |
| 9  | Leaners will be able to obtain the knowledge and skills needed to assume management positions in a wide range of organizations.   |
| 10 | To provide students with a solid foundation in organisational behaviuor and human resource management.  |

### COURSE OUTCOME:

PAPER NAME/NUMBER: PRINCIPLE OPF MANAGEMENT

SEM: I

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME  |
|----------------------|---|--|
| 01                   | To introduce the concepts of traditional and Contemporary Management.                               | Learners will be able to apply the concepts of management in Banking and Financial Sector.   |
| 02                   | To understand the concepts of Planning.   | Learners will be able to practice the process of management like Planning, Organising , Directing, Controlling etc. in the Banking Sector. |
| 03                   | To teach Learners the concept of Organising and Departmentation.                                    | Learners will be able to design and develop organizational chart and structure for an Enterprise.  |
| 04                   | To introduce the techniques of Centralisation and Decentralisation.                                 | Learners will be able to learn the techniques of Decision making process.  |
| 05                   | To get encouraged by studying the achievements of famous Indian and International Business leaders. | Learners will be able to evaluate and influence the forces on the current practices of management.   |



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PAPER NAME/NUMBER: Foundation course

SEM: II

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 01                   | To provide the information about the globalization process in India economy. To aware the students about the role of LPG in the development of Indian society. | Students obtain the information about the globalization process in India. Students understands the impact of Globalisation on Indian society.                      |
| 02                   | To provide the information about the Human rights to the students. To aware the students about the fundamental rights of the constitution.                     | Students came to know the UDHR. They are equipped with the information about their fundamental rights.   |
| 03                   | To provide the the information about the environmental degradation. To make students aware about the various causes of environmental degradation.              | Students gets the information about the environmental problems. They become familiar about the concept of sustainable development and steps to reduce degradation. |
| 04                   | To understand the students about the cause and effects of stress. To make them aware about the various steps to cope with stress.                              | Students understand the causes and effects of stress. They are aware about the ways to cope up with stress.  |
| 05                   | To explain the students about the causes of conflict and aggression and ways to get over it.   | Students understand the effects of aggression and violence.  |

PAPER NAME/NUMBER: Principle of management

SEM: II

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 01                   | To make student understand about the nature of management. To make them aware about the various theories of management.  | Students gets the information about the nature and meaning of management. Students understands the various theories of management.           |
| 02                   | To aware the students about the process of planning of and decision making.  | Students gets the information about the process of planning and decision making.   |
| 03                   | To provide the information about the organising and departmentation. To provide the information about differences between centralization and decentralization. | Pupils gets the information about the organizing and departmentation. Students gets awareness about the centralization and decentralization. |
| 04                   | To understand the students about the directing, Leadership, co ordinating and controlling.   | Students obtain the information about the directing, Leadership, co ordinating and controlling.  |

NAME OF THE COURSE /SUBJECT/PAPER –SYBMS / Economics II

PAPER NAME/NUMBER: II

SEM: IV

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 01                   | To make the students understand about the Macroeconomic. To make then understand about the measurement of national income. To make them aware about the Keynes theory of effective demand. | Students gets the knowledge about the concepts of macroeconomics. They understand the measurement of national income. They understand the various Keynes theories. |
| 02                   | To make the students understand about the demand and supply of money.  | Students understand the demand and supply of money.  |





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|    |  |  |
|----|--|--|
|    | To make them aware about the monetary policy and inflation.  | They get the information about the monetary policy.  |
| 03 | To provide the students about the government fiscal policy<br>Make them aware about the budget and deficit.                        | Students came to know about the government fiscal policy.<br>Students understands about the budget and deficit.                    |
| 04 | To help students about the theories and issues of international trade.<br>To make them aware about the balance of payments system. | Students understand about the various issues of international trade.<br>Students understands about the balance of payment account. |

NAME OF THE COURSE /SUBJECT/PAPER – SYBMS / Strategic Management

PAPER NAME/NUMBER: III

SEM: III

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 01                   | To provide students with the knowledge of various prospective and concepts in the field of strategic management. | Students learn about the various concepts of strategic management.   |
| 02                   | To help students masters the analytical tool of strategic management.  | Students gain knowledge about the various analytical tools.          |
| 03                   | To learn about the procedures of implementation of policies with the help of various theories.                   | Students gain the knowledge about the various policies and theories. |
| 04                   | To learn about the method of evaluation and techniques to control strategies                                     | Students learn about the various techniques of management.           |

NAME OF THE COURSE /SUBJECT/PAPER – FYBBI/principles and practice of banking and Insurance

PAPER NAME/NUMBER: IV

SEM: IV

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME   |
|----------------------|---|---|
| 01                   | To learn the detail about banking structure in India.                               | Students understand about the banking structure in Indian.            |
| 02                   | To learn about the various regulatory authorities related to banking and insurance. | Students learn about the regulatory authorities of insurance systems. |
| 03                   | To learn about the insurance system in detail                                       | Students understand the working of insurance market.                  |
| 04                   | To learn about the working procedure of Insurance.                                  | Student understand about the procedure about the insurance system.    |

NAME OF THE COURSE /SUBJECT/PAPER – SYBBI/ Customer relationship management

PAPER NAME/NUMBER: III,

SEM: IV

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME  |
|----------------------|---|--|
| 01                   | To learn about the evolution of CRM and its needs.                          | Students understand about the evolution and needs of CRM.        |
| 02                   | Learn about procedure of CRM and data collection of warehousing and mining. | Students learn about the data collection process of warehousing. |
| 03                   | To learn about the role of technology in CRM.                               | Students learn about the role of technology in CRM.              |





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|    |   |   |
|----|---|---|
| 04 | To learn the various software and applications used in CRM. | Students learn about the use of Software and applications in CRM. |
|----|---|---|

NAME OF THE COURSE /SUBJECT/PAPER – TYBBI/Marketing of Banking and Insurance

PAPER NAME/NUMBER: III,

SEM: VI

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME   |
|----------------------|---|---|
| 1                    | Marketing concepts and their Application to Banking industry                | To make the students understand the concept of role of banking sector in the services of banks  |
| 2                    | Macro & Micro factors influencing the market good & service                 | To enable the students to understand the application of marketing principles in banking sectors |
| 3                    | Selective exposure, selective distortion , and effect on consumer behaviour | To expose the students to learn the concepts of Insurance                                       |
| 4                    | Market segmentation techniques for personal & corporate customers           | To enable the students to know about marketing research and marketing information system        |

NAME OF THE COURSE /SUBJECT/PAPER – SYBMS / Product Innovation Management

PAPER NAME/NUMBER: III,

SEM: III

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME   |
|----------------------|--|---|
| 1                    | To understand the concept of Innovation and Relevance of innovations in the present day scenario | To make the students understand the concept of Tools of Innovation                          |
| 2                    | To understand the importance of protecting innovations and legal aspects related to innovations. | To enable the students to understand the application Managing and strategizing Innovations. |
| 3                    | To study product innovations process innovations and innovations diffusions.                     | To expose the students to learn the concepts of Product and process diffusion.              |
| 4                    | To acquaint with stages in new product development.  | To enable the students to know about New product Development and Product testing.           |

NAME OF THE COURSE /SUBJECT/PAPER –SYBBI / Economics II

PAPER NAME/NUMBER: II

SEM: IV

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 01                   | To make the students understand about the Macroeconomic.<br>To make then understand about the measurement of national income.<br>To make them aware about the Keynes theory of effective demand. | Students gets the knowledge about the concepts of macroeconomics.<br>They understand the measurement of national income.<br>They understand the various Keynes theories. |
| 02                   | To make the students understand about the demand and supply of money.<br>To make them aware about the monetary policy and inflation.   | Students understand the demand and supply of money.<br>They get the information about the monetary policy.   |
| 03                   | To provide the students about the government fiscal policy<br>To provide the students about the government fiscal policy<br>Make them aware about the budget and deficit.                        | Students came to know about the government fiscal policy.<br>Students understands about the budget and deficit.  |
| 04                   | To help students about the theories  | Students understand about the various  |



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|--|--|--|
|  | and issues of international trade.<br>To make them aware about the balance of payments system. | issues of international trade.<br>Students understands about the balance of payment account. |
|--|--|--|

NAME OF THE COURSE /SUBJECT/PAPER – TYBMS / Direct Tax

PAPER NAME/NUMBER: III,

SEM: V

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 1                    | To understand the concept of Amendments in Income tax Act 1961<br>Understand the current application of general taxation principle.      | To make the students understand the concept of Income Tax Act 1961.                    |
| 2                    | To understand the importance of Heads under Salary , Business and Profession.  | To enable the students to understand the Residential status and Scope of Total Income. |
| 3                    | Provide an understanding of the taxation of business activity  | To expose the students to learn the concepts of Heads of Income.                       |
| 4                    | To acquaint with Guidelines of Gross total Income and Computation, Be aware of the potential impacts of taxation on the decision making. | To enable the students to know about Computation of Total Income/ Net taxable Income . |

NAME OF THE COURSE /SUBJECT/PAPER – TYBMS / Indirect Tax

PAPER NAME/NUMBER: III,

SEM: VI

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| 1                    | To understand the concept of in Gst Act 2017. Understand the current application of general taxation principle.                    | To make the students understand the concept of Registration under GST ACT 2017.              |
| 2                    | To understand the importance of Place of Supply and Time of Supply.  | To enable the students to understand the that GST is Destination based Tax.                  |
| 3                    | Provide an understanding of the taxation of business activity  | To expose the students to learn the concepts of Value of Supply to be charged by Government. |
| 4                    | To acquaint with Guidelines of total Income and Computation, Be aware of the potential impacts of taxation on the decision making. | To enable the students to know about Computation under GST.                                  |

NAME OF THE COURSE /SUBJECT/PAPER – TYBMS/ Customer relationship management

PAPER NAME/NUMBER: III,

SEM: V

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME   |
|----------------------|---|---|
| 01                   | To learn about the evolution of CRM and its needs.                          | Students understand about the evolution and needs of CRM.         |
| 02                   | Learn about procedure of CRM and data collection of warehousing and mining. | Students learn about the data collection process of warehousing.  |
| 03                   | To learn about the role of technology in CRM.                               | Students learn about the role of technology in CRM.               |
| 04                   | To learn the various software and applications used in CRM.                 | Students learn about the use of Software and applications in CRM. |



## PROGRAMME SPECIFIC OUTCOME

### DEPARTMENT OF ACCOUNTANCY

| SR.NO | PROGRAMME SPECIFIC OUTCOME  |
|-------|---|
| I     | Learners will be able to apply different concepts in starting and managing the business and they will also realize their social responsibilities.   |
| II    | Learners will be capable in preparing financial statements of business using accounting principles, concepts, conventions and provisions.   |
| III   | Learners will be able to implement traditional and modern strategies and practices of costing, banking, economics, marketing, management, auditing and taxation.  |
| IV    | Learners will be able to use mathematical and statistical tools in academics, business and research.  |
| V     | 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.              |
| VI    | The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.   |
| VII   | 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. |
| VIII  | Learners will aware of cultural differences and able to account for these in developing solutions to commerce related problems.   |
| IX    | Learners will gain systematic and subject skills within various disciplines of Finance, Auditing, Taxation, Accounting, Management, Communication and computer.   |

### COURSE OUTCOME:

SEM: I

#### ACCOUNTANCY AND FINANCIAL MANAGEMENT

| SYLLABUS<br>(UNIT<br>WISE) | OBJECTIVES  | OUTCOME  |
|----------------------------|---|--|
| I                          | 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. |
| II                         | 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.   |
| III                        | 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.   |
| IV                         | 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<br>(UNIT<br>WISE) | OBJECTIVES  | OUTCOME   |
|----------------------------|---|---|
| I                          | 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. |
| II                         | To teach the concepts, types and  | The students will understand in detail the  |



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|            |   |  |
|------------|---|--|
|            | accounting procedures of Consignment Account.   | 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   |





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|    |  |   |
|----|--|---|
|    |  | 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.    |

SEM-V

**COST ACCOUNTING**

| 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 |





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|            |   |  |
|------------|---|--|
|            |   | 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.                       |

SEM-V

**Financial Accounting**

| SYLLABUS<br>(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<br>(UNIT WISE) | OBJECTIVES  | OUTCOME  |
|-------------------------|---|--|
| <b>I</b>                | To teach the concepts, methods and accounting procedure of Amalgamation, Absorption and | The students will be able to understand the concept, methods of Amalgamation, Absorption and External Reconstruction |



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|            |   |  |
|------------|---|--|
|            | External Reconstruction with reference to A.S- 14   | 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:

### DEPARTMENT 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.           |



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SEM-II

BUSINESS ECONOMICS-II

| SYLLABUS<br>(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 conditions.   |
| 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<br>(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.   |



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|    |   |   |
|----|---|---|
| 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. |
|----|---|---|

SEM-IV

BUSINESS ECONOMICS-IV

| SYLLABUS<br>(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<br>(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.  |





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|    |   |   |
|----|---|---|
| 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<br>(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 learns about foreign exchange market, foreign exchange rate in the role of central bank in foreign exchange rate management.  |

**PROGRAMME SPECIFIC OUTCOME**

**DEPARTMENT OF ENGLISH**

| Sr.No        | Programme Specific Outcome   |
|--------------|--|
| <b>PS0 1</b> | To understand the local, state, national and international business standards.   |
| <b>PSO2</b>  | To develop an overall corporate culture amongst students.  |
| <b>PSO3</b>  | To demonstrate and visualise them the interview techniques, public relations and also the official communication.                        |
| <b>PSO4-</b> | 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<br/>Communication Theory</b>       | To understand communication definition, concept, need and importance.<br>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<br/>Channels of Communication</b> | To understand the line of communication deployed at work place and listening skill.<br>To imbibe values and ethics at work place.           | The learner's will purposefully select appropriate channel to communicate at workplace.<br>The students exhibit good behavior and refined manners in business or work place. |
| <b>Module III<br/>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**

| Syllabus (Unit Wise) | Objectives   | Outcome   |
|----------------------|--|---|
| <b>Module I</b>      | To understand communication definition, concept, need and importance.<br>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**

| SR.NO | PROGRAMME SPECIFIC OUTCOME   |
|-------|--|
| 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**

| Syllabus (unit wise)   | Objectives   | Outcome  |
|--|--|--|
| Unit – i<br>Shares and mutual funds                                    | 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<br>Permutation & combination<br>Linear programming problems  | To provide practical exposures of lpp problems to maximizes the profit or minimize the loss<br>To provide guidelines in arrnaging and selection of objects/perons in real time | Enable learners to solves examples of lpp in real life<br>Enable learners to find the possibilities and selection of objects in day to day life    |
| Unit – iii<br>Measures of central tendencies<br>Measures of dispersion | To familiarizes the concept of statistics<br>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<br>Enable learners to solve examples on statistics                       |
| Unit – iv<br>Probability theory<br>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<br>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<br>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<br>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<br>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<br>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<br>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.<br>Apply problem-solving techniques to solving real-world events. |



## PROGRAMME: BACHELOR OF SCIENCE (B.SC) & (B.Sc.IT)

### 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</b><br><b>ALGAE</b><br>1 Structure, life cycle and systematic position of Nostoc and Spirogyra.<br>2 Economic importance of Algae      | <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.<br>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.<br>3] Students get familiarised with identification of various divisions of algae through microscopic observation.<br>4] Student gain awareness about its role in controlling various plant diseases and get acquainted about economic importance of algae in various |
| <b>UNIT II</b><br><b>FUNGI</b><br>1 Structure, life cycle and systematic position of Rhizopus and Aspergillus<br>2 Economic importance of Fungi. |   |  |
| 3 Modes of nutrition in Fungi (Saprophytism and Parasitism).   |   |  |
|  |   |  |



|  |  |   |
|--|--|---|
| <b>UNIT III<br/>BRYOPHYTA</b><br><b>1</b> General characters of Hepaticae<br><b>2</b> Structure, life cycle and systematic position of Riccia. | entity in various fields <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> | field and its practical application in fields like medicine, agriculture, research and industries.<br>5] With this knowledge students understand adaptations of various organisms and relationships between them along with the environment for satisfying its basic nutritional requirements.<br>6] Students learn identification of various divisions of bryophyte and compare their characteristics through microscopic observation. |
|--|--|---|

SEM-I

**FORM AND FUNCTION 1**

| SYLLABUS (UNIT WISE)   | OBJECTIVES   | OUTCOME  |
|--|--|--|
| <b>UNIT I<br/>CELL BIOLOGY</b><br><b>1</b> General structure of plant cell: cell wall Plasma membrane (bilayer lipid structure, fluid mosaic model)<br><b>2</b> Ultra structure and functions of the following cell organelles: Endoplasmic reticulum and Chloroplast. | <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 organism and characteristics of different ecosystem.</li> <li>To study genetic laws and understand basic pattern of inheritance or heredity.</li> </ul> | 1] Students get familiarised with basic skills and techniques of plant physiology by studying some cell organelles under microscope.<br>2] Student understands mechanism of transport within the cell and get acquainted with applied aspects of plant physiology.<br>3] Student understands importance of various organisms in maintaining balance in an ecosystem by studying food chain charts and energy flow models.<br>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.<br>5] Student understand pattern of inheritance by performing and solving various crosses and through micrograph of various karyotype. Students get familiarized with nuclear and extra nuclear inheritance. |
| <b>UNIT II<br/>ECOLOGY</b><br><b>1</b> Energy pyramids energy flow in an ecosystem.<br><b>2</b> Types of ecosystems: aquatic and terrestrial.  |  |  |
| <b>UNIT III<br/>GENETICS</b><br><b>1</b> Phenotype/Genotype, Mendelian Genetics- monohybrid, dihybrid; test cross; back cross ratios.<br><b>2</b> Epistatic and non epistatic interactions; multiple alleles.  |  |  |





SEM-II

**PLANT DIVERSITY 1**

| SYLLABUS (UNIT WISE)   | OBJECTIVES  | OUTCOME   |
|--|---|---|
| <p><b>UNIT I</b><br/> <b>PTERIDOPHYTES</b><br/>           1 Structure life cycle, systematic position and alternation of generations in Nephrolepis<br/>           2 Stellar evolution</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 various types of modifications in vascular bundle</li> <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>1] Students learn identification of various divisions of pteridophyte and compare their characteristics through macro and microscopic observation.<br/>           2] Student understands types of stele through identification practical by observing various types of stele under microscope.<br/>           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.<br/>           5] Students develop inductive and deductive reasoning ability through plant identification practical's by studying various morphological characters and modification observed in plants.<br/>           Student Understands the life cycle pattern of most evolved group of plants.</p> |
| <p><b>UNIT II</b><br/> <b>GYMNOSPERMS</b><br/>           2 Structure life cycle systematic position and alternation of generations in Cycas<br/>           2 Economic importance Gymnosperms.</p>  |   |   |
| <p><b>UNIT III</b><br/> <b>ANGIOSPERMS</b><br/>           1. 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.<br/>           2 Inflorescence: Racemose: simple raceme, spike, catkin, spadix, panicle. Cymose: monochasial, dichasial, polychasial. Compound: corymb, umbel, cyathium, capitulum, verticillaster, hypanthodium.<br/>           3 Study of following families: Malvaceae, Amaryllidaceae.</p> |   |   |

SEM-II

**FORM AND FUNCTION 1**

| SYLLABUS (UNIT WISE)  | OBJECTIVES   | OUTCOME   |
|---|--|---|
| <p><b>UNIT I</b><br/> <b>ANATOMY</b><br/>           1 Simple tissues, complex tissues</p> | <ul style="list-style-type: none"> <li>• To study different types of tissue their structure, position 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</p> |



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|   |   |  |
|---|---|--|
| <p><b>2</b> Primary structure of dicot and monocot root, stem and leaf.<br/> <b>3</b> Epidermal tissue system: types of hair, monocot and dicot stomata.</p>  | <p>function</p> <ul style="list-style-type: none"> <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> </ul> | <p>temporary sections of various parts of plants.<br/>         2] Through staining practical students can study to identify various types of vascular bundles and cells microscopically.<br/>         3] Student also understands role and importance of various epidermal outgrowths like hair, stomata which are observed and studied by them under microscope.<br/>         4] Student understands role of cell, cell organelle and its relations with vital physiological process of photosynthesis by studying various chemical cycle and anatomical studies of C3 and C4 plants.<br/>         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.<br/>         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>UNIT II</b><br/> <b>PHYSIOLOGY</b><br/> <b>1</b> Photosynthesis: Light reactions, photolysis of water, photophosphorylation (cyclic and non cyclic), carbon fixation phase (C3, C4 and CAM pathways).</p>   | <ul style="list-style-type: none"> <li>To understand and study process of photosynthesis in plants and aware student about basic skills of plant physiology.</li> </ul>   |  |
| <p><b>UNIT III</b><br/> <b>MEDICINAL BOTANY</b><br/> <b>1</b> Concept of primary and secondary metabolites, difference between primary and secondary metabolites.</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><b>2</b> Grandma's pouch: Following plants have to be studies with respect to botanical source, part of the plant used, active constituents present and medicinal uses: Oscimum sanctum, Adathodavasica, Zinziberofficinale, Curcuma longa, Santalum album, Aloe vera.</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<br>Thermodynamics.<br>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.<br>To learn classification and periodicity of periodic table.  | Students learned about structure of atom. They know about element and its importance.  |
| UNIT III: Organic chemistry<br>IUPAC nomenclature of different organic compound.<br>Bonding and structure of organic compound.<br>Electronic effect and study of carbocation, carbanion and carbon free radicle. | It aims to study nomenclature of compounds.<br>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<br>Chemical kinetics.<br>Liquid state. | To provide information the first order and second order reaction including rate constants, half life time and units.<br>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.   |



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|  |   |  |
|--|---|--|
| 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.<br>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.<br>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.<br>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.<br>Students understand the concept of pH and buffers.<br>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.<br>To learn about oxidation number and oxidation state of different elements and also study about balancing redox reactions. To learn about   |
| UNIT III: Stereochemistry. Concept of aromaticity, antiaromaticity and nonaromaticity. Electrophilic substitution reactions. | To study the stability of cycloalkane.<br>To study basic concepts involve in reaction and its mechanistic pathway.  | Students are able to understand concept of stability.<br>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.<br>Chemical Thermodynamics-II.<br>Electrochemistry.   | 1. Improvement of efficiency processes.<br>2. Making the processes more non-polluting and environmental friendly.<br>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<br>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.<br>Chemical Kinetics.<br>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.<br>Preparation of oxide of nitrogen.  | Students learned about basics of boron, germanium and silica which have industrial and agricultural importance.  |
| UNIT III: Organic Chemistry<br>Carbonyl compound its reactivity, preparation and reactions.<br>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.  |



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SEM-III

CHEMISTRY-III

| SYLLABUS (UNIT WISE)   | OBJECTIVES   | OUTCOME  |
|--|--|--|
| Unit-1<br>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<br>Classical methods of analysis  | To understand about different types of titration process.<br>To study about basic instruments likes pH meter, Potentiometer.<br>To study about Gravimetric Analysis. | Student understand about different types of titration process.<br>Student learn about basic instruments likes pH meter, Potentiometer.<br>Student know about Gravimetric Analysis. |
| Unit-3<br>Instrumental Methods-I   | To provide experience in scientific analytical instruments likes Spectrometer and colorimeter (UV-visible spectrophotometry)   | Students learn about UV-visible spectrophotometry<br>i.e. Spectrometer and colorimeter.  |

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.<br>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.<br>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.<br>Describe the characteristic electron configuration of the transition elements.<br>To understand the key features of coordination compounds, including:<br>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<br>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.<br>To understand reaction outcome.  | Students are capable of getting outcome of the reaction.<br>Students are capable of applying these knowledge in industrial work.   |



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SEM-IV

CHEMISTRY-II

| SALLABUS UNIT WISE   | OBJECTIVES  | OUTCOME  |
|--|---|--|
| UNIT I: Physical Chemistry.<br>Solid State.<br>Catalysis   | To provide the knowledge of 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. | Students know the types of 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<br>Aqueous medium &<br>environmental chemistry of<br>volatile oxides & oxo-acids. | To understand the acidity of cations and basicity of anions in aqueous medium.<br>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.<br>2) To learn about proportions of all elements in the form of oxoacids present in the environment which cause acid rain, photochemical smog. Learn about how to control the amount of such hazardous elements to prevent environmental issues.  |
| UNIT III: Organic<br>Chemistry<br>Study of amines, diazonium<br>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<br>Analytical<br>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<br>Instrumental<br>Methods-II                     | To provide experience in scientific analytical instruments like pH meter, Conductometer.  | Students learn about basic instruments like pH meter, Conductometer.   |
| Unit-3<br>Statistical<br>treatment of<br>Analytical data | 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. | Students learn about practical 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<br>To understand the basics of Raman spectroscopy and comparison between IR & Raman spectra.                           | To imparts 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.<br>To study the kinetics of fast reactions and it's 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.<br>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.<br>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 .<br>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<br>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.  |





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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<br>Describe bonding models and appreciate how these impact on the properties of a simple molecule<br>Apply curly arrow nomenclature to depict the mechanistic course of a reaction<br>Appreciate when different reactions are likely to compete and ways to bias reactions towards a single outcome<br>Understand and apply the concept of protecting groups |
| UNIT II : Stereochemistry I<br>Molecular chirality and elements of symmetry.<br>Chirality of compounds without stereogenic centre.<br>Heterocyclic chemistry.<br>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.<br>Synthesis of organic compounds.   | To provide knowledge of systematic naming of organic compound.<br>To emphasis on the underlying mechanistic pathways.  | Students are able to recognize name and structure of compound.<br>Students are able to do mechanism of reaction.  |
| UNIT IV : Spectroscopy<br>Introduction, UV-Visible and Mass spectrometry.<br>Study of natural products.  | To understand the principle of UV-Visible and Mass spectroscopy.<br>To get information of structure and synthesis of certain natural products.   |   |

SEM-V

CHEMISTRY-IV

| SYLLABUS (UNIT WISE)   | OBJECTIVES  | OUTCOME   |
|--|---|---|
| Unit-1<br>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. |



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|-----------------------------------|---|---|
| Unit-2<br>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<br>Optical Methods         | To provide experience in scientific analytical instruments likes Spectrometer(single beam and double beam spectrophotometer) and colorimeter (UV-visible spectrophotometry) | Students learn about UV-visible spectrophotometry i.e. Spectrometer and colorimeter.  |
| Unit-4<br>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:<br>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.<br><b>POLYMERS</b> | Identify strength of different polymer based on their classification.<br>Estimate number and weight average masses of polymer samples given by degree of polymerization .               |
| Unit 3:<br>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<br>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 .<br>To study the differences between NMR and ESR spectroscopy.  |

SEM-VI

CHEMISTRY-II( INORGANIC CHEMISTRY)

| SYLLABUS (UNIT WISE)        | OBJECTIVES   | OUTCOME  |
|-----------------------------|--|--|
| Unit 1:Crystal field theory | (CFT) a bonding model that explains many important properties of | To understand the general characteristics of the d and f |



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|  | <p>transition-metal complexes, including their colors, magnetism, structures, stability, and reactivity.<br/>The central assumption of CFT is that metal–ligand interactions are purely electrostatic in nature.</p>  | <p>block elements To give the students a thorough knowledge of the different theories to explain the bonding in coordination compounds</p>   |
| <p>Unit 2 :Theories of metal ligand bond</p> | <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>  |
| <p>Unit :3 organometallic chemistry</p>      | <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.<br/>To improve the level of understanding of the chemistry of organometallic compounds, metal carbonyls and metal clusters.</p> |
| <p>Unit :4 Metallurgy</p>                    | <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>   |

SEM-VI

CHEMISTRY-III (ORGANIC CHEMISTRY)

| SYLLABUS (UNIT WISE)   | OBJECTIVES  | OUTCOME   |
|--|---|---|
| <p>Unit I)<br/>Stereochemistry :<br/>stereoselectivity and stereospecificity , topicity and stereochemistry of SN , E2</p> | <p>To understand the concept of basic terms such as selectivity, specificity, topicity.<br/>To understand the stereochemistry of some selected reactions.<br/>It aims to study about amino acids and proteins. How they are synthesized. It also include study of polypeptides.</p> | <p>The students are able to understand the concept of selectivity, specificity and topicity. Students are able to understand stereochemical outcome of the reaction.<br/><br/>Students are able to understand general theory and structure of</p> |



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|---|--|---|
| <p>,bromination,hydroxylation and epoxidation. Amino acids and Proteins: General theory preparation and reactions. Study of polypeptide and proteins.</p>   |  | <p>amino acids and proteins. They studied about its preparation and reactions. They also understand about polypeptides.</p>   |
| <p>Unit II)<br/>Molecular Rearrangement: mechanism of electron deficient carbon and nitrogen and carbanion and some name reaction. Carbohydrates: introduction, structure, stereoisomers, synthesis and reactions.</p>  | <p>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.<br/>To understand about sugars its open and cyclic forms, its stability, mutarotation, natural abundance, preparation, and reactions.</p> | <p>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.</p>            |
| <p>Unit III)<br/>Spectroscopy: Theory and applications of IR and NMR spectroscopy. Spectral problems Nucleic acid: Structure of DNA and RNA and Nucleic acid.</p>   | <p>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.<br/>To get information of structure and function of DNA, RNA, Sugars, Bases, Nucleotides, Nucleosides and Nucleic acid.</p>                                    | <p>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, Bases, Nucleotides and Nucleosides.</p> |
| <p>Unit IV)<br/>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, reduct</p> | <p>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.<br/>To understand use of reagents and catalyst in certain reaction and its selectivity.</p>  | <p>On completion of course students will be to describe the general structure, uses and synthesis of polymer. They also gained information of biodegradable polymers.<br/>Students are able to understand which types of catalyst and reagents are used on a suitable substrate.</p>  |





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| ioneoxidation and bromination. |  |  |
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SEM-VI

CHEMISTRY-IV

| SYLLABUS (UNIT WISE)                                   | OBJECTIVES  | OUTCOME  |
|--|---|--|
| Unit-1<br>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<br>Methods of Separation-II                     | To understand the Instrumentation of Gas Chromatography, HPLC.  | Students study about Instrumentation of Gas Chromatography, HPLC in details.   |
| Unit-3<br>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<br>Thermal methods Analytical Method Validation | To understand the different kinds of Thermal Methods and Instrumentation regarding Thermal process.<br>To have better understanding of validation process used in industry. | Students understand the different kinds of Thermal Methods.<br>Students have better understanding of validation process. |

SEM-VI

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

| SALLABUS UNIT WISE   | OBJECTIVES   | OUTCOME  |
|--|--|--|
| UNIT I DRUGS<br>Drug discovery, designs and development.<br>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<br>Antiamoebic, Antitubercular, Antileprotic, Antineoplastic, Anti HIV Drugs.<br>Drug intermediates.<br>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. |



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|--|---|--|
| <p>UNIT III DYES<br/>Classification of dyes based on chemical constitution and synthesis of selected dyes.<br/>Health and environmental hazards of synthetic dyes and their remediation processes.</p> | <p>To understand the properties and application of dye on various substrate.<br/>To study health hazardous of dye and method to avoid this.</p> | <p>This study make students capable of understanding dyeing processes and help in future to work as chemist.<br/>Students have idea of health hazardous of dyes.</p> |
| <p>UNIT IV DYES<br/>Biomedical uses of dyes. Dyes used in foods and cosmetics. Paper and leather dye. Hair and leaser dyes. Indicators, security ink .Pigments.<br/>Dyestuff industry.</p>             | <p>To study the importance of dyes in medicine, foods, cosmetics, paper, leather, hair and laser.</p>   | <p>Students now about different uses of drugs its importance and side effect.</p>  |

**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:<br>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:<br>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:<br>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  |
|---|---|--|
| UNIT I:<br>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:<br>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.     |



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|                              | 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:<br>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<br>(UNIT WISE)                              | OBJECTIVES  | OUTCOME  |
|--|---|--|
| UNIT I:<br>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:<br>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:<br>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<br>(UNIT WISE)         | OBJECTIVES  | OUTCOME   |
|---------------------------------|---|---|
| UNIT I:<br>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. |





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|---|---|---|
| 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.           |

SEM-III

ZOOLOGY-I

| 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.                              |



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SEM-III

ZOOLOGY-II

| SYLLABUS (UNIT WISE)  | OBJECTIVES   | OUTCOME  |
|---|--|--|
| UNIT I:<br>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:<br>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:<br>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.   |

SEM-III

ZOOLOGY-III

| SYLLABUS (UNIT WISE)     | OBJECTIVES  | OUTCOME   |
|--------------------------|---|---|
| UNIT I:<br>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:<br>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. |



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|                                  |   |  |
|----------------------------------|---|--|
|                                  | 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:<br>Economic<br>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.   |

SEM-IV

ZOOLOGY-I

| SYLLABUS<br>(UNIT WISE)   | OBJECTIVES   | OUTCOME  |
|---|--|--|
| UNIT I: Origin<br>and Evolution<br>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:<br>Population<br>Genetics and<br>Evolution                 | 1) To develop an understanding in the learners about genetic variability within a population.    | 1) Learners will understand the forces that caused evolutionary 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:<br>Scientific<br>Research,<br>attitude and<br>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<br>(UNIT WISE) | OBJECTIVES  | OUTCOME   |
|-------------------------|---|---|
| UNIT I: Cell<br>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.      |



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|                               | 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.                      |

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.             |





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SEM-V

ZOOLOGY-I

| SYLLABUS (UNIT WISE)                  | OBJECTIVES  | OUTCOME   |
|---------------------------------------|---|---|
| UNIT I :<br>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:<br>Kingdom:<br>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:<br>Kingdom :<br>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:<br>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               |



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|                             |  |   |
|-----------------------------|--|---|
|                             |  | 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.   |



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SEM-V

ZOOLOGY-IV

| SYLLABUS (UNIT WISE)                              | OBJECTIVES   | OUTCOME  |
|---|--|--|
| UNIT I:<br>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:<br>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:<br>Muscles of long bones of Human limbs | 1) To study long limb 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:<br>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:<br>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.                                   |



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|---|---|--|
| UNIT III:<br>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:<br>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:<br>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:<br>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:<br>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:<br>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:<br>Phylum Chordata:<br>Group Protochordata | 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. |





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|                                      |   |  |
|--------------------------------------|---|--|
| and Group<br>Euchordata I            | 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<br>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:<br>Group<br>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<br>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<br>(UNIT WISE)    | OBJECTIVES   | OUTCOME  |
|----------------------------|--|--|
| UNIT I :<br>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:<br>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:<br>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 disorders associated with faulty functioning of endocrine glands. | 2) The learners will realize the significant role of endocrine glands and its disorders in human body.                     |





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|                                   |  |  |
|-----------------------------------|--|--|
| UNIT IV:<br>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:<br>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:<br>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:<br>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:<br>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.                  |



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SEM-VI

ZOOLOGY-IV

| SYLLABUS (UNIT WISE)                            | OBJECTIVES  | OUTCOME   |
|---|---|---|
| UNIT I:<br>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, its impact and environment management laws.  |
| UNIT II:<br>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:<br>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:<br>Marine Shell of India | 1) To develop an in-depth understanding of crustaceans and molluscan fisheries. | 1) Learner shall understand crustacean and molluscan fisheries.  |



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|---|--|---|
|   | 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:<br>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:<br>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:<br>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:<br>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:<br>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.  |



**COURSE OUTCOME**

**BSc.IT**

PAPER NAME/NUMBER:

Digital Electronics

SEM: I

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME  |
|----------------------|---|--|
| Unit-1               | To acquire the basic knowledge of digital logic levels and application of knowledge to understand digital electronics circuits. . | Have a thorough understanding of the fundamental concepts and techniques used in digital electronics.  |
| Unit-2               | To understand and examine the structure of various number systems and its application in digital design.                          | Ability to solve numericals based on number system.  |
| Unit-3               | To prepare students to perform the analysis and design of various digital electronic circuits.                                    | . The ability to understand, analyze and design various combinational and sequential circuits.         |
| Unit-4               | To prepare students to identify basic requirements for a design application and propose a cost effective solution                 | Ability to identify basic requirements for a design application and propose a cost effective solution. |
| Unit-5               | To prepare student to identify hazards and timing problems in digital electronics   | The ability to identify and prevent various hazards and timing problems in a digital design            |

PAPER NAME/NUMBER

Green Computing

SEM: II

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME  |
|----------------------|---|--|
| Unit-1               | To acquire knowledge about the problems concerning with disposal of e-waste and its consequences on the environment.  | knowledge about the problems concerning with disposal of e-waste and its consequences on the environment.  |
| Unit-2               | To acquire issues related to power consuming as well as the energy cost associated with the cooling of computing devices. components involved and how effectively we can achieve cost saving without harming the environment. | The issues related to power consuming as well as the energy cost associated with the cooling of computing devices. components involved and how effectively we can achieve cost saving without harming the environment. |
| Unit-3               | To Study how to reduce paper use.   | The procedural aspects towards going green. It also gives the advantages and cost saving measures of going paperless.  |
| Unit-4               | To acquire knowledge about recycling issues.  | addresses the recycling issues the standard procedures that are followed by the well-known countries for   |





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|        |  | recycling of waste in proper way. also addresses the hardware related part and mentions some of the effective selection and utilisation strategies that we can adopt in case of hardware. |
| Unit-5 | To acquire knowledge about how to go green and how to maintain it. | Change the entire organization green. The metrics we can adopt for the entire organization. Learn how to go green and how to maintain it.   |

PAPER NAME/NUMBER: Business Intelligence SEM: VI

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME  |
|----------------------|---|--|
| Unit-1               | To acquire knowledge about BI data ware house and decision support system.(D.S.S)   | Define the basic concepts of Business Intelligence and Data Warehouses. Understanding the concept of D.S.S                             |
| Unit-2               | To understand the concept of models. ETL process.   | Apply the principles of DW modelling<br>Employ the basic ETL procedures  |
| Unit-3               | To acquired knowledge about classification models. To understand the method of clustering.                                | Able to solve problem based on clustering. Differentiate between classification and clustering. Solve the problems based on clusteing. |
| Unit-4               | To develop knowledge about marketing models. To understand the concept of data analysis.                                  | Understand the concept of marketing models. Solve the problem based on data analysis.  |
| Unit-5               | To understand the concept of knowledge management. To acquired knowledge about artificial intelligence and expert system. | Define knowledge management. Differentiate between artificial and natural intelligence. Understanding the concept of expert system.    |

PAPER NAME/NUMBER: Computer graphics and animation SEM: IV

| SYLLABUS (UNIT WISE) | OBJECTIVES  | OUTCOME  |
|----------------------|---|--|
| Unit-1               | To acquired knowledge about areas of computer graphics, overview of graphic system, video-display devices, raster-scan systems, graphic monitors and input devices. | Student learn about overview of computer graphics, video display device, graphics monitors and input devices.                                  |
| Unit-2               | To learn how to draw points and lines, line drawing algorithms, mid-point circle algorithm, Filled area primitives: scan-line                                       | Student learn about draw points and lines, line drawing algorithms, mid-point circle algorithm, Filled area primitives: scan-line polygon fill |



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|        | polygon fill algorithm, boundary-fill and flood-fill algorithm.   | algorithm, boundary-fill and flood-fill algorithm.  |
| Unit-3 | To acquired knowledge about graphics tools and techniques.  | Students will be able to work and interact, through hands-on experiences, to design, develop, and modify electronically generated imaginary using a wide range of sophisticated graphical tools and techniques. |
| Unit-4 | To learn different hidden surfaces, elimination and shading technique   | Students will be able to summarize different hidden surface elimination algorithms and shading techniques used in computer graphics and digital media production.   |
| Unit-5 | To acquired knowledge about multimedia content for the web, Video analyze DVD 2D and 3D graphics sound and programming. | Students will be able to explain about the technology necessary for creating multimedia content for the web, video, Analyze DVD, 2D and 3D graphics, Sound and programming                                      |

PAPER NAME/NUMBER: Principles of geographic information system\_ SEM: VI

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME  |
|----------------------|--|--|
| UNIT - I             | To learn nature of GIS , spital data and Geo-information ,model of modelling ,maps ,databases.           | Analyse & implement history of GIS, architecture & its components of GIS, types of geographic phenomena. |
| UNIT - II            | To study GIS architecture and functionality, spital data infrastructure, stages of spital data handling. | Acquire GIS Architecture, spital data infracture, stages of spital data handling.                        |
| UNIT -III            | To study reference surface for mapping, satellite based positioning.                                     | Analyse & implement mapping projections and satellite based positioning.                                 |
| UNIT - IV            | To learn spital data analysis, overlay function, GIS application models.                                 | Analyse & implement GIS application models, overlay function.  |
| UNIT - V             | To study data visualization, GIS and maps.   | Analyse & implement GIS maps, virtualization process.  |

Name of the Course /Subject/Paper: **Numerical And Statistical Methods** SEM:II

| SYLLABUS (UNIT WISE)  | OBJECTIVES   | OUTCOME  |
|---|--|--|
| <b>Unit - I</b><br>Mathematical modelling<br>Approximations<br>And round off errors<br>Truncation error and taylor series | To acquire knowledge of preparing a mathematical model based on real situations              | Enable learner to frame a real life situation and constraints of industry in mathematical model form |
| <b>Unit – II</b><br>Algebraic and transcendental  | Students will develop skills in understanding equations and finite pattern of sequences with | Students will able to solve equations of linear expressions<br>Students will able to form a          |



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| Equations<br>Interpolation   | random orders  | pattern and able to simplify it.  |
| <b>Unit – III</b><br>Solution and algebraic equations using iterative methods<br>Numerical differentiation and Integration<br>Numerical solution of 1 <sup>st</sup> and 2 <sup>nd</sup> differential equations | Differentiation and integration can help to solve many types of <b>real-world problems</b> .<br>To understand modelling the behaviour of moving objects. | Students are able to apply differentiation and integration in solving real-world problems.<br>Student will have a working knowledge of basic application problems described by second order linear differential equations with constant coefficients. |
| <b>Unit – IV</b><br>Least square regression<br>Linear programming  | To acquire knowledge of best fit of data and provide visual demonstration between relationship of data   | Students able to predict future value of respective situations based on values with defining some constraints   |
| Unit – V<br>Random variables and distributions   | 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.<br>Apply problem-solving techniques to solving real-world events.  |

NAME OF THE COURSE /SUBJECT/PAPER: **Embedded Systems**

SEM: III

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME   |
|----------------------|--|---|
| I                    | Students will try to learn:<br>The concepts of embedded systems, Characteristics and quality attributes of embedded systems. | Students will able to: Explain the embedded system concepts and architecture of embedded systems      |
| II                   | Embedded Systems – Application and Domain Specific   | Describe the architecture of 8051 microcontroller and write embedded program for 8051 microcontroller |
| III                  | Basic of microcontroller 8051 and 8051 Programming in C.   | To work with 8051 controller and developing programs in embedded C.                                   |
| IV                   | The concepts of microcontroller interface and Different design platforms used for an embedded systems application            | Design the interfacing for 8051 microcontroller and Select elements for an embedded systems tool.     |
| V                    | The concepts of real time operating system   | Demonstrate the open source RTOS and solve the design issues for the same.                            |

NAME OF THE PAPER: **IMPERATIVE PROGRAMMING**

SEM: I

| SYLLABUS (UNIT WISE) | OBJECTIVES   | OUTCOME   |
|----------------------|--|---|
| UNIT - I             | To learn Types of programming languages, history, features and application, structure of a program | Analyse & implement Types of programming languages, history, features and application, structure of a program |
| UNIT - II            | To learn Operators and Expressions, Data Input and output  | Analyse & implement Operators and Expressions, Data Input and output  |



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Kausa Mumbra, Thane-400612

|           |   |  |
|-----------|---|--|
| UNIT -III | To learn Conditional statements and loops- while, do-while, for loop                        | Analyse & implement Conditional statements and loops- while, do-while, for loop                        |
| UNIT - IV | To learn Storage classes, automatic variable , external variables, library functions        | Analyse & implement Storage classes, automatic variable , external variables, library functions        |
| UNIT - V  | To learn Pointers, Fundamentals, Arrays and pointers, passing functions to other functions. | Analyse & implement Pointers, Fundamentals, Arrays and pointers, passing functions to other functions. |

NAME OF THE PAPER: **DATA BASE MANAGEMENT SYSTEM** SEM: **III**

| SYLLABUS<br>(UNIT WISE) | OBJECTIVES  | OUTCOME  |
|-------------------------|---|--|
| UNIT - I                | To learn Introduction to Databases and Transactions, Data Models, Database Design, ER Diagram and UML | Analyse & implement Introduction to Databases and Transactions, Data Models, Database Design, ER Diagram and UML |
| UNIT - II               | To learn Relational Database Model, Relational Algebra and Calculus                                   | Analyse & implement Relational Database Model, Relational Algebra and Calculus                                   |
| UNIT -III               | To learn Constraints, Views, Sequential Query Language, Aggregate Functions                           | Analyse & implement Constraints , Views, Sequential Query Language, Aggregate Functions                          |
| UNIT - IV               | To learn Transaction Management and Concurrency, ACID Property  | Analyse & implement Transaction Management and Concurrency, ACID Property  |
| UNIT - V                | To learn Beginning with PL/SQL, Identifiers and Keywords, Operators, Exception Handling               | Analyse & implement Beginning with PL/SQL, Identifiers and Keywords, Operators, Exception Handling               |

NAME OF THE COURSE /SUBJECT/PAPER: **CORE JAVA** SEM: **IV**

| SYLLABUS<br>(UNIT WISE) | OBJECTIVES  | OUTCOME  |
|-------------------------|---|--|
| UNIT - I                | To learn history , architecture & its components of java, JVM, Data types , different Operators in Java | Analyse & implement history , architecture & its components of java, JVM, Data types , different Operators in Java |
| UNIT - II               | To learn control flow statements, Garbage collection , Method Overloading & Method Overriding           | Analyse & implement control flow statements, Garbage collection, Method overloading & Method Overriding            |
| UNIT -III               | To learn Inheritance, Interfaces, Abstract class, Packages  | Analyse and implement Inheritance, Interfaces, Abstract class, Packages  |
| UNIT - IV               | To learn Enumerations, Arrays, Multithreading, Exceptions, Byte Streams                                 | Analyse and implement Enumerations, Arrays, Multithreading, Exceptions, Byte Streams                               |
| UNIT - V                | To learn Event Handling, Windows Fundamentals, AWT , Layout Managers                                    | Analyse and implement Event Handling, Windows Fundamentals, AWT , Layout Managers                                  |