

Course Outcomes:

एम.ए. (हिंदी साहित्य) प्रथम सेमेस्टर

प्रश्न पत्र - प्रथम (हिंदी साहित्य का इतिहास)

उद्देश्य:-

1. हिंदी साहित्य के आदिकाल एवं भक्तिकाल की प्रवृत्तियों व रचनाकारों का अध्ययन
2. उक्त कालों की समस्त पृष्ठभूमियों का अध्ययन

प्रश्नपत्र - द्वितीय (प्राचीन एवं मध्यकालीन काव्य)

उद्देश्य:-

1. आदिकाल एवं भक्तिकाल (निर्गुण भक्ति काव्य) की रचनाओं का अध्ययन
2. लोक जागरण का भाव विकसित करना

प्रश्नपत्र तृतीय (आधुनिक हिंदी काव्य)

उद्देश्य:-

1. नवीन भावभूमि एवं वैचारिक गतिशीलता का प्रसार
2. आधुनिकता, इहलौकिकता विश्वजनीनता एवं वैज्ञानिक दृष्टिकोण का विकास

प्रश्नपत्र चतुर्थ (आधुनिक गद्य साहित्य)

उद्देश्य:-

1. गद्य की विविध विधाओं के माध्यम से मानव-जीवन के विविध पक्षों का उद्घाटन
2. ऐतिहासिक, सामाजिक, सांस्कृतिक मूल्यों का विकास

एम.ए. (हिंदी साहित्य) द्वितीय सेमेस्टर

प्रश्नपत्र:-प्रथम (हिंदी साहित्य का इतिहास)

उद्देश्य:-

1. हिंदी साहित्येतिहास के रीतिकाल, आधुनिक काल एवं छायावादोत्तर काल का व्यापक अध्ययन
2. समस्त पृष्ठभूमियों प्रवृत्तियों एवं प्रतिनिधि रचनाकारों का परिचय

प्रश्नपत्र: द्वितीय (प्राचीन एवं मध्यकालीन काव्य)

उद्देश्य:-

1. मध्यकालीन (सगुठा भक्तिधारा / रीतिकाल) काव्य का अध्ययन
2. लोक मंगल भावनात्मक एकता एवं सांस्कृतिक परम्परा से जोड़ना

प्रश्नपत्र: तृतीय (आधुनिक हिंदी काव्य)

उद्देश्य:-

1. प्रगतिवाद एवं प्रयोगवाद के प्रमुख हस्ताक्षरों का अध्ययन
2. समकालीन भावभित्तिजना एवं शिल्पगत नवीनता से परिचय

प्रश्नपत्र: चतुर्थ (आधुनिक गद्य साहित्य)

उद्देश्य:-

1. साहित्य समाज-संस्कृति का दर्शन
2. आंचलिकता से रुबरु करना

एम.ए. (हिंदी साहित्य) तृतीय सेमेस्टर

प्रश्नपत्र: प्रथम (काव्यशास्त्र एवं साहित्यलोचन)

उद्देश्य:-

1. रचना में मर्यादा का पालन करना
2. रचना को उसकी समग्रता में जांचना परखना
3. साहित्यिक समझ विकसित करना

प्रश्नपत्र: द्वितीय (भाषा विज्ञान एवं हिंदी भाषा)

उद्देश्य:-

1. साहित्य के गंभीर अध्ययन हेतु भाषिक व्यवस्था का ज्ञान
2. हिंदी भाषा के ऐतिहासिक विकासक्रम को समझना
3. देवनागरी लिपि और मानकीकरण की प्रक्रिया को समझना

प्रश्नपत्र: तृतीय (प्रयोजनमूलक -हिंदी)

उद्देश्य:-

1. रोजगार एवं जीविका के क्षेत्र में भाषा कौशल विकसित करना
2. जीवन और समाज की विभिन्न आवश्यकताओं के अनुरूप भाषा की दक्षता उत्पन्न करना

प्रश्नपत्र: चतुर्थ (भारतीय साहित्य)

उद्देश्य:-

1. भारतीय साहित्य की रूप -रचना जानना
2. प्रांतीय भाषाओं के साहित्य में एकरूपता खोजना
3. परस्पर तुलनात्मक अध्ययन करना

एम.ए. (हिंदी साहित्य) चतुर्थ सेमेस्टर

प्रश्नपत्र: प्रथम (काव्यशास्त्र एवं साहित्यालोचन)

उद्देश्य:-

1. हिंदी लक्षण परम्परा को जानना
2. हिंदी आलोचना की प्रमुख प्रवृत्तियों को समझना
3. व्यवहारिक समीक्षा का ज्ञान

प्रश्नपत्र: द्वितीय (भाषा विज्ञान एवं हिंदी भाषा)

उद्देश्य:-

1. हिंदी की उप भाषाओं का ज्ञान
2. हिंदी के विविध रूप का ज्ञान

प्रश्नपत्र: तृतीय (प्रयोजन मूलक हिंदी (पत्रकारिता))

उद्देश्य:-

1. पत्रकारिता के स्वरूप और इतिहास को जानना
2. विभिन्न जनसंचार माध्यमों के महत्त्व को समझना
3. प्रमुख प्रेस कानून एवं आचार संहिता की जानकारी

प्रश्नपत्र: चतुर्थ (जनपदीय भाषा एवं साहित्य (छत्तीसगढ़ी))

उद्देश्य:-

1. छत्तीसगढ़ी भाषा के नामकरण बोलिया और व्याकरण का ज्ञान
2. छत्तीसगढ़ी साहित्य के इतिहास का परिचय

M.Sc. Mathematics- 4 Semesters Postgraduate programme

Programme Outcomes (PO), Programme Specific Outcomes (PSO), Course Outcomes (CO)

Class	Paper Name	Outcome
M.Sc.- I & II Sem.	Advanced Abstract Algebra	<ol style="list-style-type: none">1. Students will learn Group theory, Ideals, Ring theory, Modules, Vector space, Normal Group, Abelian group etc.2. Students Skills to solve any theorem by using the properties of the given group, Ring, Ideal or field.3. Students compute different theorems and learn how to find the Galois group of any given group.
	Real Analysis	Students will be able to know the sequence and series of real numbers, convergence and divergence of both sequence and series. Determine the Riemann integrability.
	Topology	Students Skill to:- <ol style="list-style-type: none">1. Understand various basic topologies and topological spaces.2. Understand the countability and

		<p>uncountability of spaces and sets and their types.</p> <ol style="list-style-type: none"> 3. Understand the concept of <i>connectedness</i>, compactness, completeness of spaces. 4. Understand the topological and <i>hereditary</i> property 5. Learns the separation axioms.
	Complex Analysis	<p>Students will learn to:-</p> <ol style="list-style-type: none"> 1. Analyze sequence and series of complex numbers and analytical function. 2. Apply the concept of Cauchy-Riemann equations for analytic function. 3. Compute complex contour integrals and apply the cauchy Integral formula in various versions. 4. Understand the concept of Harmonic functions.
	Advanced Discrete Mathematics	<ol style="list-style-type: none"> 1. Students will know about the finite state machine, their outputs corresponding to their next state of input. 2. Students will learn the conjunctives and disjunctive Canonical form of two, three, four variables. 3. Students learn to formulate the output of Mealy and Moore machine, parallel and series circuits. 4. Students will have the knowledge of graphs, Trees, Spanning trees etc.
M.Sc.- III & IV Sem.	Integration Theory and Functional Analysis	<p>Students Skill to:-</p> <ol style="list-style-type: none"> 1. Learn the concept of linear and bounded linear transformation. 2. Understands the Function spaces and conjugate of Function Spaces. 3. Understand the concept of Dual linear spaces. 4. Learns to compute the real and complex functions.
	PDE and Mechanics	<p>Students will have the knowledge and Skills to:-</p> <ol style="list-style-type: none"> 1. Form the partial differential equations and solve them. 2. Learn the wave equations and heat equations and form their solutions. 3. Solve the problems on first order and higher degree partial differential equations and its application.
	Fuzzy Sets and their Applications	<ol style="list-style-type: none"> 1. Students learn the fundamentals of fuzzy set theory. 2. Students Skill to compute operations with fuzzy sets, extension principle, fuzzy logic, fuzzy probability. 3. Students acquire knowledge of important parts of fuzzy set theory which will enable them to create effective mathematical models of technical phenomena.
	Operations Research	<ol style="list-style-type: none"> 1. Students will be able to model LPP and solve them.

		<ol style="list-style-type: none"> 2. Students will understand the feasibility, infeasibility, basic, bounded, unbounded, optimal solutions of the problem. 3. Students will understand the Game theory. Modify a primal problem and obtain its solution.
	Programming In 'C'	<p>Students will learn to:-</p> <ol style="list-style-type: none"> 1. Code programs in 'C' of different types. 2. Understand different type of preprocessors in 'C'. 3. Struct basic structure of C-program and learns how to compile and run a C-program.

B.A.– 3 years Undergraduate programme, Programme Outcomes (PO)

PO1. The undergraduate programme in Hindi Literature / English Literature / Economics / Political Science / Geography is aimed at providing the students necessary inputs so as to set forth the task of bringing about new and innovative ideas/concepts so that the formulated model curricula in Hindi Literature / English Literature / Economics / Political Science / Geography / becomes in tune with the changing scenario and incorporate new and rapid advancements and multi-disciplinary skills, societal relevance, global interface, self-sustaining and supportive learning.

PO2. The undergraduate programme in Hindi Literature / English Literature / Economics / Political Science / Geography besides teaching the basic concepts of Hindi Literature / English Literature / Economics / Political Science / Geography should in addition have broader vision for students so that the students therefore be exposed to societal interface of Hindi Literature / English Literature / Economics / Political Science / Geography / and the role of Hindi Literature / English Literature / Economics / Political Science / Geography / in the development of arts and social sciences.

PO3. The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives. PO4. The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

PO5. The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

PO6. The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

PO7. The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

PO8. The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

PO9. The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will be able to understand and apply the knowledge of izkphu fgUnh dkO;

PSO2. The students after the completion of this programme will be able to understand and apply the knowledge of fgUnh dFkk lkfgR;

PSO3. The students after the completion of this programme will be able to understand and apply the knowledge of vokZphu fgUnh dkO;

PSO4. The students after the completion of this programme will be able to understand and apply the knowledge of

PSO5. The students after the completion of this programme will be able to understand and apply the knowledge of

PSO6. The students after the completion of this programme will be able to understand and apply the knowledge of

PSO7. The students after the completion of this programme will be able to understand and apply the knowledge of Literature in English From 1550-1750 A.D.

PSO8. The students after the completion of this programme will be able to understand and apply the knowledge of Literature in English From 1750-1900 A.D.

PSO9. The students after the completion of this programme will be able to understand and apply the knowledge of Modern English Literatures - I.

PSO10. The students after the completion of this programme will be able to understand and apply the knowledge of Modern English Literatures – II.

PSO11. The students after the completion of this programme will be able to understand and apply the knowledge of Indian Writing in English.

PSO12. The students after the completion of this programme will be able to understand and apply the knowledge of American Literature.

PSO13. The students after the completion of this programme will be able to understand and apply the knowledge of Micro Economics.

PSO14. The students after the completion of this programme will be able to understand and apply the knowledge of Indian Economy.

PSO15. The students after the completion of this programme will be able to understand and apply the knowledge of Macro Economics.

PSO16. The students after the completion of this programme will be able to understand and apply the knowledge of Money, Banking and Public Finance.

PSO17. The students after the completion of this programme will be able to understand and apply the knowledge of Development and Environmental Economics.

PSO18. The students after the completion of this programme will be able to understand and apply the knowledge of Statistical Methods.

PSO19. The students after the completion of this programme will be able to understand and apply the knowledge of Political Theory.

PSO20. The students after the completion of this programme will be able to understand and apply the knowledge of Indian Government and Politics.

PSO21. The students after the completion of this programme will be able to understand and apply the knowledge of Western Political Thought.

PSO22. The students after the completion of this programme will be able to understand and apply the fundamentals of Comparative Politics and Government.

PSO23. The students after the completion of this programme will be able to understand and apply the knowledge of International Politics.

PSO24. The students after the completion of this programme will be able to understand and apply the knowledge of Public Administration.

PSO37. The students after the completion of this programme will be able to understand and apply the knowledge of Physical Geography - Elements of Geomorphology.

PSO38. The students after the completion of this programme will be able to understand and apply the knowledge of Introduction to Geography and Human Geography.

PSO39. The students after the completion of this programme will be able to understand and apply the knowledge of Physical Geography - Climatology and Oceanography.

PSO40. The students after the completion of this programme will be able to understand and apply the knowledge of Regional Geography with Special Reference to North America.

PSO41. The students after the completion of this programme will be able to understand and apply the knowledge of Geography - Resources and Environment.

PSO42. The students after the completion of this programme will be able to understand and apply the knowledge of Geography of India (with special reference to Chhattisgarh).

Course Outcomes (CO)

Course 7: Literature in English from 1550-1750 A.D.

CO1. The students after the completion of this course will be able to demonstrate knowledge of the major texts and traditions of English literature.

CO2. The students after the completion of this course will be able to contemplate and comprehend different periods of literature and important authors like Shakespeare, Milton, etc of English literature.

Course 8: Literature in English from 1750-1900 A.D.

CO1. The students after the completion of this course will be able to contemplate and comprehend and become familiar with representative literary and cultural texts within a significant number of historical and cultural contexts.

CO2. The students after the completion of this course will be able to contemplate and comprehend and form an idea about the various stages in the development of English literature.

Course 9: Modern English Literatures - I

CO1. The students after the completion of this course will be able to contemplate and comprehend and develop critical thinking through long and short fictions of English literature.

CO2. The students after the completion of this course will be able to write and appreciate different types of prose of English literature.

Course 10: Modern English Literatures – II

CO1. The students after the completion of this course will be able to familiarize with the plays of master dramatists and will have developed the ability to appreciate and evaluate different types of plays of English literature.

CO2. The students after the completion of this course will be able to appreciate and evaluate different types of plays of English literature.

Course 11: Indian Writing in English

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the various phases of the evolution of Indian writing in English.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the thematic concern, genres and trends of Indian writing in English.

Course 12: American Literature

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the cultural themes, literary periods and key artistic features of American Literature.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the various aspects of American Society through a critical examination of the literary texts representing different periods and culture.

Course 13: Micro Economics

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the definitions, nature and scope of economics.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the theory of production and cost.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the market structure.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize factor pricing.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize welfare economics.

Course 14: Indian Economy

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize pre and post independent Indian economy.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in population and human development.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in agriculture.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in industry.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in foreign external sector.

Course 15: Macro Economics

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize national income & social accounts.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in consumption function.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the nature and characteristics of trade cycle.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in international trade.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the functions of IMF, World Bank and WTO.

Course 16: Money, Banking and Public Finance

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize basic concepts of money.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in commercial banking.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the meaning and scope of public finance.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the sources of public revenue and taxation.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize public debt and financial administration.

Course 17: Development and Environmental Economics

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize economic growth and development.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the relationship between economics and population problem & growth.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize Harrods and Domar growth model.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the relationship between economics and environment & ecology.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the concept of intellectual capital.

Course 18: Statistical Methods

CO1. The students after the completion of this course will be able to comprehend and apply statistical methods in economics.

CO2. The students after the completion of this course will be able to comprehend and apply the measurement of central tendency in economics.

CO3. The students after the completion of this course will be able to comprehend and apply the methods & tools of dispersion in economics.

CO4. The students after the completion of this course will be able to comprehend and apply coefficient of correlation in economics.

CO5. The students after the completion of this course will be able to comprehend and apply index number and measurement of trend in economics.

Course 19: Political Theory

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the nature and scope of political theory.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the concept of state, nation and civil society.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the meaning of organs of government and theory of separation of power.

Course 20: Indian Government and Politics

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the salient features in making of Indian Constitution.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize and appreciate the fundamental rights and duties and the directive principle of state policy.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize and evaluate the evolution, functioning and consequences of political parties in India.

Course 21: Western Political Thought

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the nature, methods and significance of political thought.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize and appreciate various social and political ideas of political thinkers.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize and demonstrate the knowledge of political thinkers and political concepts.

Course 22: Comparative Politics and Government

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize and critically assess presidential and parliamentary system.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the difference between federal and unitary systems of government.

Course 23: International Politics

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize and critically assess the international political system.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the relations of India with neighboring countries.

Course 24: Public Administration

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize and critically assess the administrative system of the nation.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize various concepts in public administration.

Course 38: Introduction to Geography and Human Geography

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the relationship of man and environment.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the races of man kinds.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the modes of life of pigmy, Bushman, Eskimos, Masai, Gond and Nagar.

Course 39: Physical Geography - Climatology and Oceanography

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the weather and climate.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the atmospheric moisture.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the air masses and fronts.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the surface configuration of the ocean floor.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the circulation of oceanic water.

CO6. The students after the completion of this course will be able to contemplate and comprehend and recognize the marine deposits, coral reefs.

Course 40: Regional Geography with Special Reference to North America

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the regional concept, bases of regionalization.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the structure, relief, climate and soils of North America.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the mineral and energy resources, Forests and North America.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the Agriculture belts, line stock and dairy farming in North America.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the Industries and Regions of North America.

Course 41: Geography - Resources and Environment

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the resources: meaning, nature and components.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the distribution and utilization of resources.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the man environment interrelations.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the environmental conservation and management.

Course 42: Geography of India (with special reference to Chhattisgarh)

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the geo-physical features of India.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the drainage, climate of India.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the resources, geo-cultural features of India.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the geo-physical features, geo-cultural features of Chhattisgarh.

B.Com. – 3 years Undergraduate programme

Programme Outcomes (PO)

PO1. The students after the completion of this programme will be enabled to overcome the challenges and cash in the opportunities in the field of commerce.

PO2. The students after the completion of this programme will become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stockexchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors etc.

PO3. The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

PO4. The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

PO5. The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

PO6. The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

PO7. The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

PO8. The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

PO9. The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will become well versed with financial accounting.

PSO2. The students after the completion of this programme will become well versed with business communication. PSO3. The students after the completion of this programme will be able to understand business mathematics.

PSO4. The students after the completion of this programme will be able to understand business regulatory framework.

PSO5. The students after the completion of this programme will be able to identify a business environment.

PSO6. The students after the completion of this programme will be able to understand the economics of a business. PSO7. The students after the completion of this programme will be able to understand the essentials of corporate accounting.

PSO8. The students after the completion of this programme will be able to understand the essentials of company law.

PSO9. The students after the completion of this programme will be able to understand the essentials of cost accounting.

PSO10. The students after the completion of this programme will be able to understand the principles of business management.

PSO11. The students after the completion of this programme will be able to understand the essentials of business statistics.

PSO12. The students after the completion of this programme will be able to understand the fundamentals of entrepreneurship.

PSO13. The students after the completion of this programme will be able to understand the principles of direct taxation – income tax.

PSO14. The students after the completion of this programme will be able to recognize the procedures of auditing. PSO15. The students after the completion of this programme will be able to understand the essentials, principles and procedures of indirect taxation and GST.

PSO16. The students after the completion of this programme will be able to understand the essentials of management accounting.

PSO17. The students after the completion of this programme will be able to understand the fundamentals of insurance.

PSO18. The students after the completion of this programme will be able to understand the essentials of banking and money management.

Course Outcomes (CO)

Course 1: Financial Accounting

CO1. The students after the completion of this course will be able to impart the knowledge of various accounting concepts. CO2.

The students after the completion of this course will be able to instill the knowledge about accounting procedures, methods and techniques & develop skills for computerized Accounting. Course

2: Business Communication

CO1. The students after the completion of this course will be able to understand the concept, process and importance of communication.

CO2. The students after the completion of this course will be able to develop awareness regarding new trends in business communication.

CO3. The students after the completion of this course will be able to recognize various media of communication. Course 3: Business Mathematics

CO1. The students after the completion of this course will be able to prepare for competitive exams.

CO2. The students after the completion of this course will be able to improve their calculating power & skills.

CO3. The students after the completion of this course will be able to understand the concept of simple interest, compound interest & concept of EMI. Course

4: Business Regulatory Framework

CO1. The students after the completion of this course will be acquainted with the basic concepts, terms & Provisions of mercantile & Business Laws.

CO2. The students after the completion of this course will be able to develop the awareness regarding laws affecting business, trade & commerce.

Course 5: Business Environment

CO1. The students after the completion of this course will become aware about the Business Environment.

CO2. The students after the completion of this course will be able to create entrepreneurial awareness.

CO3. The students after the completion of this course will be able to motivate themselves for taking up entrepreneurship as career.

Course 6: Business Economics

CO1. The students after the completion of this course will be able to use various economic theories.

CO2. The students after the completion of this course will be able to apply economic reasoning to problems of business.

CO3. The students after the completion of this course will be able to understand the basic micro economic concepts. Course 7: Corporate Accounting

CO1. The students after the completion of this course will be enabled to develop awareness about corporate accounting with the provisions of companies Act & Accounting as per Indian Accounting standards.

CO2. The students after the completion of this course will be enabled to develop conceptual aspect of corporate accounting & develop skills about accounting standards.

Course 8: Company Law

CO1. The students after the completion of this course will be able to impart the knowledge of fundamentals of company law.

CO2. The students after the completion of this course will be able to update the knowledge of provisions of the companies Act of 2013.

Course 9: Cost Accounting

CO1. The students after the completion of this course will be enabled with the knowledge of Basic cost concepts, Elements of cost, Ascertainment of materials & costing.

CO2. The students after the completion of this course will be able to understand various methods of costing & their applications.

Course 10: Principal of Business Management

CO1. The students after the completion of this course will be able to understand about business management concept.

CO2. The students after the completion of this course will be able to understand about various functions of business management.

Course 11: Business Statistics

CO1. The students after the completion of this course will be able to understand & apply the concepts of mean, mode & median.

CO2. The students after the completion of this course will be able to apply various methods of sampling & probability measurement.

Course 12: Fundamentals of Entrepreneurship

CO1. The students after the completion of this course will be able to create entrepreneurial temper.

CO2. The students after the completion of this course will be able to take up the cause of entrepreneurship.

Course 13: Income Tax

CO1. The students after the completion of this course will be able to understand the basic concept & acquire knowledge about computation of Income.

CO2. The students after the completion of this course will be enabled to submit Income Tax Returns, Advance Tax & Tax deducted at source

CO3. The students after the completion of this course will be able to identify the procedures of Tax collection authorities under Income Tax Act.

Course 14: Auditing

CO1. The students after the completion of this course will be able to acquaint themselves about concept & principles of Auditing, Audit process, Assurance standards & Tax Audit and Audit of computerized system.

CO2. The students after the completion of this course will be able to prepare Audit Reports.

Course 15: Indirect Taxes with GST

CO1. The students after the completion of this course will be able to understand and apply the concept of GST.

CO2. The students after the completion of this course will be able to understand and apply the concept of Excise duty, CENVAT.

CO3. The students after the completion of this course will be able to understand and apply the knowledge of Registration under GST including its procedures & the liable person for GST registration.

Course 16: Management Accounting

CO1. The students after the completion of this course will be able to understand and apply the basic knowledge of management accounting & its relevance in a business organization.

CO2. The students after the completion of this course will be able to understand and apply managerial behavior & control structures prevalent under varied business environment.

Course 17: Fundamental of Insurance

CO1. The students after the completion of this course will be able to understand and apply the fundamentals of insurance.

CO2. The students after the completion of this course will be able to understand and apply the knowledge of life Insurance, Fire Insurance & Marine Insurance.

CO3. The students after the completion of this course will be able to understand and apply the functions of Insurance agent.

Course 18: Money and Banking

CO1. The students after the completion of this course will be able to understand and apply the fundamentals of banking.

CO2. The students after the completion of this course will be able to understand and apply the banking business & practices.

CO3. The students after the completion of this course will be able to understand and apply the new concepts introduced in the banking system.

B.Sc. (Bio Group) – 3 years Undergraduate programme Programme Outcomes (PO)

PO1. The undergraduate programme in Zoology / Botany / is aimed at providing the students necessary inputs so as to set forth the task of bringing about new and innovative ideas/concepts so that the formulated model curricula in Zoology / Botany / becomes in tune with the changing scenario and incorporate new and rapid advancements and multi-disciplinary skills, societal relevance, global interface, self-sustaining and supportive learning.

PO2. The undergraduate programme in Zoology / Botany / . besides teaching the basic concepts of Zoology / Botany / . should in addition have broader vision for students so that the students therefore be exposed to societal interface of Zoology / Botany / . and the role of Zoology / Botany / . in the development of biological sciences.

PO3. The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

PO4. The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

PO5. The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will be able to understand and apply the knowledge of Cell Biology & Invertebrates.

PSO2. The students after the completion of this programme will be able to understand and apply the knowledge of Vertebrates & Embryology.

PSO3. The students after the completion of this programme will be able to understand and apply the knowledge of Anatomy & Physiology.

PSO4. The students after the completion of this programme will be able to understand and apply the knowledge of Vertebrate Endocrinology, Reproductive Biology Behavior, Evolution and Applied Zoology.

PSO5. The students after the completion of this programme will be able to understand and apply the knowledge of Ecology, Environmental biology; Toxicology; . and Medical Zoology.

PSO6. The students after the completion of this programme will be able to understand and apply the knowledge of Genetics, Cell Physiology, Biochemistry, Biotechnology and Bio-techniques.

PSO7. The students after the completion of this programme will be able to understand and apply the knowledge of General Diversity of Microbes and Cryptogams.

PSO8. The students after the completion of this programme will be able to understand and apply the knowledge of Cell Biology and Genetics.

PSO9. The students after the completion of this programme will be able to understand and apply the knowledge of Diversity of Seed Plants and their Systematics.

PSO10. The students after the completion of this programme will be able to understand and apply the knowledge of Structure Development and Reproduction in Flowering Plants.

PSO11. The students after the completion of this programme will be able to understand and apply the knowledge of Plant Physiology, Biochemistry and Biotechnology.

PSO12. The students after the completion of this programme will be able to understand and apply the knowledge of Ecology and Utilization of Plants.

PSO13. The students after the completion of this programme will be able to understand and apply the knowledge of General ..

Course Outcomes (CO)

Course 1: Cell Biology & Invertebrates

CO1. The students after the completion of this course will be able to describe Prokaryotic & Eukaryotic Cells.

CO2. The students after the completion of this course will be able to describe Cell divisions (Mitosis & Meiosis).

CO3. The students after the completion of this course will be able to describe general characteristics & classification of invertebrates.

CO4. The students after the completion of this course will be able to describe Helminthes & Annelida.

CO5. The students after the completion of this course will be able to describe Mollusca, Protochordata.

Course 2: Vertebrates & Embryology

CO1. The students after the completion of this course will be able to describe the origin and classification of Chordates.

CO2. The students after the completion of this course will be able to describe Fishes, Amphibia & Reptilia.

CO3. The students after the completion of this course will be able to describe Aves & Mammals.

Course 3: Anatomy & Physiology

CO1. The students after the completion of this course will be able to describe anatomy of various organ systems of vertebrates - Integument and its derivatives, structure of scales, hair and feathers; Alimentary canal and digestive glands in vertebrates; Respiratory Organs, Gills and lungs; Air-Sac in birds.

CO2. The students after the completion of this course will be able to describe endoskeleton-limbs, girdles and vertebrae; Circulatory System - Evolution of heart and aortic arches; Urogenital System - Kidney and excretory ducts.

CO3. The students after the completion of this course will be able to describe nervous system - general plan of brain and spinal cord; Endocrine glands - classification and histology; Gonads and genital ducts.

Course 4: Vertebrate Endocrinology, Reproductive Biology Behavior, Evolution and Applied Zoology

CO1. The students after the completion of this course will be able to describe general characters of hormones, hormone receptors, biosynthesis and secretion of thyroid, adrenal, ovarian and testicular hormones, endocrine disorder due to hormones and other glands.

CO2. The students after the completion of this course will be able to describe reproductive cycle in vertebrates, menstruation, lactation and pregnancy, mechanism of parturition, hormonal regulation of gametogenesis, extra embryonic membrane.

CO3. The students after the completion of this course will be able to describe evidence of organic evolution, theories of organic evolution, variation, mutation, isolation and natural selection, evolution of horse.

Course 5: Ecology, Environmental biology; Toxicology; . and Medical Zoology

CO1. The students after the completion of this course will be able to describe aims and scopes of ecology, major ecosystems of the world, population- characteristics and regulation of densities, communities and ecosystems, biogeochemical cycles, air and water pollution, ecological succession.

CO2. The students after the completion of this course will be able to describe environmental biology, laws of limiting factors, food chain in a freshwater ecosystem, energy flow in ecosystem-trophic levels, conservation of natural resources, environmental impact assessment.

CO3. The students after the completion of this course will be able to describe toxicology, definition of toxicity, classification of toxicants, principle of systematic toxicology, toxic agents and their action metallic and inorganic agents, animal poisons - snake-venom, scorpion and bee poisoning, food poisoning.

Course 6: Genetics, Cell Physiology, Biochemistry, Biotechnology and Bio-techniques

CO1. The students after the completion of this course will be able to describe genetics, linkage and linkage maps, varieties of gene expression - multiple alleles; lithogenesis; pleiotropic genes; gene interaction; epistasis, sex-chromosome systems, and sex-linkage, mutation and chromosomal alterations; meiotic consequences, human genetics - chromosomal and single gene disorders (somatic cell genetics).

CO2. The students after the completion of this course will be able to describe cell physiology, general idea about pH and buffer, transport across membrane - cell membrane; mitochondria and endoplasmic reticulum, active transport and its mechanism; active transport in mitochondria and endoplasmic reticulum, hydrolytic enzymes - their chemical nature, activation and specificity.

CO3. The students after the completion of this course will be able to describe biochemistry, amino acids and peptides - basic structure and biological function, carbohydrate and its metabolism - glycogenesis; gluconeogenesis; glycolysis, glycogenolysis; Krebs's cycle, lipid metabolism - oxidation of glycerol; oxidation of fatty acid, protein metabolism - deamination, transamination, transmethylation; biosynthesis of protein.

Course 7: General Diversity of Microbes and Cryptogams

CO1. The students after the completion of this course will be able to describe Viruses and Bacteria: General account of viruses and mycoplasma; bacteria structure; nutrition, reproduction and economic importance; general account of cyanobacteria.

CO2. The students after the completion of this course will be able to describe Algae: General characters, classification and economic importance; important features and life history of Chlorophyceae-Volvox, Oedogonim, Coleochaete; Xanthophyceae- Vaucheria; Phaeophyceae- Ectocarpus, Sargassum; Rhodophyceae- Polysiphonia.

CO3. The students after the completion of this course will be able to describe Fungi: General characters, classification and economic importance; important features and life history of Mastigomycotina Pythium, Phytophthora; Zygomycotina- Mucor, Ascomycotina-Saccharomyces, Eurotium, Chaetomium, Peziza; Basidiomycotina- Puccinia, Agaricus; Deuteromycotina-Cercospora, Colletotrichum; general account of Lichens.

Course 8: Cell Biology and Genetics

CO1. The students after the completion of this course will be able to describe the Cell: Envelope; Plasma membrane; bilayer lipid structure; functions; the cell wall, Ultra structure and function of nucleus: nuclear membrane; nucleolus and other organelles: Golgi bodies, ER, peroxisomes, Vacuoles.

CO2. The students after the completion of this course will be able to describe Chromosome organization: Morphology; centromere and telomere; chromosome alterations; deletions, duplications, translocations, inversions; variations in chromosome number aneuploidy, polyploidy; sex chromosomes, Cell division: Mitosis; meiosis.

CO3. The students after the completion of this course will be able to describe DNA the genetic material: DNA structure; replication; DNA- protein interaction; the nucleosome model; genetic code; satellite and repetitive DNA, Extra nuclear genome: Presence and function of mitochondrial and plastid DNA; plasmids.

CO4. The students after the completion of this course will be able to describe Gene expression: Structure of gene; transfer of genetic information; transcription, translation, protein synthesis; tRNA; ribosomes; regulation of gene expression in prokaryotes and eukaryotes; proteins - 1D, 2D and 3D structures.

Course 9: Diversity of Seed Plants and their Systematics

CO1. The students after the completion of this course will be able to describe characteristics of seed plants; evolution of the seed habit; seed plants with (angiosperms) and without (gymnosperms) fruits; fossil and living seed plants, general features of gymnosperms and their classification; evolution and diversity of gymnosperms; geological time scale, fossilization and fossil gymnosperms.

CO2. The students after the completion of this course will be able to describe morphology of vegetative and reproductive parts; anatomy of roots, stem and leaf, reproduction and life cycle of Pinus, Cycas and Ephedra.

CO3. The students after the completion of this course will be able to describe angiosperms: origin and evolution, some examples of primitive angiosperms, angiosperms taxonomy: brief history, aims and fundamental components; identification, keys taxonomic literature, botanical nomenclature: principles and rules; taxonomic ranks; type concept; principle of priority.

Course 10: Structure Development and Reproduction in Flowering Plants

CO1. The students after the completion of this course will be able to describe the basic body plan of a flowering plant: modular type of growth, diversity in plant form in annuals, biennials and perennials; convergence of evolution of tree habit in gymnosperms, monocotyledons and dicotyledons; trees-largest and longest-lived organisms.

CO2. The students after the completion of this course will be able to describe the shoot system: the shoot apical meristem and its histological organization; vascularization of primary shoot in monocotyledons and dicotyledons; formation of internodes, branching pattern; monopodial and sympodial growth canopy architecture; cambium and its functions; formation of secondary xylem, a general account of wood structure in relation to conduction of water and minerals; characteristics of growth rings, sapwood and heart wood; role of woody skeleton; secondary phloem – structure, function, relationships, periderm.

CO3. The students after the completion of this course will be able to describe leaf: origin, development, arrangement and diversity in size and shape; internal structure in relation to photosynthesis and water loss; adaptations to water stress; senescence and abscission, the root system: the root apical meristem; differentiation of primary and secondary tissues and their roles; structural modification for storage, respiration, reproduction and for interaction with microbes.

Course 11: Plant Physiology, Biochemistry and Biotechnology

CO1. The students after the completion of this course will be able to describe plant-water relations: importance of water to plant life; physical properties of water; diffusion and osmosis; absorption, transport of water and transpiration; physiology of stomata, mineral nutrition: essential macro and micro-elements and their role; mineral uptake; deficiency and toxicity symptoms.

CO2. The students after the completion of this course will be able to describe transport of organic substances: mechanism of phloem transport; source-sink relationship; factors affecting translocation, basic of enzymology: discovery and nomenclature; characteristics of enzymes; concept of holoenzyme, apoenzyme, coenzyme and cofactors; regulation of enzyme activity, mechanism of action, photosynthesis: significance; historical aspects; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems; Z-scheme; photo-phosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration.

CO3. The students after the completion of this course will be able to describe respiration: ATP - the biological energy currency; aerobic and anaerobic respiration; Krebs's cycle, electron transport mechanism (chemi-osmotic theory); redox potential; oxidative phosphorylation; pentose phosphate pathway, Nitrogen and lipid metabolism: Biology of nitrogen fixation; importance of nitrate reductase and its regulations; ammonium assimilation; structure and function of lipids; fatty acid biosynthesis; Betaoxidation; saturated and unsaturated fatty acids; storage and mobilization of fatty acids.

CO4. The students after the completion of this course will be able to describe growth and development: definitions; phases of growth and development; kinetics of growth, seed dormancy, seed germination and factors of their regulation; plant movements; the concept of photoperiodism; physiology of flowering; florigen concept; biological clocks; physiology of senescence, fruit ripening; plant hormones auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery, biosynthesis and mechanism of action; photomorphogenesis; phytochromes and cryptochromes, their discovery, physiological role and mechanism of action.

Course 12: Ecology and Utilization of Plants

CO1. The students after the completion of this course will be able to describe plants and environment: atmosphere (gaseous composition), water (properties of water cycle), light (global radiation, photosynthetically active radiation), temperature, soil (development, soil profiles, physico-chemical properties), and biota, Morphological, anatomical and physiological responses of plants to water (hydrophytes and xerophytes), temperature (thermoperiodicity), light (photoperiodism, heliophytes and sciophytes) and salinity.

CO2. The students after the completion of this course will be able to describe community ecology: community characteristics, frequency, density, cover, life forms biological spectrum; ecological succession, ecosystems: structure, abiotic and biotic components; food chain, food web, ecological pyramids, energy flow; biogeochemical cycles of carbon, nitrogen and phosphorus.

CO3. The students after the completion of this course will be able to describe population ecology: growth curves; ecotypes; eads, biogeographical regions of India, Vegetation types of India: Forests and grasslands.

CO4. The students after the completion of this course will be able to describe utilization of plants food plants: rice, wheat, maize, potato, sugarcane, fibers: cotton and jute, vegetable oils: groundnut, mustard and coconut, general account of sources of firewood, timber and bamboos.

Course 13: General .

CO1. The students after the completion of this course will be able to describe unity of microbial world, scope of ., . and human health, beneficial and harmful microbes, development of . (contributions and pioneers).

CO2. The students after the completion of this course will be able to describe diversity of microbial world: principle of classification, classification of viruses, bacteria (including cyanobacteria) algae and fungi (including yeast) and protozoa.

CO3. The students after the completion of this course will be able to describe methods of studying microorganism: origin of microbes, microscopy, pure culture techniques, sterilization, aseptic techniques, isolation of pure culture, conditions and media for growth of microorganisms in the laboratory.

CO4. The students after the completion of this course will be able to describe general organization of microbes; structural functional organization and economic importance of algae (Nostoc, anabaena, Ocillitoria), fungi (Rhizopus, Penicillium, Aspergillus), yeast and lichens.

Course 14: Biochemistry and Immunology

CO1. The students after the completion of this course will be able to describe structure and properties of mono and disaccharides, amino acids and peptides, bases; purines and pyrimidines, sugars; ribose, deoxyribose and nucleoside and nucleotide; general account of lipids.

CO2. The students after the completion of this course will be able to describe the concept of macromolecules; structural and functional organization of polysaccharides (starch, glycogen, cellulose, mucopolysaccharides), proteins and nucleic acids (DNA, RNA).

CO3. The students after the completion of this course will be able to describe enzymes; historical account, classification, co-enzymes and their role, enzyme action, enzyme kinetics, km, vm and enzyme inhibition, allosteric enzyme and isoenzyme, extracellular enzymes and their role.

CO4. The students after the completion of this course will be able to describe metabolism; general concept of metabolism (anabolism, catabolism and amphibolism), glycolysis, TCA Cycle and HMP Shunt, Anaerobic catabolism of glucose; alpha, beta and gamma oxidation of fatty acids.

Course 15: Microbial Physiology and Genetics

CO1. The students after the completion of this course will be able to describe plasma membrane and transport across membrane, energy transformation, physiology of bacterial growth, phases of growth, growth conditions, differentiation in bacterial cells-sporulation, germination; bacterial cell division replication of chromosome, partition of chromosome into daughter cell.

CO2. The students after the completion of this course will be able to describe primary and secondary metabolism.

CO3. The students after the completion of this course will be able to describe bacterial plasmids; structure and properties, replication, incompatibility, plasmid amplification, bacteriophages; lytic development cycle - T4; lytic and lysogenic development of phage, single stranded DNA phage, transposition; structure of bacterial transposons, types of bacterial transposons, mechanism of antibiotic resistance and spread of antibiotic resistance.

CO4. The students after the completion of this course will be able to describe genetic recombination; requirements, molecular basis, genetic analysis of recombination in bacteria.

Course 16: Principles of Bioinstrumentation and Techniques

CO1. The students after the completion of this course will be able to describe colorimetry and spectrophotometry, spectrofluorimetry, turbidometry, nephelometry, luminometry, pH meter.

CO2. The students after the completion of this course will be able to describe chromatography; adsorption partition, column, gas, ion-exchange, gel filtration, and affinity chromatographies, HPLC, FPLC.

CO3. The students after the completion of this course will be able to describe centrifugation and ultracentrifugation, microscopy- light, phase-contrast, fluorescence, dark field, electron microscopy, laser, confocal, microscopy and digital image analysis.

CO4. The students after the completion of this course will be able to describe tissue culture techniques; principal and requirements of animal tissue culture, decontamination, sterilization and disinfection.

Course 17: Molecular Biology and Genetic Engineering

CO1. The students after the completion of this course will be able to describe history of molecular biology, model systems, concepts of molecular biology, early history of genetic engineering, genetic engineering concepts, ethical issue.

CO2. The students after the completion of this course will be able to describe mutation; spontaneous and induced, base pair change, frame shift, deletion, inversion, random duplication, insertion, useful phenotypes (auxotrophs, conditional lethal, resistance), reversion vs. suppression, Ames's test.

CO3. The students after the completion of this course will be able to describe function of macromolecules; early observation on the mechanism of heredity, DNA as genetic material; basic mechanism of replication, enzymes involved in replication, enzymes involved in transcription translation, genetic code, regulation of gene expression-transcription, translation and control of gene expression in microbes.

CO4. The students after the completion of this course will be able to describe DNA repair and restriction, types of repair systems, restriction modification systems, types of restriction enzymes, properties and uses, methylation, biology of plasmids, bacteriophages, lytic vs. lysogenic phages, single standard DNA phages, M 13, restriction modification systems, restriction enzymes.

Course 18: Environmental and Medical .

CO1. The students after the completion of this course will be able to describe aerobiology; definition, droplet nuclei, aerosol assessment of air quality, some important air borne diseases caused by bacteria (Diphtheria, Pneumonia, Meningitis), virus (Influenza, Chicken pox, Measles) and fungi (mycosis); their symptoms and preventive measures.

CO2. The students after the completion of this course will be able to describe soil .: physical and chemical characteristics and micro flora of various soil types, rhizosphere, phyllosphere, brief account of microbial interactions: symbiosis, mutualism, commensalism, competition, amensalism, synergism, parasitism, and predation. biofertilizers - biological nitrogen fixation, nitrogenase enzyme, nif genes, symbiotic nitrogen fixation, and non-symbiotic nitrogen fixation (Azotobacter, Azospirillum), VAM-ecto-endo-ectendomycorrhizae.

CO3. The students after the completion of this course will be able to describe aquatic .; ecosystem, fresh water (ponds, lakes, stream) and marine, water zonation: upwelling, eutrophication, potability of water - microbial assessment of water quality, brief account of water borne diseases (Typhoid, Dysentery, Cholera, Hepatitis) and preventive measures.

CO4. The students after the completion of this course will be able to describe food spoilage and food borne infections, biodegradation, xenobiotics, bioaccumulation, biopesticides and deterioration, general concept of industrial . and their applications. CO5. The students after the completion of this course will be able to describe waste treatment: types of wastes, characterization of solid and liquid waste, waste treatment solid saccharification, gasification, composting, liquid waste treatment - aerobic, anaerobic primary, secondary and tertiary methods, useful byproducts, mushroom, fuel, fertilizer, biodegradation of industrial waste.

B.Sc. (Maths Group) – 3 years Undergraduate programme

Programme Outcomes (PO)

PO1. The undergraduate programme in Mathematics / Physics / Chemistry is aimed at providing the students necessary inputs so as to set forth the task of bringing about new and innovative ideas/concepts so that the formulated model curricula in Mathematics / Physics / Chemistry becomes in tune with the changing scenario and incorporate new and rapid advancements and multi-disciplinary skills, societal relevance, global interface, self-sustaining and supportive learning.

PO2. It is desired that undergraduate programme in Mathematics / Physics / Chemistry besides teaching the basic concepts of Mathematics / Physics / Chemistry should in addition have broader vision for students so that the students therefore be exposed to societal interface of Mathematics / Physics / Chemistry and the role of Mathematics / Physics / Chemistry in the development of physical, chemical and mathematical sciences & technologies.

PO3. The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

PO4. The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

PO5. The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

PO6. The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

PO7. The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

PO8. The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

PO9. The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will be able to understand and apply the fundamentals of Mechanics, Oscillation and Properties of Matter.

PSO2. The students after the completion of this programme will be able to understand and apply the fundamentals of Electricity, Magnetism and Electromagnetic Theory.

PSO3. The students after the completion of this programme will be able to understand and apply the fundamentals of Thermodynamics, Kinetic Theory and Statistical Physics.

PSO4. The students after the completion of this programme will be able to understand and apply the fundamentals of Wave, Acoustics and Optics.

PSO5. The students after the completion of this programme will be able to understand and apply the fundamentals of Relativity, Quantum Mechanics, Atomic, Molecular and Nuclear Physics.

PSO6. The students after the completion of this programme will be able to understand and apply the fundamentals of Solid State Physics, Solid State Devices and Electronics.

PSO7. The students after the completion of this programme will be able to understand and apply the fundamentals of Algebra & Trigonometry.

PSO8. The students after the completion of this programme will be able to understand and apply the fundamentals of Calculus.

PSO9. The students after the completion of this programme will be able to understand and apply the fundamentals of Vector Analysis & Geometry.

PSO10. The students after the completion of this programme will be able to understand and apply the fundamentals of Advanced Calculus.

PSO11. The students after the completion of this programme will be able to understand and apply the fundamentals of Differential Equations.

PSO12. The students after the completion of this programme will be able to understand and apply the fundamentals of Mechanics.

PSO13. The students after the completion of this programme will be able to understand and apply the fundamentals of Analysis.

PSO14. The students after the completion of this programme will be able to understand and apply the fundamentals

Course Outcomes (CO)

Course 1: Mechanics, Oscillation and Properties of Matter

CO1. The students after the completion of this course will be able to understand laws of motion and their application to various dynamical situations, notion of inertial frames and concept of Galilean invariance. Learn the concept of conservation of energy, momentum, angular momentum and apply them to basic problems.

CO2. The students after the completion of this course will be able to understand expression for the moment of inertia about the given axis of symmetry for different uniform mass distributions.

CO3. The students after the completion of this course will be able to understand and apply the principles of elasticity, viscosity and surface tension.

CO4. The students after the completion of this course will be able to understand and apply Kepler's law to describe the motion of planets and satellite in circular orbit, through the study of law of Gravitation.

CO5. The students after the completion of this course will be able to explain the phenomena of simple harmonic motion and the properties of systems executing such motions.

Course 2: Electricity, Magnetism and Electromagnetic Theory

CO1. The students after the completion of this course will be able to demonstrate Gauss law, Coulomb's law for the electric field, and apply it to systems of point charges as well as line, surface, and volume distributions of charges.

CO2. The students after the completion of this course will be able to demonstrate a working understanding of capacitors.

CO3. The students after the completion of this course will be able to describe the magnetic field produced by magnetic dipoles and electric currents and explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.

CO4. The students after the completion of this course will be able to apply various network theorems and their applications.

Course 3: Thermodynamics, Kinetic Theory and Statistical Physics

CO1. The students after the completion of this course will be able to describe the basic concepts of laws of thermodynamics, the concept of entropy and the associated theorems, the thermodynamic potentials and their physical interpretations.

CO2. The students after the completion of this course will be able to describe about Maxwell's thermodynamic relations.

CO3. The students after the completion of this course will be able to describe the basic aspects of kinetic theory of gases, Maxwell-Boltzmann distribution law, equipartition of energies, mean free path of molecular collisions etc.

CO4. The students after the completion of this course will be able to describe about the real gas equations, Vander Waal equation of state, the Joule-Thompson effect etc.

Course 4: Wave, Acoustics and Optics

CO1. The students after the completion of this course will be able to describe the principle of superposition of waves and thus describe the formation of standing waves.

CO2. The students after the completion of this course will be able to apply basic knowledge of principles and theories about the behavior of light and the physical environment to conduct experiments.

CO3. The students after the completion of this course will be able to use the principles of wave motion and superposition to explain the physics of polarization, interference and diffraction.

CO4. The students after the completion of this course will be able to describe the working of selected optical instruments like biprism, interferometer, diffraction grating, and holograms.

CO5. The students after the completion of this course will be able to describe the spontaneous and stimulated emission of radiation, optical pumping and population inversion as well as Ruby laser and HeNe laser.

Course 5: Relativity, Quantum Mechanics, Atomic, Molecular and Nuclear Physics

CO1. The students after the completion of this course will be able to describe the main aspects of the inadequacies of classical mechanics and understand historical development of quantum mechanics and ability to discuss and interpret experiments that reveal the dual nature of matter.

CO2. The students after the completion of this course will be able to describe the theory of quantum measurements, wave packets and uncertainty principle

CO3. The students after the completion of this course will be able to describe the central concepts of quantum mechanics and the Schrodinger equations.

CO4. The students after the completion of this course will be able to describe the properties of nuclei and structure of atomic nucleus.

CO5. The students after the completion of this course will be able to calculate the decay rates and lifetime of radioactive decays.

CO6. The students after the completion of this course will be able to describe the fission and fusion as well as nuclear processes to produce nuclear energy in nuclear reactor and stellar energy in stars.

Course 6: Solid State Physics, Solid State Devices and Electronics

CO1. The students after the completion of this course will be able to describe the crystalline and amorphous substances and diffraction of X-rays by crystalline materials.

CO2. The students after the completion of this course will be able to describe the lattice vibrations, phonons and in depth of knowledge of Einstein and Debye theory of specific heat of solids.

CO3. The students after the completion of this course will be able to describe the band theory of solids and must be able to differentiate insulators, conductors and semiconductors.

CO4. The students after the completion of this course will be able to describe the N- and P- type semiconductors, P-N junctions, application of PN junction for different type of rectifiers and voltage regulators.

CO5. The students after the completion of this course will be able to describe the PNP and NPN transistors and their applications as amplifiers and oscillators.

Course 7: Algebra & Trigonometry

CO1. The students after the completion of this course will be able to describe Group theory, Ring theory, Vector Space, Modules.

CO2. The students after the completion of this course will be able to find the inverse of matrix, Canonical form and apply the Cayley – Hamilton theorem.

CO3. The students after the completion of this course will be able to describe that every problem can be solved as every theorem in Group theory and Ring theory has its proof and solution.

CO4. The students after the completion of this course will be able to apply de-Moivre's theorem to solve related problems.

Course 8: Calculus

CO1. The students after the completion of this course will be able to test the continuity and differentiability of functions of one variable.

CO2. The students after the completion of this course will be able to calculate and solve the definite and indefinite integrals.

CO3. The students after the completion of this course will be able to find the Maclaurin and Taylor's series of functions at any value.

Course 9: Vector Analysis & Geometry

CO1. The students after the completion of this course will be able to determine & calculate vector and scalars, dot and cross products.

CO2. The students after the completion of this course will be able to solve and verify Gauss, Green and Stokes theorem.

CO3. The students after the completion of this course will be able to solve Vector Integration and differentiation.

CO4. The students after the completion of this course will be able to describe Cone, Sphere, Cylinder, Generating Lines, Straight line, Plane etc.

Course 10: Advanced Calculus

CO1. The students after the completion of this course will be able to determine the series and alternating series. Different types of tests to solve the series.

CO2. The students after the completion of this course will be able to determine Jacobian of two and three variables.

CO3. The students after the completion of this course will be able to find the limit of a function of one and two and test its continuity and differentiability.

CO4. The students after the completion of this course will be able to determine the Beta – Gamma functions and solve the double and triple integrations.

Course 11: Differential Equations

CO1. The students after the completion of this course will be able to solve the ordinary and partial differential equations.

CO2. The students after the completion of this course will be able to compute the Laplace and Inverse Laplace transformation of the given equation.

CO3. The students after the completion of this course will be able to describe and solve differential equations. Course 12: Mechanics

CO1. The students after the completion of this course will be able to find the velocity and acceleration of a moving particle.

CO2. The students after the completion of this course will be able to compute the equilibrium condition of particle.

CO3. The students after the completion of this course will be able to describe the attraction and potential of different particles (Moving and Static)

Course 13: Analysis

CO1. The students after the completion of this course will be able to determine the Fourier series of full and half range of any function of one variable.

CO2. The students after the completion of this course will be able to apply Schwarz and Young's theorem on various functions.

CO3. The students after the completion of this course will be able to analyze all type of trigonometric real functions.

Course 14: Abstract Algebra

CO1. The students after the completion of this course will be able to use various forms of "Sylow theorem" to identify the whole structure of group.

CO2. The students after the completion of this course will be able to analyze Groups, Sub-groups, Normal Sub-groups, and Semi-groups etc.

CO3. The students after the completion of this course will be able to determine inner product of two Vectors, and Inner product space.

CO4. The students after the completion of this course will be able to analyze Vector space, Ring, their types, modules, ideals etc.

Course 15: Advanced Discrete Mathematics

CO1. The students after the completion of this course will be able to describe Graphs, Trees, Spanning Trees, Circuits, finite state machine and their types.

CO2. The students after the completion of this course will be able to describe the difference between Mealy and Moore machine.

CO3. The students after the completion of this course will be able to compute the output of a finite state machine corresponding to their next state of the given input.

Course 16: Inorganic Chemistry

CO1. The students after the completion of this course will be able to describe Atomic Structure, Periodic Properties.

CO2. The students after the completion of this course will be able to describe Chemical Bonding.

CO3. The students after the completion of this course will be able to describe S-Block Elements, Chemistry of Noble Gases.

CO4. The students after the completion of this course will be able to describe P-Block Elements, Inorganic Chemical Analysis.

CO5. The students after the completion of this course will be able to describe Chemistry of Elements of First Transition Series.

CO6. The students after the completion of this course will be able to describe Chemistry of Elements of Second & Third Transition Series.

CO7. The students after the completion of this course will be able to describe Oxidation and Reduction, Coordination Compounds.

CO8. The students after the completion of this course will be able to describe Chemistry of Lanthanide Elements, Chemistry of Actinides.

CO9. The students after the completion of this course will be able to describe Acids and Bases, NonAqueous Solvents.

CO10. The students after the completion of this course will be able to describe Metal-Ligand Bonding in Transition Metal Complexes.

CO11. The students after the completion of this course will be able to describe Magnetic Properties of Transition Metal Complexes.

CO12. The students after the completion of this course will be able to describe Organometallic Chemistry.

CO13. The students after the completion of this course will be able to describe Bioinorganic Chemistry.

CO14. The students after the completion of this course will be able to describe Hard and Soft Acids and Bases (HSAB).

Course 17: Organic Chemistry

CO1. The students after the completion of this course will be able to describe Electronic structure & bonding, mechanism of organic reactions.

CO2. The students after the completion of this course will be able to describe Stereochemistry of organic compounds.

CO3. The students after the completion of this course will be able to describe Aliphatic and aromatic ring compounds.

CO4. The students after the completion of this course will be able to describe Alkenes, dienes and alkynes.

CO5. The students after the completion of this course will be able to describe Arenes and aromaticity.

CO6. The students after the completion of this course will be able to describe Alcohols, phenols, epoxides.

CO7. The students after the completion of this course will be able to describe Aldehydes and ketones.

CO8. The students after the completion of this course will be able to describe Carboxylic acids, substituted carboxylic acids, and carboxylic acid derivatives.

CO9. The students after the completion of this course will be able to describe Organic compounds of nitrogen.

CO10. The students after the completion of this course will be able to describe Heterocyclic compounds, amino acids and peptides.

CO11. The students after the completion of this course will be able to describe organometallic compounds, organosulphur compounds, and organic synthesis via enolates.

CO12. The students after the completion of this course will be able to describe Biomolecules, carbohydrates, proteins and nucleic acids.

CO13. The students after the completion of this course will be able to describe Synthetic polymers, synthetic dyes.

CO14. The students after the completion of this course will be able to describe Spectroscopy, mass spectroscopy, infra-red spectroscopy, uv-visible spectroscopy, nmr-spectroscopy, cmr-spectroscopy, magnetic resonance imaging (MRI).

Course 18: Physical Chemistry

CO1. The students after the completion of this course will be able to describe Mathematical concepts for chemist and computer.

CO2. The students after the completion of this course will be able to describe Molecular velocities.

CO3. The students after the completion of this course will be able to describe Liquid state.

CO4. The students after the completion of this course will be able to describe Liquid crystals, colloidal state, and solid state.

CO5. The students after the completion of this course will be able to describe Chemical kinetics, catalysis.

CO6. The students after the completion of this course will be able to describe Thermo chemistry.

CO7. The students after the completion of this course will be able to describe Laws of thermodynamics.

CO8. The students after the completion of this course will be able to describe Phase equilibrium.

CO9. The students after the completion of this course will be able to describe Electrochemistry.

CO10. The students after the completion of this course will be able to describe Electrochemical cell or galvanic cell.

CO11. The students after the completion of this course will be able to describe Quantum mechanics.

CO12. The students after the completion of this course will be able to describe Quantum mechanical approach of molecular orbit theory.

CO13. The students after the completion of this course will be able to describe Spectroscopy, electromagnetic radiation, vibrational spectra, and Raman spectra.

CO14. The students after the completion of this course will be able to describe Electronic spectra, photochemistry.

CO15. The students after the completion of this course will be able to describe Thermodynamics, physical properties and molecular structure, magnetic properties.

M.Com. – 4 Semesters Postgraduate programme

Programme Outcomes (PO)

PO1. The Master of Commerce (M.Com.) semester wise programme offered by the College accomplishes the students to cash in on the opportunities and overcome the challenges in the field of commerce by providing systematic learning of managerial economics, advance accounting, income tax law & account, statistical analysis, corporate legal framework, business economics, specialized accounting, tax planning & management, advanced statistics, business law, management concept, organizational behavior, advanced cost accounting, management accounting, accounting for managerial decisions, principles of marketing, advertising & sales management, marketing research, international marketing and research project work. The students after the completion of this programme become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stock-exchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors etc.

PO2. The students after the completion of this programme will be enabled to overcome the challenges and cash in the opportunities in the field of commerce.

PO3. The students after the completion of this programme will become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stockexchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors etc.

PO4. The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

PO5. The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

PO6. The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

PO7. The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

PO8. The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

PO9. The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

PO10. The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will become well versed with Managerial Economics.

PSO2. The students after the completion of this programme will become well versed with Advance Accounting.

PSO3. The students after the completion of this programme will be able to understand Income Tax Law and Account.

PSO4. The students after the completion of this programme will be able to understand Statistical Analysis.

PSO5. The students after the completion of this programme will be able to identify a Corporate Legal Framework.

PSO6. The students after the completion of this programme will be able to understand the Business Economics.

PSO7. The students after the completion of this programme will be able to understand the essentials of Specialized Accounting.

PSO8. The students after the completion of this programme will be able to understand the essentials of Tax Planning and Management.

PSO9. The students after the completion of this programme will be able to understand the essentials of Advanced Statistics.

PSO10. The students after the completion of this programme will be able to understand the principles of Business Law.

PSO11. The students after the completion of this programme will be able to understand the essentials of Management Concept.

PSO12. The students after the completion of this programme will be able to understand the fundamentals of Organizational Behaviour.

PSO13. The students after the completion of this programme will be able to understand the principles of Advance Cost Accounting.

PSO14. The students after the completion of this programme will be able to recognize the procedures of Management Accounting.

PSO15. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Accounting for Managerial Decisions.

PSO16. The students after the completion of this programme will be able to understand the Principles of Marketing.

PSO17. The students after the completion of this programme will be able to understand the procedures of Advertising and Sales Management.

PSO18. The students after the completion of this programme will be able to understand the essentials and fundamentals of Marketing Research.

PSO19. The students after the completion of this programme will be able to understand the essentials and fundamentals of International Marketing.

PSO20. The students after the completion of this programme will be able to do Project Work in various fields of commerce studies.

Course Outcomes (CO)

Course 1: Managerial Economics

CO1. The students after the completion of this course will be able to comprehend with the basic concepts, terms & provisions of managerial economics.

CO2. The students after the completion of this course will be able to determine the prices under different market forms.

CO3. The students after the completion of this course will be able to comprehend with the concepts of inflation, slowdown, deflation, stagflation and recession in an economy.

Course 2: Advance Accounting

CO1. The students after the completion of this course will be able to comprehend with the basic accounting structure of companies.

CO2. The students after the completion of this course will be able to find out how a company can dissolve by liquidating its assets or through bankruptcy and insolvency.

CO3. The students after the completion of this course will be able to comprehend with the viable and operational accounting format of companies.

Course 3: Income Tax Law and Account

CO1. The students after the completion of this course will be able to compute total income and define tax compliances & strictures.

CO2. The students after the completion of this course will be able to file IT return on individual basis.

CO3. The students after the completion of this course will be able to comprehend with the amendments made from time to time in finance Act.

Course 4: Statistical Analysis

CO1. The students after the completion of this course will be able to independently calculate basic statistical parameters applied in commerce and accounting.

CO2. The students after the completion of this course will be able to comprehend probability theory and probability distributions in relation to general statistical analysis done in commerce and accounting.

Course 5: Corporate Legal Framework

CO1. The students after the completion of this course will be able to comprehend the commercial and accounting concepts of a company and its shares for public listings.

CO2. The students after the completion of this course will be able to comprehend the use of M/A and prospectus in a company of commerce and accounting.

CO3. The students after the completion of this course will be able to get acquainted with the negotiable instruments (Cheque, Holder and Holder in due course).

Course 6: Business Economics

CO1. The students after the completion of this course will be able to comprehend the causes and consequences of business cycle.

CO2. The students after the completion of this course will be able to comprehend the factors in commerce and accounting that contribute to and detract from long-term economic growth.

Course 7: Specialized Accounting

CO1. The students after the completion of this course will be able to ascertain the knowledge of Banking and insurance companies accounts.

CO2. The students after the completion of this course will be able to comprehend the systems of double account system and maintenance accounts.

CO3. The students after the completion of this course will be able to get acquainted with the basic concepts of royalty and Investments account.

Course 8: Tax Planning and Management

CO1. The students after the completion of this course will be able to ascertain the concepts of TDS and advance payment of tax.

CO2. The students after the completion of this course will be able to comprehend the provisions of various taxes rebates& reliefs and procedure to file IT return.

CO3. The students after the completion of this course will be able to get acquainted with the concept of recovery and refund of tax.

Course 9: Advanced Statistics

CO1. The students after the completion of this course will be able to ascertain the concepts of the statistical decision theory & statistical estimations in commerce and accounting.

CO2. The students after the completion of this course will be able to comprehend the provisions of statistical quality control & the procedures of sampling methods in commerce and accounting.

CO3. The students after the completion of this course will be able to interpret the meaning of the calculated statistical indicators in commerce and accounting.

Course 10: Business Law

CO1. The students after the completion of this course will be able to ascertain the consumer rights under consumer protection Act 1986.

CO2. The students after the completion of this course will be able to comprehend the international trade concepts used in global market decisions.

CO3. The students after the completion of this course will be able to comprehend and interpret the legal environments for security markets. Course 11: Management Concept

CO1. The students after the completion of this course will be able to ascertain the objectives of managerial reporting.

CO2. The students after the completion of this course will be able to fulfill the reporting requirements at different levels of management.

CO3. The students after the completion of this course will be able to get acquainted with the objectives of managerial reporting and reporting requirements.

CO4. The students after the completion of this course will be able to comprehend and interpret the requirements of management.

Course 12: Organizational Behaviour

CO1. The students after the completion of this course will be able to develop an understanding regarding the role of leaders in decision making process.

CO2. The students after the completion of this course will be able to fulfill the requirements of communication skills at different levels of leadership.

CO3. The students after the completion of this course will be able to analyze the challenges and opportunities in the field of organizational behavior.

Course 13: Advance Cost Accounting

CO1. The students after the completion of this course will be able to develop the impact knowledge of basic cost concepts, elements of cost, ascertainment of materials and labor cost.

CO2. The students after the completion of this course will be able to analyze the various methods of costing and their applications.

CO3. The students after the completion of this course will be able to determine various levels of material cost i.e. – reorder level, minimum level, EOQ for managing working capital.

Course 14: Management Accounting

CO1. The students after the completion of this course will be able to get acquainted with a separate branch of accounting.

CO2. The students after the completion of this course will be able to analyze the management accounting and its relevance in a business organization.

CO3. The students after the completion of this course will be able to familiarize with the management control system.

CO4. The students after the completion of this course will be able to fulfill the requirements of management sense and responsibilities.

Course 15: Accounting For Managerial Decisions

CO1. The students after the completion of this course will be able to ascertain the applicability of certain techniques of management i.e. – Target costing, ABC costing, Value chain analysis.

CO2. The students after the completion of this course will be able to analyze the essentials of capital budgeting and use different techniques of capital budgeting.

CO3. The students after the completion of this course will be able to familiarize with contemporary issues in management.

CO4. The students after the completion of this course will be able to fulfill the requirements of accounting management sense and responsibilities.

Course 16: Principles of Marketing

CO1. The students after the completion of this course will be able to ascertain the applicability of certain principle techniques and fundamentals of marketing.

CO2. The students after the completion of this course will be able to analyze product life-aide.

CO3. The students after the completion of this course will be able to familiarize with the significance & contribution of marketing to the business enterprise.

Course 17: Marketing Research

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of marketing research.

CO2. The students after the completion of this course will be able to apply & promote marketing research procedures, methods & techniques.

CO3. The students after the completion of this course will be able to ascertain the significance, importance and requirements for introduction of new products and new markets.

Course 18: International Marketing

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of EXIM policy, International transport system & International product life cycle.

CO2. The students after the completion of this course will be able to apply & promote themselves for employment as well as self employment in international businesses dealing with variety of innovative products & services.

Course 20: Project Work

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of Research and Research Methodology.

CO2. The students after the completion of this course will be able to represent data in tabular and graphic manner for convenient interpretation.

CO3. The students after the completion of this course will be able to familiarize with Research and Research problems.

CO4. The students after the completion of this course will be able to develop skills to write Research papers.

CO5. The students after the completion of this course will be able to comprehend and apply the quantitative methods of Research.

M.A. Geography – 4 Semesters Postgraduate programme

Programme Outcomes (PO)

PO1. The M.A. Geography semester wise programme offered by the College accomplishes the students to possess in-depth insights, critical knowledge of basic concepts, clear understanding at par with international standards & peers, and familiarization at the minutest level of the issues pertaining to geographical nature, bodies, regions, morphology, environment, climate & atmosphere of mother earth gained through systematic learning of Geomorphology, Climatology, Geographical Thought, Geography of India, Economic and Natural Resource Management, Oceanography, Regional Development and Planning, Social Geography, Population Geography, Settlement Geography, Biogeography and Ecosystem, Research Methodology, Urban Geography, Agricultural Geography, and Environmental Geography. The students after the completion of this programme become well prepared to take up various professional assignments, engagements and jobs in the diverse fields of application of geographical studies and technologies.

PO2. The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

PO3. The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

PO4. The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

PO5. The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

PO6. The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

PO7. The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

PO8. The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

PO9. The students will be able to inculcate values to become life-long environment conscious and nature volunteers, warriors and preservers.

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will become well versed with Geomorphology.

PSO2. The students after the completion of this programme will become well versed with Climatology.

PSO3. The students after the completion of this programme will be able to understand Geographical Thought.

PSO4. The students after the completion of this programme will be able to understand Geography of India.

PSO5. The students after the completion of this programme will be able to identify Economic and Natural Resource Management.

PSO6. The students after the completion of this programme will be able to understand Oceanography.

PSO7. The students after the completion of this programme will be able to understand the essentials of Regional Development and Planning.

PSO8. The students after the completion of this programme will be able to understand the essentials of Social Geography.

PSO9. The students after the completion of this programme will be able to understand the essentials of Population Geography.

PSO10. The students after the completion of this programme will be able to understand the principles of Settlement Geography.

PSO11. The students after the completion of this programme will be able to understand the essentials of Biogeography and Ecosystem.

PSO12. The students after the completion of this programme will be able to understand the fundamentals of Research Methodology.

PSO13. The students after the completion of this programme will be able to understand the principles of Urban Geography.

PSO14. The students after the completion of this programme will be able to recognize the principles of Agricultural Geography.

PSO15. The students after the completion of this programme will be able to understand the essentials, and principles of Environmental Geography.

PSO16. The students after the completion of this programme will be able to do Field Work in various fields of geographical studies. Course Outcomes (CO)

Course 1: Geomorphology

CO1. The students after the completion of this course will be able to comprehend with the nature and scope of geomorphology.

CO2. The students after the completion of this course will be able to determine the interior of the earth.

CO3. The students after the completion of this course will be able to comprehend the movement of the earth.

CO4. The students after the completion of this course will be able to comprehend the exogenic processes and concept of gradation.

CO5. The students after the completion of this course will be able to comprehend the geological structures and land forms.

Course 2: Climatology

CO1. The students after the completion of this course will be able to comprehend with the nature and scope of climatology.

CO2. The students after the completion of this course will be able to determine the composition of atmosphere. CO3. The students after the completion of this course will be able to comprehend the movement of general circulation of Jet stream, El-Nino and La-Nino.

CO4. The students after the completion of this course will be able to comprehend the climate classification and climate changes.

CO5. The students after the completion of this course will be able to comprehend the uses of applied climatology.

Course 3: Geographical Thought

CO1. The students after the completion of this course will be able to comprehend the prehistory of geographical ideas in different durations from Greek's, Roman's, Arab's and impact of exploration & discoveries.

CO2. The students after the completion of this course will be able to determine the modern Geographical thoughts and contribution of eminent geographers.

CO3. The students after the completion of this course will be able to comprehend the beginning of modern geography fundamental concepts and models in geography.

CO4. The students after the completion of this course will be able to comprehend the present status and application of modern techniques and its uses in climatology, geomorphology, economic geography and population geography.

Course 4: Geography of India

CO1. The students after the completion of this course will be able to comprehend with the geological structure, relief, climate, drainage, vegetation and soils of India.

CO2. The students after the completion of this course will be able to determine the nature of agriculture and agricultural regions of India.

CO3. The students after the completion of this course will be able to comprehend the geographical regional division of India and various land forms in India.

CO4. The students after the completion of this course will be able to determine the stratosphere of India.

CO5. The students after the completion of this course will be able to determine the presence of various water bodies in India.

Course 5: Economic and Natural Resource Management

CO1. The students after the completion of this course will be able to comprehend with the nature and scope of economic geography.

CO2. The students after the completion of this course will be able to determine the world pattern of major natural resources.

CO3. The students after the completion of this course will be able to comprehend the conservation and management of resources.

CO4. The students after the completion of this course will be able to determine the policy making for resource management.

CO5. The students after the completion of this course will be able to determine the need for sustainable development of resources.

Course 6: Oceanography

CO1. The students after the completion of this course will be able to comprehend with the nature and scope of oceanography.

CO2. The students after the completion of this course will be able to determine the physical and chemical properties of sea water.

CO3. The students after the completion of this course will be able to comprehend the conservation and management of oceanic resources.

CO4. The students after the completion of this course will be able to determine the impact of Human on the marine environment.

CO5. The students after the completion of this course will be able to determine the need for sustainable development of oceanic resources.

Course 7: Regional Development and Planning

CO1. The students after the completion of this course will be able to determine the nature of various regions, types of regions.

CO2. The students after the completion of this course will be able to comprehend with the regional development theories.

CO3. The students after the completion of this course will be able to comprehend the regional planning in India. CO4. The students after the completion of this course will be able to determine the center-state relations and multilevel planning in India.

Course 8: Social Geography CO1. The students after the completion of this course will be able to comprehend with the nature, scope of social geography and its relationship with other social sciences.

CO2. The students after the completion of this course will be able to determine the concept of society.

CO3. The students after the completion of this course will be able to comprehend the social development planning.

CO4. The students after the completion of this course will be able to determine the impact of public policy and social planning in India.

Course 9: Population Geography

CO1. The students after the completion of this course will be able to comprehend with historical development of population geography.

CO2. The students after the completion of this course will be able to determine the scope of population geography.

CO3. The students after the completion of this course will be able to comprehend the distribution of population. CO4.

The students after the completion of this course will be able to determine the impact of migration of population and population composition.

CO5. The students after the completion of this course will be able to determine the population resource regions and population policies of India.

Course 10: Settlement Geography

CO1. The students after the completion of this course will be able to comprehend with the objectives and scope of settlement geography.

CO2. The students after the completion of this course will be able to determine the evolution and growth of urban settlements.

CO3. The students after the completion of this course will be able to comprehend the central place theory.

CO4. The students after the completion of this course will be able to determine the impact of city-country relationship.

CO5. The students after the completion of this course will be able to determine the impact of rural-urban fringe.

Course 11: Biogeography and Ecosystem

CO1. The students after the completion of this course will be able to comprehend with the biogeography and ecosystem that provides information about the world forests, plants, niche energy and nutrients in the ecosystem. CO2. The students after the completion of this course will be able to determine the scope of biodiversity and its conservation.

CO3. The students after the completion of this course will be able to comprehend the environmental laws in India.

CO4. The students after the completion of this course will be able to determine the impact of environment legislation.

Course 12: Research Methodology

CO1. The students after the completion of this course will be able to examine research motivation, types of research, significance of research, research process and criteria of good research.

CO2. The students after the completion of this course will be able to determine the scope, types of data and methods of data collection, processing and analysis of data using different statistical methods.

CO3. The students after the completion of this course will be able to comprehend research report, types of reports and oral presentation mechanics of writing a research report.

CO4. The students after the completion of this course will be able to determine the interpretation and report writing techniques and precautions of interpretation layout.

Course 13: Urban Geography

CO1. The students after the completion of this course will be able to comprehend with the objectives and scope of urban geography.

CO2. The students after the completion of this course will be able to determine the internal structures, morphology and land use of city.

CO3. The students after the completion of this course will be able to comprehend the urban issues and urban planning.

CO4. The students after the completion of this course will be able to determine the urban functions.

CO5. The students after the completion of this course will be able to determine the urban and metropolitan planning in India.

Course 14: Agricultural Geography

CO1. The students after the completion of this course will be able to comprehend with the nature, scope and development of agricultural geography.

CO2. The students after the completion of this course will be able to determine the world's agricultural system and types of agriculture.

CO3. The students after the completion of this course will be able to comprehend the agricultural regionalization and modes in agricultural geography and the classification of agricultural models and theories of agricultural geography.

CO4. The students after the completion of this course will be able to determine the agricultural statistics and land use survey techniques and agricultural revolution, meaning & merit and demerit of green revolution and white revolution.

Course 15: Environmental Geography

CO1. The students after the completion of this course will be able to comprehend with the fundamental concepts related to environment, structure, types, and components.

CO2. The students after the completion of this course will be able to determine the nature, scope, basic concepts of interdisciplinary science and study methods.

CO3. The students after the completion of this course will be able to comprehend the environmental global problems such as deforestation, depletion of Ozone, global warming.

CO4. The students after the completion of this course will be able to determine the role of environmental legislation laws and acts for environment protection and conservation.

CO5. The students after the completion of this course will be able to determine the environmental planning and management for future and also understand the climatic changes and its effect on environment and human being.

Course 16:Field Work

CO1.The students after the completion of this course will be able to perform diverse technical works in various fields of geographical studies like climatology, geomorphology, economic geography, population geography, settlement geography, urban geography, agricultural geography, climate change etc.

M.A. Economics – 4 Semesters Postgraduate programme

Programme Outcomes (PO)

PO1.The M.A. Economics semester wise programme offered by the College accomplishes the students to cash in on the opportunities and overcome the challenges in the field of economics by providing systematic learning of Economics – Micro, Macro, Quantitative, Indian, Industrial, Research, Indian policy, Labor, Growth, International, Public, Environmental, Demography, Development & Planning, Social sector and Viva-Voce. The students after the completion of this programme become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stock-exchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors, policy making etc.

PO2. The students after the completion of this programme will be enabled to overcome the challenges and cash in the opportunities in the field of economics.

PO3.The students after the completion of this programme will become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stockexchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors, policy making etc.

PO4. The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

PO5. The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people,media and technology.

PO6. The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

PO7. The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

PO8. The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

PO9. The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

PO10. The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning. Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will become well versed with Micro Economics-I.

PSO2. The students after the completion of this programme will become well versed with Macro Economics-I.

PSO3. The students after the completion of this programme will be able to understand Quantitative Methods.

PSO4. The students after the completion of this programme will be able to understand Indian Economy.

PSO5. The students after the completion of this programme will be able to identify Industrial Economics.

PSO6. The students after the completion of this programme will be able to understand the Micro Economics-II.

PSO7. The students after the completion of this programme will be able to understand the essentials of Macro Economics-II.

PSO8. The students after the completion of this programme will be able to understand the essentials of Research Methodology and Computer Application.

PSO9. The students after the completion of this programme will be able to understand the essentials of Indian Economic Policy.

PSO10. The students after the completion of this programme will be able to understand the principles of Labor Economics.

PSO11. The students after the completion of this programme will be able to understand the essentials of Economics of Growth.

PSO12. The students after the completion of this programme will be able to understand the fundamentals of International Trade.

PSO13. The students after the completion of this programme will be able to understand the principles of Public Finance.

PSO14. The students after the completion of this programme will be able to recognize the procedures of Environmental Economics.

PSO15. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Demography.

PSO16. The students after the completion of this programme will be able to understand the principles of Economics of Development and Planning.

PSO17. The students after the completion of this programme will be able to understand the procedures of International Economics.

PSO18. The students after the completion of this programme will be able to understand the essentials and fundamentals of Public Economics.

PSO19. The students after the completion of this programme will be able to understand the essentials and fundamentals of Economics of Social Sector. PSO20. The students after the completion of this programme will be able to do Viva-Voce in various fields of commerce studies.

M.Sc. Zoology – 4 Semesters Postgraduate programme

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will become well versed with Biosystematics, Taxonomy and Biodiversity.

PSO2. The students after the completion of this programme will become well versed with Structure and Function of Invertebrates.

PSO3. The students after the completion of this programme will be able to understand Population Genetics and Evolution.

PSO4. The students after the completion of this programme will be able to understand the Tools & Techniques in Biology.

PSO5. The students after the completion of this programme will be able to understand Molecular Cell Biology and Biotechnology.

PSO6. The students after the completion of this programme will be able to understand the principles and fundamentals of General Physiology and Endocrinology.

PSO7. The students after the completion of this programme will be able to understand the principles and fundamentals of Development Biology.

PSO8. The students after the completion of this programme will be able to understand the essentials of Quantitative Biology and Computer Application.

PSO9. The students after the completion of this programme will be able to understand the essentials of Comparative Anatomy of Vertebrates.

PSO10. The students after the completion of this programme will be able to understand the principles, essentials and fundamentals of Animal Behavior.

PSO11. The students after the completion of this programme will be able to understand the principles of Environment Physiology and Population Ecology.

PSO12. The students after the completion of this programme will be able to understand the principles and procedures of Immunology and Parasitism.

PSO13. The students after the completion of this programme will be able to understand the fundamentals of Biochemistry.

PSO14. The students after the completion of this programme will be able to understand the principles of Neurophysiology.

PSO15. The students after the completion of this programme will be able to recognize the procedures of Fish (ichthyology) structure and function.

PSO16. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Cell biology.

PSO17. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Entomology.

PSO18. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Wild life conservation.

PSO19. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Biology of Vertebrate immune system.

PSO20. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Pisciculture and economic importance of fishes (Ichthyology).

M.Sc. Botany – 4 Semesters Postgraduate programme

Programme Specific Outcomes (PSO)

PSO1. The students after the completion of this programme will become well versed with Cytology.

PSO2. The students after the completion of this programme will become well versed with Genetics.

PSO3. The students after the completion of this programme will be able to understand Microbiology, Phycology and Mycology.

PSO4. The students after the completion of this programme will be able to understand the Bryophyte, Pteridophyta and Gymnosperm.

PSO5. The students after the completion of this programme will be able to understand Taxonomy and diversity of plants.

PSO6. The students after the completion of this programme will be able to understand the principles and fundamentals of Molecular Biology.

PSO7. The students after the completion of this programme will be able to understand the principles and fundamentals of Plant physiology.

PSO8. The students after the completion of this programme will be able to understand the essentials of Plant metabolism.

PSO9. The students after the completion of this programme will be able to understand the essentials of Plant development and plant resources.

PSO10. The students after the completion of this programme will be able to understand the principles, essentials and fundamentals of Plant Ecology– I (Ecosystem and vegetation ecology).

PSO11. The students after the completion of this programme will be able to understand the principles of Biotechnology I (Genetic engineering of plants & microbes).

PSO12. The students after the completion of this programme will be able to understand the principles and procedures of Molecular plant pathology-I.

PSO13. The students after the completion of this programme will be able to understand the fundamentals of Limnology-I.

PSO14. The students after the completion of this programme will be able to understand the principles of Ethno botany I.

PSO15. The students after the completion of this programme will be able to recognize the procedures of Plant reproduction and plant resources utilization.

PSO16. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Plant Ecology II (Pollution and biodiversity conservation).

PSO17. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Biotechnology II (Plant cell, tissue culture & organ culture).

PSO18. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Molecular plant pathology-I.

PSO19. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Limnology-II.

PSO20. The students after the completion of this programme will be able to understand the essentials, principles and procedures of Ethno botany - II.

MA POLITICAL SCIENCE, PROGRAMME SPECIFIC OUTCOME

PROGRAMME LEARNING OUTCOMES

On successful completion of the programme students should be able to:

Demonstrate knowledge and understanding of the key theories and concepts in Political Science .

It also aims at familiarise insights into the theoretical advances in the discipline.

to enable the students the ability to evaluate theories in the light of empirical evidence or normative propositions.

Apply appropriate theories to analyse social and political happenings.

Demonstrate an understanding of the philosophical dimensions of political systems, processes and movements at the local, national and trans-national levels.

to develop the intellectual ability to undertake inter-disciplinary research.

Achieve and demonstrate the ability to communicate their ideas effectively using the appropriate language of the discipline.

Apply critical thinking, communication and analytical skills to address significant issues of concern in society.

Recognize issues of social justice and inclusive development.

To understand the problems pertains to underdevelopment and uneven development in society.

To inculcate the spirit of just , fare and the reasonable standards among the students.

To understand the issues such as organised group bargaining and political patronage in the society.

COURSE OUTCOME

SEMESTER-1

PGI POL C01 INDIAN POLITICAL THOUGHT; ANCIENT AND MEDIEVAL

1. To enable the students to understand the political philosophy from ancient period to Medieval period.

2. To understand the different philosophical dimensions of various schools of thought.

3. To familiarise the students regarding different original works of philosophers.

PG I POL C 03 INDIAN POLITY AND GOVERNANCE

1. To generate insights into the dynamics of polity and governance in India.

2. To familiarise the students regarding various themes in Indian polity and governance.

3. To enable the students to understand the constitutional and legal processes and fundamentals of Indian constitution.

PG II POL C05 COMPARATIVE POLITICS

1. To enhance the student's understanding of politics, state, government, democracy etc from a comparative perspective.

2. To familiarise the students the relevant theories in Comparative Politics.

3. To familiarise the students the origin of comparative institutions and politics.

PG II POL C 04 INTERNATIONAL ORGANIZATION

1. To enable critical thinking among students regarding international issue and organization

2. To introduce the students the nature, and role of various international organisations and regional gatherings such as UN, ASEAN, BRICS WTO LEAGUE of NATION etc.

3. To familiarise the students the issues such as multi-culturalism and civil society

movements in world politics.

SEMESTER II

PG II POL C 01 WESTERN POLITICAL THOUGHT MODERN TRADITIONS

1. To create awareness among students regarding evolving theories and concepts in modern Political Thought.
2. To enable the students to understand different ideological dimensions of modern political philosophy.
3. To enhance the critical capacity among students to learn the working of various political institutions and processes.

PG II POL C03 ISSUES IN INDIAN STATE POLITICS

1. To understand the vibrancy and limits of the democratic practices in India.
2. To understand the students regarding the different social forces which shapes the dynamics of society and politics in India.
3. To enable the students to study the issues such as caste, gender, communalism, linguism, separatism.

PG IV POL C0 Comparative Politics of developing countries .

- 1 To know about forms of government like Unitarian, federal presidential parliamentary
- 2 To enable the student regarding the institutions and process relate to the legislative , executive ,and judiciary
- 3 To know about Political parties , pressure group.

PG IV POL C03 INDIA'S FOREIGN POLICY

1. To familiarise the students regarding the historical evolution of India's Foreign Policy .
2. To enable the students regarding the institutions and process relates to the formulation of India's Foreign Policy.
3. To enable the students to understand the different dimensions of India's International engagement.

PG I POL C02 INTERNATIONAL POLITICS: THEORY AND CONCEPTS

1. To understand the theories and concepts of International politics
2. to enable the students to understand the function of international politics in various levels.
3. to know the theoretical and practical manifestations of different concepts in national interest
4. to know the different system of international politics .
5. To understand the various issue of international politics like terrorism , human rights , environment and world peace and power game cold war post and pre period

PG I POL C02 PUBLIC ADMINISTRATION : THEORY AND CONCEPTS

1. To understand the theories and concepts of Public Administration.
2. to enable the students to understand the pre-requisites for effective and just administration at various levels.
3. to know the theoretical and practical manifestations of different concepts in administrative theory.
4. to know the system of Indian administration

Local government ,

PG III POL C03 RESEARCH METHODOLOGY

1. To familiarise the students regarding various tools and techniques in Social Science.
2. To enable the students to undertake research programmes in Social Science.
3. To Understand the various limitations of research in Social Science.

PG II POL C 02 GOVERNMENT AND POLITICS OF CHHATTISGARH

1. To familiarise the students the different dynamics of social political and cultural aspects of Chhattisgarh society and polity.
2. to introduce the students the important personalities and movements in Chhattisgarh renaissance.
3. to enable the students the different dimensions of political ideologies and practices in contemporary society and politics of Chhattisgarh

PROJECT VIVA-VOCE

1. To rephrase the research problem in social settings.
2. To enable the students to use tools and techniques to undertake a research programme.
3. To enable the students to analyse and interpret research problem in social

Course Outcomes: PGDCA

Subject: Fundamental of Computers 101

Course Objectives:

Upon successful completion of this subject the student will be able to:

1. Understand basic knowledge of computer, their types, application and features.
2. Distinguish between Systems software and Application software.
3. Identify the primary functions of an Operating System.
4. Describe the "boot" process.
5. Identify Desktop and Windows features.
6. Use Utility programs.
7. Compare between Human and Computer Language.
8. Define computer communication process.

Course Outcome:

1. Understand the meaning and basic components of a computer system.
2. Discuss the advantages, limitations and applications of computers.
3. Define and distinguish Hardware and Software components of computer system.
4. Identify different computing machines during the evolution of computer system.
5. Gain knowledge about five generations of computer system.
6. Identify and discuss the functional units of a computer system.
7. Identify the various inputs and output units and explain their purposes.
8. Understand the role of CPU and its components.
9. Understand the concept and need of primary and secondary memory.

103. Subject: Programming in "C":

Objectives: Upon successful completion of this subject the student will be able to:

1. To gain experience about structured programming.
2. To understand the implementation of C language.
3. To understand various features in C.

Outcome:

1. Solve the given problem using the syntactical structures of C language
2. Develop, execute and document computerized solution for various problems using the features of C language

3. To read and write C program that uses pointers, structures, files etc. Subject: Office Automation and Tally:
Objective:

Upon successful completion of this subject the student will be able to:

1. To provide an in-depth training in use of Office Automation packages, FoxPro windows concept and tally.
2. Essential for a modern office for day to day office management.
3. Student will learn to create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc.

Outcome:

1. To improve quality of output in terms of presentation and reduction in processing time
2. Student will do by their own create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc
3. Students do possess required skill and can also be employed as Tally data entry operator

102 Subject: Office Automation and Tally Lab:

Objective: Upon successful completion of this subject the student will be able to: Craft professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools. To familiarize preparation of documents and presentations with office automation tools.

Outcomes:

By learning the course, the students will be able

1. To perform documentation
2. To perform accounting operations
3. To perform presentation skills Subject: Practical Based on Programming in "C":

Objective: Upon successful completion of this subject the student will be able to:

The purpose of this course is to introduce to students to the field of programming using C language.

The students will be able to enhance their analyzing and problem solving skills and use the same for writing programs in C.

Outcomes:

After Completion of the course student should able to know concepts in problem solving, to do programming in C language, to write diversified solutions using C language. Subject: Database Management System (DBMS):

Objectives: Upon successful completion of this subject the student will be able to:

1. To understand the different issues involved in the design and implementation of a database system.
2. To study the physical and logical database designs, database modeling.
3. To understand and use data manipulation language to query, update, and manage a database
4. To develop an understanding of essential DBMS concepts such as: database security, integrity, and concurrency.

Outcome:

1. Gain a good understanding of the architecture and functioning of database management systems as well as associated tools and techniques, principles of data modeling using entity relationship and develop a good database design and normalization techniques to normalize a database.
2. Understand the use of structured query language and its syntax, transactions, database recovery and techniques for query optimization.
3. Acquire a good understanding of database systems concepts and to be in a position to use and design databases for different applications.

Subject: Programming in Visual Basic: Objective:

Upon successful completion of this subject the student will be able to:

1. Learn visual programming basics and its components.
2. Cover visual programming skills needed for modern software development.

Outcome:

1. Demonstrate fundamental skills in utilizing the tools of a visual environment in terms of the set of available command menus and toolbars
2. Explain and use of delegates and events for producing event-driven application

3. Implement SDI and MDI applications while using forms, dialogs, and other types of GUI components
4. Produce and use specialized new GUI components
5. Explain message passing mechanism between components and threads using messaging
6. Apply visual programming to software development by designing projects with menus
7. and submenus 8. Use visual programming environment to create simple visual applications

Subject: E-Commerce and HTML:

Objective: Upon successful completion of this subject the student will be able to:

1. Define E-commerce, its types, application
2. Describe the life cycle of implementation of E-commerce 3. Differentiate between E-commerce and other forms of commerce
4. list the modes of payments involved in E-commerce
5. Insert a graphic, link, table within a web page.
6. Use cascading style sheets.
7. Create, Validate & Publish a web page.

Outcome:

1. Design and implement an e-commerce application with a shopping cart.
2. Integrate user-centered design guidelines in developing user-friendly websites.
3. Analyze different types of portal technologies and deployment methodologies commonly used in the industry.
4. Create a static website using HTML and add dynamic functionality to it by using java Script.
5. Gain confidence to create dynamic website on real world problems.

Subject: Practical Based on E-Commerce and HTML, RDBMS and Visual Basic:

Objectives: Upon successful completion of this subject the student will be able to:

1. Learn how to design and develop a Web page using HTML and CSS.
2. Design and develop a Web site using text, images, links, lists, and tables for navigation and layout. Style your page using CSS, internal style sheets, and external style sheets.
3. Understand, analyze and apply common SQL statements including DDL, DML and DCL statements to perform different operations.
4. Design and implement a database for a given problem according to well known design principles that balance data retrieval performance with data consistency.
5. Students will be able to design, code, test and debug at a beginning level.

Outcome:

1. Design and implement a database for a given problem according to well known design principles that balance data retrieval performance with data consistency.
2. Design, create, build, and debug Visual Basic applications
3. Write Windows applications using forms, controls, and events.
4. Create local HTML pages and move them to a remote web server.
5. Design and develop basic web pages using HTML and CSS 6. Link pages so that they create a Web site.

Subject: Project: Objective: Upon successful completion of this subject the student will be able to:

1. The objective of such a computerization system is to reduce paper work and save of time in particular defined project. There by increasing the efficiency and decreasing the work load.
2. The project provides us the flexibility of generating the required document on screen as well as on printer as and when required.

Outcome:

1. Acquire practical knowledge within the chosen area of technology for project development
2. Identify, analyze, formulate and handle programming projects with a comprehensive and systematic approach
3. Contribute as an individual or in a team in development of technical projects
4. Develop effective communication skills for presentation of project related activities

