



# ST. ALOYSIUS' COLLEGE

AUTONOMOUS  
JABALPUR- 482001  
MADHYA PRADESH, INDIA

## CRITERION-7

### INSTITUTIONAL VALUES AND BEST PRACTICES

Key Indicator – 7.1

Institutional Values and Social Responsibilities



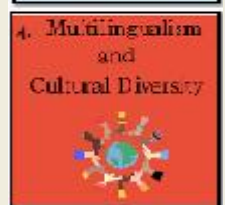
Metric No.: 7.1.8

Promotion of Gender Equity



Document Name

Institutional initiatives for inclusive environment  
(Tolerance and harmony towards Regional Diversity)





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## Inclusion and Situatedness

### 7.1.8 Institutional efforts/initiatives in providing an inclusive environment

#### **Institutional efforts/initiatives in providing an inclusive environment towards Regional Diversity**

**As part of the institution's efforts to foster inclusivity and embrace regional diversity, various courses have been integrated into the curriculum to address local and regional aspects. These courses aim to deepen students' understanding of the cultural, social, and economic dynamics specific to the region. By incorporating such content, the institution creates an environment that values and respects the diversity of its local and regional communities, contributing to a more inclusive educational experience.**



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S.No.	Class	Subject	Subject Code	Topics
1	MA IVSEM POL.SC	GOVT. & POLITICS of M.P.-II	434021	Role of Collector in Governance of Jabalpur District. DRDO 73 & 74 Constitutional Amendment, Role of Panchayati Raj Institution
2	BA IV SEM	History of Medieval India	(From 1206 to 1739 AD) 112131 (From 1740 to 1947 AD) 112141	Study of Madan Mahal Fort and Chousath Yogini Temple in Jabalpur. Rani Durgavati's Dynasty and Mughals, Gouri Dynasty of Malwa: Dilawar Khan, Hoshangshah and their achievements
3	BA III Y POL. SC	Public Administración, Paper-II	113071	Civil Services Recruitment Procedure regarding Madhya Pradesh
4	BA-II Sem, POL. SC. major, paper- II	Indian Constitution	112021	High Court, State Legislature, State PSC
5	BA – III Year, POL. SC, Paper – Major	Public Administration	113071	Control and Supervision over Local Bodies, Districts, and State, Lokayukt
6	BA/B.Sc. I Year Economics	Indian Economy	211051	- Local livelihood strategies, Agricultural Marketing, Organic Farming and Polyhouse, Madhya Pradesh's Economy, Trends, and Regional Disparities in the Agricultural Sector of Madhya Pradesh
7	MA III SEM. Economics	Industrial Economics	413021	Industries Localization, Rural Development
8	MA III Sem Economics	Rural Development	413031	Panchayati Raj, Regional Rural Bank, Mukhya Mantri Kaushalya Yojna
9	BA-Ist Year	Hindi Kavya		इंद्र बहादुर खरे
10	BA IIIrd SEM , Hindi Literature	Hindi Gaddh	112171	सेठ गोविंददास की रचनाये



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11	BA III Year	Hindi Sahitya	112172	बुन्देली भाषा साहित्य, पूरनचंद श्रीवास्तव की रचनाएँ, ऊषा किरण ताराम: (गोंडवाना दर्शन)
12	MA III SEM., ENGLISH, PAPER-III(A)	INDIAN WRITINGS IN ENGLISH	423041	Subhadra Kumari Chauhan Contribution to Indian Poetry
13	MA-I SEM., ENGLISH, PAPER-I	POETRY	421011	Sundarkand- The Hymns of Himalaya by Dr. Akhilesh Gumasta
14	B.Sc. III Year Computer Science	Programming using Python	311061	Developing a Predictive Model on "Identification of Diabetic and Nondiabetic Patients using Classification Technique" in Jabalpur Hospital. Creating PowerPoint presentations on college assembly
15	BBA/BA/BSc. /BCom. (Vocational) Computer Science	Digital Marketing	811031	Awareness of E-Governance Services in M.P. Practical on creating worksheets and visualization of data for crop production for Indian states (for MP region)
16	B.Sc. I Sem. & M.Sc. II Sem (Chemistry)	Chemistry	211053	Water Testing Study: Acidity, Alkalinity, and Hardness in water, samples of cantonment Jabalpur
17	B.Sc. I Year Old Scheme (Chemistry)	Chemistry	111043	Colloidal solution, classification, properties, and applications.
18	B.Sc. IV Sem. (Chemistry)	(NEP) Chemistry	213211	Electrochemical Series and its significance
19	B.Sc. III Year, Old Scheme (Chemistry)	Organic Chemistry	111341	Saponification value, iodine value & acid value, Synthetic detergent and dyes
20	B.Sc. III Year (Chemistry)	Chemistry	213211	Comparative analysis of Adulterants in Milk samples (Sanchi, Amul & local vendors),
21	B.Sc. I Year	Practical	211321	influencing the rate of reaction



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	(Chemistry)			– concentration, temperature, light, and catalyst
22	M.Sc. IV Sem. (Chemistry)	Environment Chemistry	544031	Green synthesis of organic compound
23	B.Sc. IV Sem. (physics)	Electricity, Magnetism & Electromagnetic theory	214021	Study of hydroelectric power plants in Bargi Dam Jabalpur
24	B.Sc. I Sem. (physics)	Mechanics and general properties of Matter	211021	Conveyor belt –hopper
25	B.Sc. II Sem. (physics)	Thermodynamics & Statistical Physics	212021	Heat engine
26	B.Sc. IV Sem (physics)	Electricity, Magnetism & Electromagnetic theory	214021	Antireflection coating; Dielectric Mirrors; Interference filter, Musical notes; Musical scale, Acoustic, aspects of halls and auditoria, Plane diffraction grating, Telescope, Application of polarization: Sunglasses
27	B.Sc. IV SEM. (physics)	Electricity, Magnetism & Electromagnetics theory	212201	An overview of thermal and hydroelectric power plants in Bargi, Jabalpur, Madhya Pradesh
28	B.Sc. III Sem. (physics)	Wave & Optics	212191	Interference filter, Michelson's, Interferometer, Three-dimensional movies; Photography
29	B.Sc. III Year (physics)	Paper-1 (Major) Quantum Mechanics & Molecular physics Paper-II(Major) Solid State Physics & Electronics Paper-III(Elective/Minor) Quantum Mechanics Solid State Physics & Devices	213241	Continuous and characteristic X-rays, Light Emitting Diode, Amplifiers, Application of X-ray to structure determination, Light Emitting diode and Solar cell, Transistors (PNP and NPN), JFET and Amplifiers
30	B.Sc. I Sem. (Mathematics)	Algebra, Vector Analysis and Geometry	211011	Matrix, Vector Calculus, Cone cylinder, Gradient, divergence and curl, Application to



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		(Major /Minor/Elective)		geometry, Brahmagupta, Matrix, Cone, Cylinder, Vector Calculus, matrix, Curvature, tracing of curves
31	B.Sc. II Sem. (Mathematics)	Calculus and Differential equations (paper 2) (Major /Minor/Elective)	211181	Introduction to Double and Triple Integral, Concavity and Convexity, Sequence of real numbers, Linear, Independence of row and column matrix, tracing of conics, Linear differential equation
32	B.Sc. IV Sem. (Mathematics)	Advanced Calculus and Partial Differential Equations Major /Minor/Elective	212181	Ring homomorphic m, Subring, Ideals, Alternating series and Leibnitz's test, Limit of a sequence Bounded and monotonic sequences, Absolute and Conditional Convergence of Series of real terms, ODE, Solution of Equations
33	M.Sc.- IV Sem. (Mathematics)	Mathematical Modeling	574051	transportation model, individual-group replacement and discount, Transportation, Job Sequencing, Inventory, Mathematica I Modelling
34	B.Sc. III Year (Mathematics)	Elements of Discrete Mathematics (Paper-I, Major Paper)	213221	Graphs, Boolean algebra, partial order, lattice, graph, digraph and weighted graph
35	B.Sc. III Year DSE Group A (Zoology)	Wild Life Conservation and Management	213151	Study of local birds: Myna, Koel
36	B.Sc. III Year, DSE Group A (Zoology)	Applied Aquaculture	213152	Study of Ecosystems WSR Pond ecosystem at Local Level
37	B.Sc. IV Sem. Major/Minor/ Elective (Zoology)	System Physiology and Biochemistry	213154	Estimation of protein, carbohydrates, and fat of locally available samples
38	B.Sc. III Year DSC Group A (Zoology)	Genetics	213153	Multiple, factors and blood groups
39	B.Sc. III Year DSC Group A (Zoology)	Wild life conservation and Management	213151	Population, Estimation, Pug Marks, Ecotourism, Local Communities
40	B.Sc. III Year	Applied Zoology	213152	Taxonomic identification of



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	(Zoology)			pests of vegetables and stored grains of Jabalpur district.
41	B.Sc. III Year, DSE Group A (Zoology)	Applied Aquaculture	213153	Study of common weeds of fish ponds
42	Practical II (Zoology)	M.Sc. IV Sem.	504350	Age determination of teleost fish with the help of scales
43	M.Sc. IV Sem. (Zoology)	Practical II	504350	Survey of local fish market
44	B.Sc. IV sem. Major/ Minor /Elective (Zoology)	System Physiology and Biochemistry	213154	Detection of Human Blood groups, Total differential count, Haemin crystal, clotting time of human blood
45	B.Sc. III Year Minor/ Elective (Zoology)	Genetics	213171	Common genetic disorders and Syndrome
46	B.Sc. III Year DSE Group A (Zoology)	Applied Aquaculture	213155	Prawn Culture and Aquatic Insects. Carp culture, Freshwater Fishes.
47	B.Sc. III Year DSE Group A (Zoology)	Wild life conservation and Management	213151	Wild life, Protection Act, National Parks and Sanctuaries of Madhya Pradesh.
48	M.Sc. III Sem. (Zoology)	Sericulture	533051	Historical background of sericulture. Life cycle of Bombyx mori. Preparation of Map showing extension of sericulture in India.
49	M.Sc. III Sem. (Micro Biology)	Agricultural Microbiology	523031	Study of millets: Kodo, Kutki, microflora, varieties grown in Jabalpur region. Study of local weeds of Jabalpur {Parthenium: Gajar Ghass}, Red Amaranth/ Lal Bhaji, Blue Green Algae
50	M.Sc. IV Sem. (Botany)	Industrial Botany	533031	Raw material for Fermentation (Mahua) in the Mahakaushal Region. Plants {Mulberry, Arjun} used to rear silkworms in Madhya Pradesh
51	B.Sc. III year (Biotechnology)	Environmental Biotechnology	213101	Treatment and disposal of medical effluent (waste) in Medical College Jabalpur.
52	B.Sc. III Year	Industrial	213091	Industrial Production of Ethyl



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	(Biotechnology)	Biotechnology		Alcohol. Penicillin.
53	B.Sc. III Year (Biotechnology)	Environment Biotechnology	213101	Environment: Basic concept, Significance, Public awareness, Environmental pollution.
54	B.Sc. IV Sem. (Biotechnology)	Recombinant DNA Technology	214061	Isolation of DNA from Tissue/Blood/Microorganism from local sources
55	M.Sc. I Sem. (Biotechnology)	Paper- I Cell and Developmental Biology	552011	Prevalence Rate of Malaria, AIDS, Tuberculosis, Filariasis and Kala-azar in M.P.
56	M.Sc. I Sem. (Biotechnology)	Paper – IV Analytical Techniques	552014	Centrifugation, Colorimeter and Spectrophotometer.
57	M.Sc. II Sem. (Biotechnology)	Immunology	562011	To identify human blood groups.
58	M.Sc. II Sem. (Microbiology)	Molecular Biology	562013	Effect of UV on microbial/plant cells.
59	B.Sc. IV Sem. & M.Sc. I Sem. (Biotechnology)	Practical	562014	Demonstration of southern blotting.
60	M.Sc. II Sem. (Biotechnology)	Practical, Genetic Engineering	562041	Isolation of RNA from Yeast.
61	BBA III Year	Entrepreneurship Development	613011	Rural Entrepreneurship: Home-grown products in Jabalpur
62	BBA III Sem.	Marketing Management	612061	A study of marketing strategies for local goods in Saliwada Village. Planning for Startups
63	BBA I Sem.	Communication Skill	611021	Effective Communication, Meetings, Business Letters, Report Writings, Symposia and Conferences
64	BBA I Sem.	Financial Accounting	611051	Preparation of Books of Accounts. Tally – Computerized Accounting Rural Marketing
65	BBA III Sem.	Marketing Management	612061	Channels of distribution for Raahar Dal with respect to the state of Madhya Pradesh.
66	BBA I Sem.	Financial Accounting	611051	Branch Accounts – Study of few regional branches. Channels of Distribution of Raahar Dal with state of Madhya Pradesh





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				Pradesh
67	B.Com. I Semester	Major: Financial Accounting	321041	Voucher Entry and Creating Stock Items
68	B.Com. I Semester	Minor: Business Organization	311021	Case Study on Cooperative Organization in Jabalpur, Steps to Start an Enterprise
69	B.Com. I Semester	Major: Financial Accounting	611051	Partnership Accounts
70	B.Com. I Semester	Elective: Business Economics I	311051	Market Concepts and their classification.
71	B.Com. I Semester	Elective: Banking & Insurance	311031	Introduction to Micro Finance, Private Banks
72	B.Com. I Semester	Elective: Advertisement & Sales Promotion I	311041	Determination of target audience, Advertising media and their choice, Determination of target audience, Advertising media and their choice
73	B.Com. II Semester	Major: Business Regulatory Framework	312011	Negotiable Instrument Act 1881, Partnership Deed
74	B.Com. II Semester	Minor: Business Communication	312012	Interpersonal Barriers
75	B.Com. II Semester	Elective: Advertisement & Sales Promotion II	312041	sales promotion campaign, Sales Promotion Budget
76	B.Com. II Semester	Minor: Business Communication	312012	Interpersonal Barriers
77	B.Com. II Semester	Elective: Business & Vedic Mathematics II	312013	Simple interest
78	B.COM. III Semester	Minor: Principles of Statistics I	312061	Data collection, primary and secondary data, Data collection, primary and secondary data
79	B.COM. III Semester	Elective: Financial Market Operations I	312062	Leasing & Hire Purchase, Leasing & Hire Purchase
80	B.COM. III Semester	Elective: Principles of Management I	312071	Organizational Structures, Planning in Business
81	B.COM. III Semester	Major: Cost Accounting	312072	Labour Costing, Material control and Its Techniques, Break-even Analysis
82	B.COM. III Semester	Minor: Principles of Statistics II	312073	Sampling,
83	B.COM. III Year	GROUP A DSE MAJOR 1: Income tax law and practice	313041	TDS
84	B.COM. III Year	DSE MAJOR 2: Goods and Service Tax & Custom Duty	313051	GST in India. Structure and Classification of GST, Preparation of Tax invoice,



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				Preparation of Tax invoice, Levy and Collection of Tax
85	B.COM. III Year	DSE MINOR: Income Tax for Business	313111	Assessment of Hindu undivided family, Assessment of Hindu undivided family
86	B.COM. III Year	GROUP B DSE MAJOR 1: Marketing Management	313061	Factors influencing consumer buying decisions, Factors influencing consumer buying decisions, Channels of distribution
87	B.COM. III Year	DSE MAJOR 2: Human Resource Management	323061	methods of wage payment, methods of wage payment
88	B.COM. III Year	DSE MINOR: Management Accounting	313071	Budgetary Control, Budgetary Control
89	B.COM. III Year	GROUP C DSE MAJOR 1: Financial Management	313131	Management of Inventory, Management of Inventory
90	B.COM. III Year	DSE MAJOR 2: Auditing	313061	Internal Control Questionnaire, Vouching, Internal Control Questionnaire,
91	B.COM. III Year	DSE MINOR: Public Finance	313121	Local bodies and their financial responsibilities Sources of local Finance, division of financial resources between Central and States, Division of financial resources between Central and States, Division of Financial resources between Central and States.
92	M. Com. II Semester	Elective: Advanced Goods and Services Tax and Customs Duty	912091	E-way billing: Provisions regarding generation, cancellation, and Verification of E-way billing, Integrated Goods and Services Tax
93	M.Com. III Semester	Business Environment	913021	Internal Factors of Business Environment, Social & Cultural Environment



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रांत अलॉयसियस महाविद्यालय (स्वाशासी) जबलपुर

M.A. IV Semester एम.ए. चतुर्थ सेमेस्टर			
Subject विषय	Political Science राजनीति विज्ञान		
Paper प्रश्नपत्र	II द्वितीय		
Title of the paper प्रश्नपत्र का शीर्षक	Government and Politics of Madhya Pradesh म.प्र.शासन और राजनीति		
	Core		
Max.Marks/अधिकतम अंक	Theory/सैद्धांतिक	Internal Assessment/आंतरिक मूल्यांकन	Credit
50	40	10	5

Unit -1	Reorganization of States (1956) and Formation of Madhya Pradesh. Division of Madhya Pradesh. Determinants and Characteristics of Madhya Pradesh Politics. Party System and Main Political Parties in Madhya Pradesh.
इकाई-1	राज्यों का पुनर्गठन (1956) तथा मध्य प्रदेश का निर्माण । मध्य प्रदेश का विभाजन । मध्य प्रदेश की राजनीति के निर्धारक तत्व एवं विशेषताएं, मध्य प्रदेश की दलीय व्यवस्था एवं प्रमुख राजनीतिक दल ।
Unit-2	Governor: Powers, Position and Role. Chief Minister and Council of Ministers: Powers, Position and Role. State Legislative Assembly: Organization and Powers. High Court in Madhya Pradesh: Jurisdiction and Role.
इकाई-2	राज्यपाल : शक्ति, स्थिति एवं भूमिका । मुख्यमंत्री एवं मंत्रि परिषद् -शक्ति, स्थिति एवं भूमिका । राज्य विधानसभा : संगठन एवं शक्ति । मध्यप्रदेश में उच्च न्यायालय : क्षेत्राधिकार एवं भूमिका ।
Unit -3	Administration in Madhya Pradesh: Structure, Secretariat, Chief Secretary, Secretary, Commissioner. District Administration in Madhya Pradesh : Role of Collector.
इकाई-3	मध्य प्रदेश में प्रशासन : संरचना सचिवालय, मुख्यसचिव, सचिव, आयुक्त । मध्य प्रदेश में जिला प्रशासन : जिलाधीश की भूमिका ।
Unit -4	Rural Local Self-Government in Madhya Pradesh : Organisation & Powers. Urban Local Self-Government in Madhya Pradesh : Organisation & Powers. Importance of Finance, Bureaucracy and Autonomy in Local Self-Government.
इकाई-4	मध्यप्रदेश में ग्रामीण स्थानीय स्वशासन : संगठन एवं शक्तियां । मध्यप्रदेश में नगरीय स्थानीय स्वशासन संगठन एवं शक्तियां । वित्त का महत्व, स्थानीय स्वशासन में नौकरशाही एवं स्वायत्तता ।
Unit-5	Emerging Trends in Madhya Pradesh Politics : Politics of Tribals, Politics of Dalits, Naxalite Problem, Women and Politics. Electoral Politics and Voting Behaviour. Development Politics in Madhya Pradesh.
इकाई-5	मध्य प्रदेश की राजनीति में उभरती प्रवृत्तियाँ : जनजातीय राजनीति, दलित राजनीति, नवसत समस्या ,महिलाएँ और राजनीति । निर्वाचन की राजनीति एवं मतदान व्यवहार । मध्यप्रदेश में विकास की राजनीति ।



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संत अलुयसियस कॉलेज (स्वतंत्र) जबलपुर

B.A. III Year संस्कृत-तृतीय वर्ष		
Subject विषय	Political Science राजनीति विज्ञान	DSE (Group A)
Paper प्रश्नपत्र	II द्वितीय	
Title of the paper प्रश्नपत्र का शीर्षक	Public Administration लोक प्रशासन	
Max.Marks/अधिकतम अंक	Theory/सैद्धांतिक	Internal Assessment/आंतरिक मूल्यांकन
100	70	30

Unit -1	Introduction of Public Administration
	<ol style="list-style-type: none"><li>1. Public Administration: Meaning, Nature and Scope. Evolution of Public Administration as an Academic Discipline. Politics- Administration Dichotomy. Public Administration and Private Administration: Features, Differences and Similarities.</li><li>2.</li></ol>
इकाई-1	लोकप्रशासन का परिचय
	<ol style="list-style-type: none"><li>1. लोकप्रशासन: अर्थ, प्रकृति एवं क्षेत्र। अकादमिक विषय के रूप में लोकप्रशासन का विकास। राजनीति – प्रशासन द्वैतवाद। लोकप्रशासन एवं निजी प्रशासन : विशेषताएँ, अंतर एवं समानताएँ।</li><li>2. प्रशासन एवं प्रबंध : विशेषताएँ, अंतर एवं समानताएँ। नवीन लोकप्रशासन एवं नवीन लोकप्रबंध।</li></ol>
Unit-2	Organization and its Principles
	<ol style="list-style-type: none"><li>1. Organization: Meaning, Bases of Organization, Types of Organization – Features, Merits and Demerits.</li><li>2. Principles of Organization- Hierarchy, Unity of Command, Span of Control, Coordination, Supervision, Authority and Responsibility, Centralization and Decentralization, Delegation.</li><li>3. Headquarter – Field Relationship.</li><li>4. Line Agencies, Staff Agencies and Auxiliary Agencies, Meaning, Features and significance</li></ol>



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इफार्ई-2	<b>संगठन एवं इसके सिद्धांत</b>
	<ol style="list-style-type: none"><li>1. संगठन: अर्थ, संगठन के आधार, संगठन के प्रकार- विशेषताएँ, गुण एवं दोष।</li><li>2. संगठन के सिद्धांत – पदसोपान, आदेश की एकता, नियंत्रण का क्षेत्र, समन्वय, पर्यवेक्षण, प्राधिकार एवं उतारदायित्व, केन्द्रीकरण एवं विकेन्द्रीकरण, प्रत्यायोजन।</li><li>3. मुख्यालय- क्षेत्र संबंध।</li><li>4. सूत्र अभिकरण, स्टाफ अभिकरण एवं सहायक अभिकरण: अर्थ, विशेषताएँ एवं महत्व।</li></ol>
Unit -3	<b>Personnel Administration and Bureaucracy</b>
	<ol style="list-style-type: none"><li>1. Personnel Administration- Meaning, Objectives, Scope and Significance.</li><li>2. Recruitment- Concept, Principles, Types ( with Merits and Demerits), Training- Meaning, Objectives, Types and Importance, Promotion: Meaning and Principles.</li><li>3. Bureaucracy- Concept, Types, Max Weber's Ideal Type of Bureaucracy and its relevance. Indian Bureaucracy ; Characteristic Features, Politician and Minister- Civil Servant Relationship.</li></ol>
इफार्ई-3	<b>कार्मिक प्रशासन एवं नौकरशाही</b>
	<ol style="list-style-type: none"><li>1. कार्मिक प्रशासन- अर्थ, उद्देश्य, क्षेत्र एवं महत्व। भर्ती- अवधारणा, सिद्धांत, प्रकार (गुण एवं दोष सहित)। प्रशिक्षण- अर्थ, उद्देश्य, प्रकार एवं महत्व। पदोन्नति- अर्थ, एवं सिद्धांत।</li><li>2. नौकरशाही- अवधारणा, प्रकार, मैक्स वेबर की आदर्श प्रकार की नौकरशाही एवं इसकी प्रासंगिकता। भारतीय नौकरशाही – चारित्रिक विशेषताएँ, राजनीतिज्ञ एवं मंत्री – नौकरशाह संबंध।</li><li>3. संघ एवं राज्य (मध्य प्रदेश के संबंध में) स्तर पर लोक सेवा भर्ती प्रक्रिया।</li></ol>
Unit -4	<b>Budget</b>
	<ol style="list-style-type: none"><li>1. Budget- Concept, Principles and Significance. Types of Budget: Features, Merits- Demerits. Accounts and Audit : Concept and Importance.</li><li>2. Budgetary Process in India ; Budget- Making, Budget- Enactment and Budget- Implementation. Agencies involved in Budgetary Process.</li><li>3. Comptroller and Auditor General of India : Appointment Provisions, Power and Functions, Criticism.</li></ol>
इफार्ई-4	<b>बजट</b>
	<ol style="list-style-type: none"><li>1. बजट: अवधारणा, सिद्धांत एवं महत्व। बजट के प्रकार : विशेषताएँ, गुण-दोष। लेखांकन एवं लेख परीक्षण : अवधारणा एवं महत्व।</li><li>2. भारत में बजटीय प्रक्रिया : बजट – निर्माण, बजट – अधिनियम एवं बजट – क्रियान्वयन। बजटीय प्रक्रिया में संलग्न संस्थाएँ।</li><li>3. भारत का नियंत्रक एवं महालेखा परीक्षक : नियुक्ति प्रावधान, शक्तियाँ एवं कार्य, आलोचना।</li></ol>
Unit-5	<b>Recent Trends of Administration in India</b>
	<ol style="list-style-type: none"><li>1. Good Governance : Concept, Elements, Characteristics, Significance. E-Governance : Meaning, features, scope, types and importance.</li></ol>



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	<ol style="list-style-type: none"><li>2. Public Private Partnership (PPP) : Concept, types and Significance.</li><li>3. People – Participation : Meaning, Types and Importance. Features of people- Participation in India.</li></ol>
हफाई-5	<b>भारत मे प्रशासन की नवीन प्रवृत्तियाँ</b>
	<ol style="list-style-type: none"><li>1. सुशासन : अवधारणा, तत्व। विशेषताएँ एवं महत्व। ई-शासन : अर्थ, विशेषताएँ। क्षेत्र, प्रकार एवं महत्व।</li><li>2. सार्वजनिक निजी भागीदारी (पी पी पी) : अवधारणा, प्रकार एवं महत्व।</li><li>3. जन- भागीदारी : अर्थ, प्रकार एवं महत्व। भारत मे जन भागीदारी का स्वरूप।</li></ol>



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## St. Aloysius College (Autonomous) Jabalpur

संत अलॉयसियस महाविद्यालय (स्वशासी) जबलपुर

B.A. II Semester बी.ए. द्वितीय सेमेस्टर	
Subject विषय	Political Science राजनीति विज्ञान
	Major / Minor
	मुख्य/ गौण
Title of the paper प्रश्न पत्र का शीर्षक	Indian Constitution भारतीय संविधान

Unit -1	Genesis of the Indian Constitution and Salient Features 1. Constitutional Development in India 2. Making of the Constituent Assembly: History and Objectives 3. Salient Features of the Constitution: 3.1 Preamble 3.2 Fundamental Rights and Duties 3.3 Directive Principles of State Policy 3.4 Procedure for Constitutional Amendment
इकाई-1	भारतीय संविधान की व्युत्पत्ति एवम् विशेषताएँ 1. भारत में संवैधानिक विकास 2. संविधान सभा का निर्माण : इतिहास एवम् उद्देश्य 3. संविधान की प्रमुख विशेषताएँ 3.1 प्रस्तावना 3.2 मूल अधिकार एवम् कर्तव्य 3.3 राज्य के नीति निर्देशक तत्व 3.4 संविधान संशोधन की प्रक्रिया
Unit-2	Legislature 1. Central Legislature 1.1 Indian Parliament – Composition and Functions of the Lok Sabha and Rajya Sabha 1.2 Speaker of the Lok Sabha- Role, Power and Functions, Independence and Impartiality of the Speaker 1.3 Legislative procedure of the Parliament 1.4 Parliamentary Committees 2. State Legislature 2.1 Vidhan Sabha- Composition and Functions 2.2 Vidhan Parishad- Composition and Functions
इकाई-2	1. केंद्रीय व्यवस्थापिका 1.1 भारतीय संसद- लोकसभा एवम् राज्यसभा की संरचना तथा कार्य 1.2 लोकसभा अध्यक्ष – भूमिका, शक्तियाँ एवम् कार्य, अध्यक्ष की स्वतंत्रता एवम् निष्पक्षता 1.3 संसद की विधायी प्रक्रिया 1.4 संसदीय समितियाँ। 2. राज्य व्यवस्थापिका 2.1 विधान सभा – संरचना एवम् कार्य 2.2 विधान परिषद्- संरचना एवम् कार्य।



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Unit -3	<b>Executive</b> 1. Union Executive 1.1 President- Power and Functions 1.2 Prime Minister- Role and Functions 1.3 Council of Ministers- Composition and Functions 2. State Executive 2.1 Governor- Power and Functions 2.2 Chief Minister- Power and Functions 2.3 State Council of Ministers
इकाई-3	<b>कार्यपालिका</b> 1. संघीय कार्यपालिका 1.1 राष्ट्रपति- शक्तियाँ एवम् कार्य 1.2 प्रधानमंत्री – भूमिका एवम् कार्य 1.3 मंत्रिपरिषद – संरचना, भूमिका एवम् कार्य। 2. राज्य कार्यपालिका 2.1 राज्यपाल – कार्य एवम् शक्तियाँ 2.2 मुख्यमंत्री – कार्य एवम् शक्तियाँ 2.3 राज्य मंत्रिपरिषद
Unit -4	<b>Judiciary and Other Constitutional Bodies</b> 1. Supreme Court- Composition and Jurisdiction 2. High Court- Composition and Jurisdiction 3. <i>Judicial Activism</i> 4. Constitutional Bodies 4.1 Election Commission 4.2 Union Public Service Commission 4.3 National Commission for SC's 4.4 National Commission for ST's 4.5 State Public Service Commission
इकाई-4	<b>न्यायपालिका एवम् अन्य सांवैधानिक निकाय</b> 1. उच्चतम न्यायालय – संगठन एवम् क्षेत्राधिकार 2. उच्च न्यायालय – संगठन एवम् क्षेत्राधिकार। 3. <i>न्यायिक सक्रियता</i> 4. संवैधानिक निकाय 4.1 निर्वाचन आयोग 4.2 केंद्रीय लोकसेवा आयोग 4.3 अनुसूचित जातियों के लिये राष्ट्रीय आयोग 4.4 अनुसूचित जनजातियों के लिये राष्ट्रीय आयोग 4.5 राज्य लोकसेवा आयोग।
Unit-5	<b>Division of Powers</b> 1. Centre-State Relations 1.1. Legislative Relations 1.2. Administrative Relations 1.3. Financial Relations 2. Local Self Government- 73 <sup>rd</sup> and 74 <sup>th</sup> Amendment.
इकाई-5	<b>शक्तियों का विभाजन</b> 1. केंद्र राज्य संबंध 1.1 विधायी संबंध 1.2 प्रशासकीय संबंध 1.3 वित्तीय संबंध 2. स्थानीय स्वशासन – 73 वां एवम् 74 वां संशोधन





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## B.A/B.Sc. – II Semester

### (Paper - Major / Minor)

Course Title पाठ्यक्रम का शीर्षक	Indian Economy (भारतीय अर्थव्यवस्था)
Course Type पाठ्यक्रम का प्रकार	Major / Minor
Credit Value क्रेडिट मान	06
Max. Marks अधिकतम अंक	100

Unit (इकाई)	Topics (विषय वस्तु)
Unit -1 Introduction परिचय	<ol style="list-style-type: none"><li>1. Characteristics of Indian Economy.</li><li>2. Trends and Composition of National Income.</li><li>3. Sectoral Distribution of Work force.</li><li>4. Natural Resources Endowment- Land, Water, Livestock, Forest and Minerals.</li><li>5. Demographic Features- Population Composition, Size and growth Rates .</li><li>6. Problem and Causes of Over Population and Population Policy.</li></ol> <ol style="list-style-type: none"><li>1. भारतीय अर्थव्यवस्था की विशेषताएँ</li><li>2. राष्ट्रीय आय की क्षेत्रीय संरचना एवं प्रवृत्तिया</li><li>3. श्रमशक्ति का क्षेत्रीय वितरण</li><li>4. प्राकृतिक संसाधन सम्पदा- भूमि, जल, पशुधन, वन, खनिज</li><li>5. जनांकिकीय विशेषताए - जनसंख्या की संरचना आकार एवं वृद्धि दर</li><li>6. जनाधिक्य की समस्या एवं जनसंख्या नीति</li></ol>
Unit -2 Agriculture कृषि	<ol style="list-style-type: none"><li>1. Nature, Importance and Characteristics of Indian Agriculture .</li><li>2. Land Use Pattern and Land Reforms.</li><li>3. Trends in Agricultural Production and Productivity .</li><li>4. Green Revolution- Objective, Achievement and Failures.</li><li>5. Agricultural Finance and Insurance .</li><li>6. Agricultural Marketing .</li><li>7. New Technology in Agriculture.</li></ol> <ol style="list-style-type: none"><li>1. भारतीय कृषि की प्रकृति, महत्त्व और विशेषताएँ</li><li>2. भू उपयोग पद्धति एवं भूमि सुधार</li><li>3. कृषि उत्पादन और उत्पादकता की प्रवृत्तिया</li><li>4. हरितक्रांति-उद्देश, सफलताए एवं विफलताए</li><li>5. कृषि वित्त एवं बीमा</li><li>6. कृषि विपणन</li></ol>



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	7. कृषि में नवीन तकनीक
Unit -3 Industry and Infrastructure उद्योग एवं आधारभूत संरचना	<ol style="list-style-type: none"><li>1. Industrial Development of India after Independence.</li><li>2. New Industrial Policy of 1991.</li><li>3. Role of Public Sector and Private Sector in Industrialization</li><li>4. MSME- Definition, Characteristics and its Role</li><li>5. Problems and Remedies of Small Scale and Cottage Industries</li><li>6. Start Up India, Make in India and Aatm Nirbhar Bharat</li><li>7. Infrastructure Composition- Power, Transport and Communication.</li></ol> <ol style="list-style-type: none"><li>1. स्वतंत्रता प्राप्ति के पश्चात भारत का औद्योगिक विकास</li><li>2. नई औद्योगिक नीति 1991</li><li>3. औद्योगिकीकरण में सार्वजनिक एवं निजी क्षेत्र की भूमिका</li><li>4. सूक्ष्म, लघु और माध्यम उपक्रम (MSME) – परिभाषा, विशेषताएँ एवं इनकी भूमिका</li><li>5. लघु एवं कुटीर उद्योगों की समस्याएँ और समाधान</li><li>6. स्टार्टअप इंडिया, मेक इन इंडिया एवं आत्मनिर्भर भारत</li><li>7. आधारभूत संरचना – ऊर्जा, परिवहन एवं संचार</li></ol>
Unit -4 Foreign Trade and Development विदेशी व्यापार एवं विकास	<ol style="list-style-type: none"><li>1. Indian's Foreign Trade- Importance, Composition and Direction.</li><li>2. Role of Foreign Direct Investment and Multinational Corporations.</li><li>3. Disinvestment in India.</li><li>4. Indian Planning - Objectives, Achievements and Failures.</li><li>5. NITI Aayog.</li><li>6. Indian Economic Problems- Poverty, Unemployment and Regional Inequality.</li></ol> <ol style="list-style-type: none"><li>1. भारत का विदेशी व्यापार- महत्त्व, दशा एवं दिशा</li><li>2. प्रत्यक्ष विदेशी निवेश व बहुराष्ट्रीय निगमों की भूमिका</li><li>3. भारत में विनिवेश</li><li>4. भारतीय नियोजन - उद्देश, उपलब्धियाँ एवं विफलताएँ</li><li>5. नीति आयोग</li><li>6. भारतीय आर्थिक समस्याएँ- गरीबी, बेरोजगारी एवं क्षेत्रीय विषमताएँ</li></ol>
Unit -5 Economy of Madhya Pradesh मध्यप्रदेश की अर्थव्यवस्था	<ol style="list-style-type: none"><li>1. Salient Features of Madhya Pradesh's Economy.</li><li>2. Natural Resources of Madhya Pradesh – Land, Forest, Water and Minerals.</li><li>3. Trends and Regional Disparities in Agricultural Sector of Madhya Pradesh.</li><li>4. Organic Farming and Polyhouse in Madhya Pradesh.</li><li>5. Industrial Development in Madhya Pradesh.</li><li>6. Infrastructure Development in Madhya Pradesh- Power, Transport and Communication.</li><li>7. Development of Tourism in Madhya Pradesh.</li><li>8. Employment Oriented Schemes in Madhya Pradesh.</li></ol>



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1. मध्यप्रदेश की अर्थव्यवस्था की मुख्य विशेषताएँ
2. मध्यप्रदेश के प्राकृतिक संसाधन -भूमि, वन, जल एवं खनिज
3. मध्यप्रदेश में कृषि क्षेत्र की क्षेत्रीय विषमताएँ एवं प्रवृत्तियाँ
4. मध्यप्रदेश में जैविक खेती और पॉलिघर
5. मध्यप्रदेश में औद्योगिक विकास
6. मध्यप्रदेश में आधारभूत संरचना का विकास - ऊर्जा, परिवहन एवं संचार
7. मध्यप्रदेश में पर्यटन विकास
8. मध्यप्रदेश में रोजगार मूलक योजनाएँ



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## Paper - II

### Industrial Economics

Max. Marks: 40

#### Unit I

Industrialization – Meaning And Importance, Process of Industrialization, Problem of Industrialization, Classification of Industries, - Size based, Use based, Input based, Proprietary based, Dangers of Heavy Industrialization.

#### Unit II

Industrial Combination – Definition, Advantages and Disadvantages, Forms and Types of Industrial Combinations, Localization of Industries – Concept and Significance, Theories of Industries Localization – Weber and Sargent Florence theory.

#### Unit III

Role of Government in Industrial Development, Licensing Policy, Industrial Policy – 1948 Policy, 1956 Policy and New Industrial Policy.

#### Unit IV

Industrial Productivity– Concept, Types, Measurement, Partial and Total Trends, Productivity Movement in India, Rationalization – Meaning, Objectives, Aspects, Problems, Govt. Policies towards Rationalization, Modernization in Indian Industries.

#### Unit V

Industrial Sickness – Definition, Extent of Industrial Sickness in Indian Industries, Causes of Sickness, Harmful Effects of Sickness, Measures to Remove Industrial Sickness, Concentration of Economic Power and Monopoly, Measurement to Check Monopoly, UTP And RTP Provisions, Competition Act.



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## Paper-III

### Rural Development (Core Elective)

Max. Marks: 40

#### UNIT I

Nature of Rural Economy, Concept and Feature of Rural Development, Causes of Rural Backwardness in India, Importance of Rural Development for Indian Economy, Relationship of Rural Development with Industrial Development and Service Sector.

#### UNIT II

Dimensions of Rural Development: Agriculture, Irrigation, Electrification and Power Supply, Rural Road, Health, Education, Banking in Rural Areas, Sanitation, Safe Drinking Water, Productivity Level

#### UNIT III

Institutions for Rural Development: National Bank for Agriculture and Rural Development (NABARD), Pachayati Raj Institutions, Co-operative Banks, Commercial Banks and Regional Rural Banks.

#### UNIT IV

Various Programme for Rural Development in India: Provision of Urban Amenities in Rural Area (PURA), Mahatma Gandhi National Rural Employment Guarantee ACT 2005 (MNREGA), Pradhan Mantri Gramin Sadak Yojana (PMGSY), Rural Housing, Swarnjayanti Gram Swarojgar Yojna (SGSY), Latest Provisions and Changes in Union Budget for Rural Development.

#### UNIT V

Rural Development in Madhya Pradesh: Madhya Pradesh Rural Livelihood Project, Madhya Pradesh Rural Road Development Authority, Mahatma Gandhi State Institute of Rural Development, Causes of Rural Backwardness in Madhya Pradesh, Other Initiative for Rural Development in Madhya Pradesh.



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## संत अलॉयसियस स्वशासी महाविद्यालय, जबलपुर (म.प्र.)

2023-2024

भाग अ परिचय			
कार्यक्रम: डिप्लोमा	कक्षा : बी.ए.	सेमेस्टर: तृतीय	सत्र: 2023-2024
विषय: हिंदी साहित्य			
1	पाठ्यक्रम का कोड	A2-HLIT1T	
2	पाठ्यक्रम का शीर्षक	हिन्दी गद्य	
3	पाठ्यक्रम का प्रकार : (कोरकोर्स/इलेक्टिव/जेनेरिक इलेक्टिव/ वोकेशनल/ ...)	कोर कोर्स मेजर /माइनर	
4	पूर्वापेक्षा (Prerequisite) (यदि कोई हो)	इस कोर्स का अध्ययन करने के लिए, छात्र ने किसी भी विषय/संकाय में अध्ययन किया हो, पात्र है।	
5	पाठ्यक्रम अध्ययन की परिलब्धियां (कोर्स लर्निंग आउटकम) (CLO)	1. विद्यार्थी हिन्दी गद्य-साहित्य एवं प्रमुख रचनाओं से परिचित होंगे। 2. विद्यार्थियों में साहित्य अध्ययन से संवेदनशीलता एवं मानवीय गुणों का विकास होगा। 3. साहित्य क्षेत्र में सर्जनात्मक लेखन एवं समीक्षा के प्रति प्रेरित होंगे। उन्हें रचनाओं के प्रकाशन एवं अध्यापन के क्षेत्र में रोजगार प्राप्ति के अवसर प्राप्त होंगे।	
6	क्रेडिट मान 100	06 Theory	
7	कुल अंक	100 अंक सैद्धांतिक मूल्यांकन - 70 अंक आंतरिक मूल्यांकन - 30 अंक	
भाग ब पाठ्यक्रम की विषयवस्तु			
व्याख्यान की कुल संख्या (90) :- (L85+T05) व्याख्यान प्रति सप्ताह 2 घंटे			
इकाई	विषय	व्याख्यान की संख्या	
1	आधुनिक हिन्दी गद्य साहित्य की पृष्ठभूमि एवं उदय के कारण : 1 आधुनिक हिन्दी गद्य साहित्य की सामाजिक सांस्कृतिक पृष्ठभूमि 2 हिन्दी गद्य के उद्भव के कारण	16	





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	3 हिन्दी उपन्यास का स्वरूप और विकास। प्रमुख प्रवृत्तियों एवं रचनाकार । 4 रामगढ़ की रानी – व्याख्या एवं समीक्षा।	
इकाई 2	हिन्दी कहानी : स्वरूप और विकास 1 स्वरूप और विकास 2 प्रमुख हिन्दी कहानियों – व्याख्या एवं समीक्षा 3 कहानियों – उसने कहा था – चंद्रधर शर्मा गुलेरी पंच परमेश्वर – प्रेमचंद पुरस्कार - जयशंकर प्रसाद वापसी – उषा प्रियंवदा	18
इकाई 3	हिन्दी नाट्य साहित्य : स्वरूप और विकास 1 हिन्दी नाटक : स्वरूप और विकास 2 हिन्दी एकांकी : स्वरूप और विकास 3 नाटक : लहरों के राजहंस - मोहन राकेश (व्याख्या एवं समीक्षा) 4 एकांकी (व्याख्या एवं समीक्षा) । दीपदान – डॉ. रामकुमार वर्मा ॥ टूटते हुए- सुरेश चन्द्र शुक्ल (चन्द्र) ॥॥ व्यवहार – सेठ गोविंद दास	16
इकाई 4	हिन्दी निबंध : स्वरूप और विकास 1. हिन्दी निबंध:स्वरूप 2. हिन्दी निबंध का उद्भव एवं विकास, प्रमुख निबंधकारों का परिचय व प्रवृत्तियों 3 प्रमुख निबंध (व्याख्या एवं समीक्षा) । मित्रता - आचार्य रामचन्द्र शुक्ल ॥ अशोक के फूल- आचार्य हजारी प्रसाद द्विवेदी ॥॥ मेरे राम का मुकुट भीग रहा है- आचार्य विद्यानिवास मिश्र	26
इकाई 5	हिन्दी की अन्य गद्य विधाएँ: स्वरूप और विकास 1 संस्मरण : सुभद्राकुमारी चौहान - महादेवी वर्मा (पथ के साथी संग्रह से) 2 यात्रा वृत्तान्त - सौन्दर्य की नदी नर्मदा (अंश- ओंकारेश्वर से खलघाट) अमृतलाल बैंगड़, मध्य प्रदेश हिन्दी ग्रंथ अकादमी, भोपाल	29







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<p>3 व्यंग्य- भोलाराम का जीव- हरिशंकर परसाई</p> <p>4 जीवनी - उत्तर योगी श्री अरविन्द (अंश- मनुष्य प्रकृति की सर्वोच्च प्रयोगशाला ) - शिवप्रसाद सिंह, लोकभारती प्रकाशन, इलाहाबाद</p> <p>5 आत्मकथा- क्या भूलूँ क्या याद करूँ - (अंश- श्यामा प्रसंग, पृ. 169 से 174 तक) हरिवंशराय बच्चन, प्रकाशन- राजपाल एण्ड संस, कश्मीरी गेट, दिल्ली</p> <p>6 डायरी - कठिन समय में - रमेशचन्द्र शाह (अंश- दिनांक(25.04.2010) किताबघर, नई दिल्ली</p> <p>ट्यूटोरियल</p> <ul style="list-style-type: none"><li>• गद्य रचनाओं का वाचन एवं रचनात्मक लेखन</li><li>• निबंध, कहानी एवं अन्य गद्य विधाओं का नाट्य रूपांतरण एवं मंचन। मंच सज्जा, पात्र वेशभूषा।</li></ul>	
सार बिंदु (की वर्ड) टैग: गद्य साहित्य की विधाएँ, अवधारणा पृष्ठभूमि, समीक्षा, व्याख्या	
भाग स- अनुशासित अध्ययन संसाधन	
पाठ्य पुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन	
अनुशासित सहायक पुस्तकें ग्रन्थ/अन्य पाठ्य संसाधन/पाठ्य सामग्री: पाठ्य पुस्तकें -	
1 तिवारी रामचंद्र, हिन्दी निबंध और निबंधकार, विश्वविद्यालय प्रकाशन वाराणासी, 2007	
2 सिंह बच्चन, आधुनिक हिन्दी साहित्य का इतिहास, लोक भारती प्रकाशन, प्रयागराज, 2019	
3 शुक्ल रामचंद्र, हिन्दी साहित्य का इतिहास, विश्वविद्यालय प्रकाशन, वाराणासी, 1992	
4 तिवारी, रामचंद्र, हिन्दी गद्य का इतिहास, लोक भारती प्रकाशन प्रयागराज	
5 सिंह नामवर आधुनिक साहित्य की प्रवृत्तियाँ राजकमल प्रकाशन, नयी दिल्ली 2018	
6 चतुर्वेदी, रामस्वरूप, हिन्दीगद्य: विन्यास और विकास, लोक भारती प्रकाशन, प्रयागराज 2018	
7 वर्मा, वृंदावनलाल रामगढ़ की रानी प्रभात प्रकाशन आसिफ अली रोड नई दिल्ली	
8 दस एकांकी, श्रीराम मेहरा एंड कंपनी, आगरा	
9 वर्मा, डॉ रामकुमार, आठ एकांकी नाटक, स्रोत पुस्तकालय ई	
10 हरिशचंद्र भारतेदुर अंधेर नगरीए वाणी प्रकाशन, नयी दिल्ली	
11 प्रसाद जयशंकर, ध्रुवस्वामिनीए वाणी प्रकाशन, नयी दिल्ली	
12 गुप्ता सोमनाथ, हिंदी नाटक साहित्य का इतिहास, इंद्रा चंद्र नारंग, इलाहाबाद, तीसरा संस्करण 1951	
13 ओझा, डॉ दशरथ, हिंदी नाटक उद्भव एवं विकास, राजपाल एंड संस, दिल्ली	





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**St. Aloysius' (Autonomous) College,  
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College with Potential for Excellence by UGC  
DST FIST Supported & STAR College Scheme by DBT  
Jabalpur, (M.P) INDIA**

Credit 05

Class	M.A		
Semester	III		
Paper	III (Core Elective Paper)		
Title of the Paper	Indian Writing in English		
Marks	Maximum Marks	Theory Marks	Practical Marks
	50	40	10

**Scheme of Marks:**

Part A: Five Objective Questions (No Choice) 1X5=5 Marks

One question from each unit

Part B: Five Short Questions

(Two question from each unit with internal Choice) 3X5= 15 Marks

Part C: Five Long Questions

(Two question from each unit with internal Choice) 4X5= 20 Marks

**Course Outcome**

1. The main objective of the course is to develop sensibility and emotions of students with the purpose to enable them to relish literature.
2. This course introduces students to a wide range of Indian Writing in English.
3. The students should be taught the prescribed texts with special emphasis on the issues such as the representation of culture, identity, history, national and gender politics, etc.
4. Knowledge of the making of the Indian idiom.
5. Familiarity with socio-cultural issues in colonial and Post-Colonial India with emphasis on the gradual evolution of the Indian mind-set from dependence on British writers to complete autonomy.

Unit - I	A Study of Indian English Literature: Literary Context, the Imitative, The assimilative, the experimental and contemporary phases.
Unit -II	Sri Aurobindo: Savitri- Book I Canto I. Tagore: Geetanjali- poems (1-10) (McMillan edition). 11-20 (for non-detailed) Contribution of Subhadra Kumari Chouhan to Indian Poetry
Unit -III	APJ Abdul Kalam- Wings of Fire Indian Autobiographies in English: An Overview (for short answers only)
Unit -IV	Girish Karnad: Nagamandala

*Adarsh* *Reena* *of course* *Neha* *Pranika* *May* *Chandra* *Sanya*



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	Vijay Tendulkar: Silence! The Court is in Session.
Unit- V	Anita Desai: Cry, the Peacock Arun Joshi: The City and the River Jhumpa Lahiri: The Unaccustomed Earth (selected stories non- detailed)

### Books Recommended:

1. K.R.S.Iyengar : Indian Writings in English.
2. M.K.Naik : History of Indian English Literature.
3. M.K.Naik(ed) : Perspectives on Indian Drama in English.
4. Meenakshi Mukherjee : Twice Born Fiction.
5. Thompson : Tagore.
6. O. P. Budholia : Anita Desai: Vision and Technique in her Novels
7. M.K. Naik(ed.) : History of Indian English Literature

*Adarsh* *Rereina* of cam thap

*Adarsh* *Rereina* of cam thap

*Nexlang and Plain text* *May* *Books* *Saya*  
*.. n/cha*



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Jabalpur, (M.P) INDIA**

Credit 05

Class	MA (Previous)		
Semester	I		
Paper	I (Core Paper)		
Title of the Paper	Poetry		
Marks	Maximum Marks	Theory Marks	Internal Assessment
	50	40	10

**Scheme of Marks:**

Part A: Five Objective Questions (No Choice) 1X5=5 Marks

One question from each unit

Part B: Five Short Questions

(Two question from each unit with internal Choice) 3X5= 15 Marks

Part C: Five Long Questions

(Two question from each unit with internal Choice) 4X5= 20 Marks

**Course Outcomes:**

1. Turn to writing poetry and experimenting with new trends.
2. The rhythm of poetry helps the students to acquire natural rhythm of speech and become better communicators.
3. Pleasure of literary forms such as novel, poem, drama, and essay.
4. Critical understanding and analyzing of literature.
5. Students can connect between literature and real life.
6. Emotional development of human mind.
7. Students will be able to read and translate poems in the other language known to them.

Unit-1	Elements of Poetry –How to approach Poetry, Figures of Speech: Imagery, Kinds of Images, Rhythm and Rhyme, Scansion of Poetry, Meter, Blank Verse, Free Verse, Iambic Pentameter
Unit-II	Epic Poetry: John Milton: Paradise Lost (Book -1) Valmiki : Ramayan (Sundarkand) ) Poetry Hymns of Himalayas in Sundar Kand by Dr. Akhilesh Gumastha
Unit-III	Narrative Poetry: Geoffrey Chaucer: The Prologue to the Canterbury Tales

*Reddy* *Ravina of com staff* *Neharajana Prasad* *May* *...* *...*



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	S. T. Coleridge: The Rime of the Ancient Mariner
Unit-IV	Renaissance Poetry: William Shakespeare: Sonnets No. 23, 24, 26,27,31,44. John Donne: The Extasie, A Valediction Forbidden, Mourning, The Good Morrow, Love's Alchemie, Canonization, The Anniversarie.
Unit-V	Satirical Poetry: John Dryden: Absalom and Achitophel Alexander Pope: The Rape of the Lock

### Books Recommended:

1. Emile Legouis- Chaucer
2. EMW Tillyard- Milton
3. Compton Rickett- History of English Literature
4. David Daiches- History of English Literature

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*Raveira of com map*

*Naxlangane Pleasant*

*May 2018*



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## ST. ALOYSIUS' COLLEGE (AUTONOMOUS) JABALPUR M.P.

Part A- Introduction	
Program : Certificate	Year: First Year Session 2023-24
Course Code	VI-COM-DIGT
Course Title	DIGITAL MARKETING
Course Type	Vocational
Pre- Requisite (if any)	Open For All
Course learning Outcomes (CLO)	After the successful completion of the course, the student shall be able to:-
	Understand digital marketing, importance thereof, meaning of web site and levels of web site, difference between blog, portal & url; website.
	Understand the working of SEO (search engine optimization) on page optimization, off page optimization, and will learn to prepare reports.
	Learn about SMO (Social media optimization) like Face book, twitter, LinkedIn, Tumblr, Pinterest and other social media services optimization.
	Understand paid tools like google ad words, display advertising techniques
	Learn and apply hands on experience on tools useful to SEO for analysis on website traffic, keyword analysis and learn email marketing and ad designing.
Expected Job Role/career opportunities	Digital Marketing Manager
	Search Engine Optimizer
	Social Media Marketer
	Content Marketer
	Content creator for AR-VR (Augmented Reality-Virtual Reality)
	SEO Specialist for Voice assistance
Credit Value	4 - Theory - 2 Practical - 2

*AS Raw* *[Signature]* *[Signature]* *[Signature]*



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Part B- Content of the Course		
Total No. of Lectures + Practical (inhours per week) L-1Hr/P-1 Lab Hr		
Total No. of Lectures/Practical L-30hrs/P-30hrs		
Module	Topics	No. of Hours
I	<b>Introduction to Digital Marketing:</b> Meaning of Digital Marketing, differences form Traditional Marketing, Return of Investments on Digital Marketing vs. Traditional Marketing E commerce Tools used for successful marketing, SWOT analysis of Business for Digital Marketing, Meaning of Blogs, Website, Portal and Their Differences, Visibility Visitor Engagement, Conversion Process, Retention, Performance Evaluation <b>Keywords:</b> Titles, Meta Tags	10
II	<b>Search Engine Optimization (SEO):</b> On Page optimization Techniques, off Page Optimization Techniques, Preparing Reports, Creating Search Campaigns, Creating Display Campaigns <b>Social Media Optimization (SMO)</b> Introduction to Social Media Marketing Advanced Facebook Marketing, Word Press Blog Creation, Twitter Marketing, LinkedIn Marketing, Instagram Marketing, social media Analytical Tools. <b>Keywords:</b> Google, Word press, FB, LinkedIn, Instagram, Analytics, SMO, Verbal Communication, Non-Verbal Communication Intra Personal and Interpersonal Communication	10
III	<b>Search Engine Marketing:</b>  Meaning And Use of Search Engine Marketing Tools used -Pay per Click, Google Ad words, Display Advertising Techniques, Report Generation  <b>Website Traffic Analysis Affiliate Marketing and Ad Designing:</b>  Google Analytics Online Reputation Management Email Marketing, Affiliate Marketing Understanding AD Words Algorithm, Advertisement Designing <b>Keywords:</b> PPC Google Ad words, Reports SEM, Google Analytics Ad Design Social Media Affiliate	10

*Ramesh S. Kumar* *S. S.*



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Practical	
1. Design SEO to improve page rank of our college	30
2. Monitor traffic of your website using google analytics.	
3. Using search engine submission improves online recognition and visibility of websites	
4. Designing a blog	
5. Use of cross linking.	
6. On/Off optimization of the website	
7. Design Back Link and outbound link of website	
8. Web Development Audio Video Production.	
9. Digital Content Creation, Product & Sales review analysis	

### Part C - Learning Resources

#### Suggested Readings:

##### 1. Textbooks

1. Ahuja Vandana Digital Marketing, Oxford University Press (2016) ISBN: 9780199455447.

2. Sainy Romi, Nargundkar Rajendra Digital Marketing : Cases From India, Nation Press (2018) ISBN 9781644291931, 1644291932

##### 2. Suggestive digital platforms web links

<https://www.wordstream.com/linkbuilding#:~:text=Building%20links%20is%20one%20of%20the%20links%20to%20your%20site>

<https://www.targetinternet.com/the-top-32-most-useful-digital-marketing-links/><https://digitalmarketingphilippines.com/8strategic-steps-to-natural-link-building/><https://www.the-web-guys.com/digital-marketing/>

#### Suggested equivalent Online Courses:

<https://onlinecourses.swayam2.ac.in>

*(Handwritten signatures)*





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PART A: Introduction			
Program: Degree		Class: B.Sc.	Year: III Year
Session: 2023-24			
Subject: Computer Science			
1.	Course Code	S3-COSC21	
2.	Course Title	<b>Programming with Python (Theory)</b>	
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational)	Minor / Elective	
4.	Pre-Requisite (if any)	To study this course, a student must have successfully completed the course on Programming at Certificate/Diploma Levels.	
5.	Course Learning Outcomes(CLO)	<p><b>After studying this subject, students shall be able to do the following –</b></p> <ul style="list-style-type: none"> <li>• Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.</li> <li>• Express proficiency in the handling of strings, functions and file handling.</li> <li>• Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.</li> <li>• Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python with class, modules and packages.</li> <li>• Identify the commonly used operations involving database connectivity and use of tkinter for GUI programming.</li> </ul>	
6.	Credit Value	Theory - 4 Credits	
7.	Total Marks	Max. Marks : 30+70	Min. Passing Marks: 35
PART B: Content of the Course			
No. of Lectures (in hours per week): 2 Lectures per week			
Total No. of Lectures: 60 Hrs.			
Module	Topics		No. of Lectures
1	<p><b>Python Basics</b> : Python interpreter, Python idle, dynamically typed and strongly typed features, basic data types, variables, expressions, statements, operators, flow of execution. Input and Output statements, Conditionals: Boolean values and operators, conditional (if), alternative (ifelse), chained conditional (if-elif-else). Iteration: while, for, break, continue, pass, implementing 'for' through range(), 'in' and 'not in' operators for sequence traversal. Creating and executing .py scripts.</p> <p><b>Keywords:</b> <i>interpreter, while, for, break, continue, scripts.</i></p>		12



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II	<p><b>Data Structures:</b> Lists- append, extend, insert, index, remove, pop, count, sort, reverse, slicing, list comprehension. Copying a list: deep copy, shallow copy. Tuples- index, count, usage, use of tuples as a swap function. Dictionaries-keys, values, tuples, nested dictionaries, dictionary comprehension. Strings- Single line and multi-line strings, formatter, isdigit, isalpha, isalnum, islower, istitle, isspace, title, lower, upper, strip, split, splitlines, join etc. Sets – union, intersection, subset, superset, difference, symmetric difference, copy, add, remove, discard etc.</p> <p><b>Keywords:</b> <i>index, sort, deep copy, tuples, dictionary, sets, strings.</i></p>	12
III	<p><b>Functions &amp; File Handling:</b> Inbuilt Functions- id, len, chr, ord etc., defining and calling a function, arguments, global versus local variables, defining and using lambda functions, the map(), filter(), reduce() functions. Working with files : read, write and append modes: r, w, a, x, r+, w+, a+, x+, reading-read(), readlines(), readlines(), writing-write(), writelines(), seek(), tell(). Word count, copy file scripts through file handling concepts.</p> <p><b>Keywords:</b> <i>function, calling a function, arguments, global variables, read, write, copy, seek.</i></p>	12
IV	<p><b>Classes, modules and exceptional handling:</b> Classes: Introduction, Member variables and defining methods, constructor, destructor, data encapsulation, inheritance, multiple inheritance, diamond problem solving technique of python. Modules: inbuilt modules- sys, random, time etc. import, from..import, from..import *. Constructing packages, role of __init__.py Exceptional Handling: The try-except-else-finally block, the raise statement, the hierarchy of exceptions, adding exceptions</p> <p><b>Keywords:</b> <i>class, constructor, destructor, encapsulation, inheritance, exception, modules.</i></p>	12
V	<p><b>Database &amp; GUI Programming:</b> Importing sqlite, connecting to database, creating table, insert, select, update, delete, drop tables, accessing and modifying tables through python. Graphical user interfaces: event-driven programming paradigm; tkinter module, creating simple GUI; buttons, labels, entry fields, dialogs, widget attributes - sizes, fonts, colors layouts, nested frames.</p> <p><b>Keywords:</b> <i>GUI, tables, database, insert, update, drop tables, event- driven programming, dialogs, frames.</i></p>	12
<b>PART C: Learning Resources</b>		
Textbooks, Reference Books, Other Resources		
Suggested Readings		
<b>Textbooks:</b>		
<ul style="list-style-type: none"><li>• Taneja Sheetal &amp; Kumar Naveen, "Python Programming: A modular approach", Pearson.</li><li>• Liang Y. Daniel, "Introduction to Programming Using Python", Pearson.</li></ul>		
<b>Reference Books:</b>		
<ul style="list-style-type: none"><li>• Zed A. Shaw, "Learn Python the Hard Way", Zed Shaw's Hard Way Series.</li><li>• Charles Dierbach, "Introduction to Computer Science using Python", Wiley.</li></ul>		



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B.Sc IV Sem

2023-24

(Electricity, Magnetism and Electromagnetic theory)

Major & Minor

Course Code: S2-PHYS2T

Pre-requisite: To study this course, the student must have passed B.Sc. III Sem with Physics.

Max. Marks: 40+60

Min. Passing Marks: 35

Credit Value: 4 (60 hrs)

## Course Objective

The objectives of the course are:

	Course Objectives	Cognitive Level
CO -I	To study electrostatics, Gauss's theorem and its application, to arrive at various mathematical models in electrostatics.	U, R, E, Ap
CO -II	To understand Magnetostatics with emphasis on Lorentz force, Biot-Savart law and its application, Ampere's law, free and bound currents, magnetic substances.	U, Ap, R, E
CO -III	To understand steady and ac, dc current circuits and various network theorem.	R, U, C
CO -IV	To understand the motion of charged particles in electric and magnetic fields, the relevant equipment's and their use	U, R, Ap
CO -V	To understand electrodynamics with emphasis on Faraday's laws, Maxwell equations and their application, Fresnel's equations.	U, R, Ap, C
CO -VI	To study electromagnetic waves with emphasis on, reflection, refraction and polarization at different media.	U, Ap, E, C, An

## Course Learning Outcome

CO No.	Course Learning Outcomes	PSOs Addressed	Cognitive Level*
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CLO -I	The student will arrive at an understanding of electrostatics, Gauss's theorem, Gauss's law and their application.	1,2,3,4	U, R, E, Ap
CLO -II	The student will arrive at an understanding of Magnetostatics with emphasis on Lorentz force, Biot-Savart law and its application, Ampere's law, free and bound currents, magnetization vector, magnetic substances.	1,2,3,4,5	U, Ap, R, E
CLO -III	The student will arrive at an understanding of steady & non steady current, a-c & dc circuits, and various network theorem.	1,2,3,4	R, U, C
CLO -IV	The student will arrive at an understanding of the motion of charged particles in electric and magnetic fields, the relevant equipment and their use	1,2,3,4	U, R, Ap
CLO -V	The student will arrive at an understanding of electrodynamics with emphasis on Faraday's laws, Maxwell equations and their application, Fresnel's equations.	1,2,3,4	U, R, Ap, C
CLO -VI	The student will arrive at an understanding of electromagnetic waves with emphasis on, reflection, refraction and polarization at different media	1,2,3	U, Ap, E, C, An

CO- Course Objective; CLO – Course Learning Outcome; R- Remember; U- Understand; Ap – Apply; An – Analyse; E- Evaluate; C – Create

## UNIT-I

[No. of Lectures: 12]

### Electrostatics

1. An overview of thermal and hydroelectric power plants in Madhya Pradesh.
2. Electrostatic field; Electric flux; Gauss's theorem of electrostatics; Applications of Gauss theorem: Electric field due to infinite long charged wire; Uniformly charged spherical shell and solid sphere; Charged plate; Conservative nature of electrostatic field Laplace and Poisson's equations; Uniqueness theorem.
3. Dielectrics; Polar and non-polar molecules; Parallel plate capacitor with a dielectric; Electrical susceptibility and dielectric constant; Polarization and Polarization vector (P); Displacement vector (D); Intensity of Electric field (E); Relationship between D, E and P.
4. Gauss's law in dielectrics; Clausius-Mossotti relation, Langevin-Debye formula; Ferroelectric and Paraelectric materials; Hysteresis loop for ferroelectrics.

**Keywords/Tags:** Hydroelectric power plant, Electrostatic field, Dielectrics, Polarization vector Displacement vector



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## UNIT-II

[No. of Lectures: 12]

### Magnetostatics

1. Lorentz force equation and magnetic field B; Biot-Savart's law; Calculation of magnetic intensity H for solenoid and anchor ring.
2. Ampere's circuital law and its applications for solenoid and Toroid; Basic law of magnetostatics in differential form  $\nabla \times \mathbf{B} = \mu_0 \mathbf{J}$ ,  $\nabla \cdot \mathbf{B} = 0$ ; Free and bound currents; Magnetization and magnetization vector  $\mathbf{M}$ ; Magnetic permeability and susceptibility; Derivation of  $\nabla \times \mathbf{M} = \mathbf{J}_b$  for a non-uniformly magnetized substance; Relationship between  $\mathbf{B}$ ,  $\mathbf{H}$  and  $\mathbf{M}$ .
3. Diamagnetic, Paramagnetic and Ferromagnetic substances; B-H Curve and Hysteresis loss.
4. General idea about AC and DC motors, Motor winding.

**Keywords/Tags:** Magnetic field, Magnetization, Hysteresis loss, Motor winding.

## UNIT-III

[No. of Lectures: 12]

### Current electricity

1. Network theorems: Concept of ideal current and voltage sources; Thevenin's theorem; Norton's theorem; Millman's theorem; Maximum power transfer theorem.
2. Transient current: Growth and decay of current in LR circuit; Charging and discharging of a capacitor through resistor; Measurement of high resistance by leakage; Charging and discharging of a condenser through an inductance and resistance.
3. Alternating current: Complex number and their applications in alternating current circuits (RL, RC and LC); Series LCR (acceptor) and parallel LCR (rejector) circuits; Power factor.
4. A.C. bridges: Maxwell's bridge; Owen's bridge; Anderson's bridge; Kelvin's bridge.

**Keywords/Tags:** Network theorems, Transient current, A.C. bridges.

## UNIT-IV

[No. of Lectures: 12]

### Motion of charged particles in electric and magnetic field

1. Motion of charged particles in electric and magnetic field, Construction and working principle of Cyclotron and Betatron; Thomson's method for the determination of specific charge (e/m) of electron.



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2. Ballistic galvanometer: Torque on a current loop; Current and charge sensitivity; Electromagnetic damping, Logarithmic damping; CDR.
3. Introduction to CRO: Block Diagram of CRO; Applications of CRO: (1) Study of Waveform, (2) Measurement of Voltage, Current, Frequency, and Phase Difference.
4. Electromagnetic induction: Faraday's law; Lenz's law; **Integral and differential forms of Faraday's law**, Self and mutual inductance; Reciprocity theorem; Self-mutual of coil; Mutual inductance of two coils; Energy stored in magnetic field.

**Keywords/Tags:** Motion of charged particles, specific charge, Ballistic galvanometer, CRO, Electromagnetic induction.

## UNIT-V

[No. of Lectures: 12]

### Electrodynamics

1. Equation of Continuity for current; Maxwell's displacement current; Derivation of Maxwell's equations; Poynting theorem.
2. Electromagnetic wave equations; Plane electromagnetic wave in vacuum and dielectric media; Reflection and refraction at a plane boundary of dielectric; Polarization by reflection and Fresnel's equation; Brewster's Law.
3. Electromagnetic Waves in conducting medium; Reflection and refraction of Electromagnetic wave by the ionosphere; Secant law; Skip distance and maximum usable frequency.

**Keywords/Tags:** Displacement current, Poynting vector, Electromagnetic wave, Polarization by reflection.

### Learning Resources

#### Text Books, Reference Books, Other resources

#### Suggested Readings:

1. Electricity, Magnetism & Electromagnetic Theory: Mahajan S. and Choudhury, 2012, Tata McGraw.
2. Electricity and Magnetism: Griffiths D.J., 3rd Edn., 1998, Benjamin Cummings.
3. Electricity and magnetism: Murugesan, S. Chand & Co.
4. Feynman Lectures Vol.2: Feynman R. P., Leighton R.B., Sands M., 2008, Pearson Education
5. Electromagnetic field theory: Kshetrimayun R. S., 2012, Cengage Learning.
6. Physics For Degree Students: C.L. Arora and P.S. Hemne, S.Chand Publications.
7. Electrodynamics : Gupta, Kumar and Singh, Pragati Prakashan



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St. Aloysius College (Autonomous), Jabalpur

DEPARTMENT OF PHYSICS

SYLLABUS 2023-24

## Programme Specific Outcomes for B.Sc Program

PSO No.	Programme Specific Outcomes Upon completion of these courses the student would be able to:
PSO-1	Analyse the concepts and theories of Physics.
PSO-2	Analyse real world problems and develop mathematical equations to find acceptable solutions.
PSO-3	Develop problem solving skills and scientific reasoning by learning laboratory skills.
PSO-4	Develop written and oral communication skills in communicating with diverse stakeholders.
PSO-5	Create and collaborate in emergent physical, mathematical and computing technologies leading to innovative solutions for industry and academia.
PSO-6	Crack various competitive exams for higher studies and employment.

B. Sc. I Semester

2023-24

Mechanics and General Properties of Matter

Major & Minor

**Course Code: S1PHYST**

**Pre-requisite:** To study this course, a student must have had the subject Physics in 12<sup>th</sup> class.

**Max. Marks: 40+60**

**Min. Passing Marks: 35**

**Credit Value: 4 (60 hrs)**

### Course Objectives (CO)

The objectives of the course are:

	Course Objectives	Cognitive Level
CO-I	To become aware of the contribution to science by Indians.	R,U, Ap,E
CO-II	To develop required mathematical skills to analyse simple, damped and forced harmonic oscillation	R,U, Ap,E
CO-III	To study Rigid body, Centre of mass, Moment of inertia, Poisson's ratio and various elastic constant	U, Ap, R, E



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CO-Course Objectives; CLO – Course Learning Outcome; R- Remember; U- Understand; Ap – Apply; An – Analyse; E- Evaluate; C – Create

## UNIT-I

### Historical background and Oscillations

#### 1.1 Historical background [ 12 Lectures ]

- 1.1.1 A brief historical background of mathematics and mechanics in the context of India and Indian culture.
- 1.1.2 A brief biography of Varahamihira and Vikram Sarabhai with their major contribution to science and society.

#### 1.2 Oscillations

1.2.1 SHM: Simple Harmonic Oscillations. Differential equation of SHM and its solution. Kinetic energy, potential energy, total energy and their time-average values. Damped oscillation. Forced oscillations: Transient and steady states; Resonance, sharpness of resonance; Power dissipation and Quality factor.

Keywords: SHM, Gravitation, Oscillation, Quality factor.

## UNIT-II

### Mechanics of Rigid and deformable bodies

#### 2.1 Rigid body mechanics [ 12 Lectures ]

2.1.1 System of particles and concept of Rigid body, Torque, Centre of mass: position of the centre of mass, Motion of the centre of mass, Conservation of linear & angular momentum with examples, Systems of variable mass : Single stage and multistage rocket, Conveyor belt - hoppers.

2.1.2 Rotatory motion and concept of moment of inertia, Theorems on moment of inertia: theorem of addition, theorem of perpendicular axis, theorem of parallel axis, Calculation of moment of inertia of rectangular lamina, disc, solid cylinder, solid sphere.

#### 2.2 Mechanics of deformable bodies:

- 2.2.1 Hook's law, Young's modulus, Bulk modulus, Modulus of rigidity and Poisson's ratio, Relationship between various elastic moduli.
- 2.2.2 Possible values of Poisson's ratio, Finding Poisson's ratio of rubber in the laboratory, Torsion of a cylinder, Strain energy of twisted cylinder.





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- 2.2.3 Finding the modulus of rigidity of the material of a wire by Barton's method, Torsional pendulum and Maxwell's needle, Searle's method to find  $Y$ ,  $\eta$  and  $\sigma$  of the material of wire, Bending of beam, Cantilever, Beam supported at its ends and loaded in the middle.

**Keywords/Tags:** Rigid body, Centre of mass, Moment of inertia, Poisson's ratio.

## UNIT-III

### Fluid mechanics

#### 3.1 Surface Tension [ 12 Lectures ]

- 3.1.1 Inter- molecular forces and potential energy curve, force of cohesion and adhesion.
- 3.1.2 Surface tension, Explanation of surface tension on the basis of intermolecular forces, Surface energy, Effect of temperature and impurities on surface tension, Daily life application of surface tension.
- 3.1.3 Angle of contact, The pressure difference between the two sides of a curved liquid surface, Excess pressure inside a soap bubble, Capillarity, determination of surface tension of a liquid –capillary rise method, Jaeger's method .

#### 3.2 Viscosity

- 3.2.1 Ideal and viscous fluid, Streamline and turbulent flow, Equation of continuity, Rotational and irrotational flow, Energy of a flowing fluid, Euler's equation of motion of a non-viscous fluid and its physical significance.
- 3.2.2 Bernoulli's theorem and its applications (Velocity of efflux, shapes of wings of airplane, Magnus effect, Filter pump, Bunsen's burner)
- 3.2.3 Viscous flow of a fluid, Flow of liquid through a capillary tube, Derivation of Poiseuille's formula and limitations, Stoke's formula, Motion of a spherical body falling in a viscous fluid.

**Keywords/Tags:** Inter-molecular force, Surface tension, Angle of contact, Capillarity, Viscosity, Euler's equation, Poiseuille's formula.

## UNIT-IV

### Gravitational potential and central forces

#### 4.1 Gravitational potential [ 12 Lectures ]

- 4.1.1 Conservative and non-conservative force field, Conservation of energy in motion under the conservative and non-conservative forces, Potential energy.



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4.1.2 Conservative force, Conservation of energy, Gravitational potential and gravitational potential energy, Gravitational potential and intensity of gravitational field due to a uniform spherical shell and a uniform solid sphere.

4.1.3 Gravitational self-energy, Gravitational self-energy of a uniform spherical shell and a uniform solid sphere.

#### 4.2 Central forces

4.2.1 Motion under Central forces, Conservative characteristics of central forces.

4.2.2 The motion of a two particles system in central force, Concept of reduced mass, Reduced mass of positronium and hydrogen.

4.2.3 Motion of particle in an inverse-square central force, Motion of celestial bodies and derivation of Kepler's laws

4.2.4 Elastic and inelastic scattering (elementary idea).

**Keywords/Tags:** Conservative force field, Gravitational potential, Gravitational self-energy, Central force, reduced mass, Scattering.

## UNIT-V

### Relativistic Mechanics and Astrophysics

#### 5.1 Relativistic Mechanics: [ 12 Lectures]

5.1.1 Frame of references, Galilean transformation, and Michelson-Morley experiment.

5.1.2 Postulates of special theory of relativity, Lorentz Transformation, Simultaneity and order of events, Length contraction, Time dilation, Relativistic transformation of velocities, Variation of mass with velocity.

5.1.3 Mass-energy equivalence and its experimental verification.

#### 5.2 Astrophysics

5.2.1 Introduction to the universe, Properties of the Sun, Concept of Astronomical Distance.

5.2.2 Life cycle of stars, Chandrasekhar Limit, H-R diagram, Red giant star, White dwarf star, Neutron star, Black hole.

5.2.3 Big Bang Theory (elementary idea).

**Keywords/Tags:** Transformation, Mass-energy equivalence, Astronomical distance, Chandrasekhar limit, Black hole.

**Learning Resources:**



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B. Sc.II Semester

2023-24

Major & Minor

Thermodynamics and Statistical Physics

Course Code: S2PHYST

**Pre-requisite:** To study this course, a student must have had the subject Physics in 12<sup>th</sup> class.

**Max. Marks:** 40+60

**Min. Passing Marks:** 35

**Credit Value:** 4(60 hrs)

### Course Objectives (CO)

The objectives of the course are:

	Course Objectives	Cognitive Level
CO-I	To know the important contributions of various physicist in the field of Physics	U,R
CO-II	To understand the basic concepts of thermodynamics and to have an idea about conversion of heat in to work.	U, R, E
CO-III	To learn the idea of entropy, Maxwell's relation and their applications.	U, Ap, R, E
CO-IV	To apply the principles of probability in distribution of particles in various systems and to calculate thermodynamic probability. To create basic ideology of phase space, microstate, macrostate.	R, U, An, Ap, E,C
CO-V	To provide insight of postulates of statistical physics. To learn the different types of statistical distribution (which particles follow which statistics and why).	R, U, An, Ap, E, R



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## Course Learning Outcome(CLO)

	Course Learning Outcomes	PSOs Addressed	Cognitive Level
CLO-I	Learner will be able to recollect the Specific Contributions of Indians in thermodynamics and statistical mechanics.	3,5,6	U, C
CLO-II	Learner will be able to make use of Basic concepts of thermodynamics & apply Maxwell's thermodynamic relations to derive various formulae.	1,2	U, R, E,Ap
CLO-III	Learner will be able to use and apply the idea of Micro and Macro states, Ensembles, Statistical Probability and Phase Space.	1,3,6	R, U, An, Ap, E
CLO-IV	Learner will be able to apply the idea of partition function and distribution function to classical and quantum statistics.	4,5,6	R, U, Ap, An, E

COb-Course Objective; COt – Course Outcome; R- Remember; U- Understand; Ap – Apply; An – Analyse; E- Evaluate; C – Create

## UNIT-I

### Historical background & Laws of Thermodynamics

#### 1.1 Historical background: [ 12 Lectures ]

1.1.1 A brief historical background of thermodynamics and statistical Physics in the context of India and Indian culture, Contribution of S.N Bose in thermodynamics & Statistical physics.

#### 1.2 Laws of thermodynamics:

1.2.1 Thermodynamical system and thermodynamical coordinates, Thermal equilibrium, Zeroth Law of thermodynamics, The concept of path function and point function, Work done by and on the system.

1.2.2 First law of thermodynamics, Internal energy as a state function, Reversible and irreversible change, Heat engine and its efficiency, Carnot's cycle, Carnot's engine and its efficiency, Carnot's theorem, Otto engine, Otto cycle, Diesel engine, Diesel cycle.

1.2.3 Second law of thermodynamics, Statement of Kelvin-Planck and Clausius Clapeyron. Absolute scale of temperature: Zero of absolute scale, Size of degree, Identity of perfect gas scale and absolute scale.

**Keywords/Tags :** Thermodynamics, Internal energy, Heat engine, Absolute scale



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## UNIT-II

### Entropy and Thermodynamic potentials [ 12 Lectures ]

- 2.1 Concept of entropy, Clausius theorem, Entropy as a point function, Second law of thermodynamics in terms of entropy, Change in entropy in reversible and irreversible processes.
- 2.2 Change in entropy of an ideal gas, Change in entropy when two liquids at different temperatures are mixed (or two bodies at different temperatures are kept in contact).
- 2.3 Principle of increase of entropy, Change in entropy of the universe in an irreversible process, connection of Entropy with Disorder, Entropy as unavailable energy for work, Entropy and heat death of universe.
- 2.4 Physical Significance of entropy, Temperature-entropy (T-S) diagram, third law of thermodynamics.
- 2.5 Thermodynamic potentials, Thermal equilibrium, Internal energy, Helmholtz free energy, Enthalpy and Gibbs free energy.
- 2.6 Derivation of Maxwell's relations from thermodynamic potentials, Gibbs-Helmholtz equation, Thermodynamic energy equation for ideal and van der Waal gas.

**Keywords/Tags:** Reversible process, Entropy, Ideal gas, Thermodynamic potentials

## UNIT-III

### Applications of Thermodynamic potentials and Kinetic theory of gases [12 Lectures ]

- 3.1 Applications of Thermodynamic potentials:
  - 3.1.1 TdS equation, Derivation of expressions for  $C_p$ - $C_v$  and their special cases for ideal and Van der Waal gases, derivation of the expression  $E_p/E_v=C_p/C_v$ .
  - 3.1.2 Clausius-Clapeyron latent heat equation, Temperature change in adiabatic process, Principle of refrigeration, Joule-Thomson effect, cooling by adiabatic demagnetization, Production and measurement of very low temperatures.
- 3.2 Kinetic theory of gases :
  - 3.2.1 Behavior of a real gas and its deviation from an ideal gas, Andrews experiment on  $CO_2$  gas, Virial equation.
  - 3.2.2 Critical constant, Continuity of the liquid and gaseous state, Vapor and gas state, Boyle temperature, Van der Waals equation for real gas, Values of critical constants, Laws of the corresponding state.

**Keywords/ Tags:** Potential, Enthalpy, Adiabatic, Real gas, Critical constant.



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## UNIT –IV

### Classical Statistics

[12 Lectures]

- 4.1 Probability, Distribution of N particles in two identical boxes, Probability of occurrence of either event, probability of composite events, Weightage probability.
- 4.2 Probability distribution and its narrowing with the increase in number of particles, Expression for average properties Constraints, Accessible and non-accessible microstates.
- 4.3 Ensemble theory (Micro-canonical, canonical and Grand canonical), Macro and micro states with examples, Principle of equal a prior probability, Concept of phase space.
- 4.4 Derivation of law of equipartition of energy from statistics. Equilibrium between two system in thermal contact and  $\beta$  parameter. Derivation of relation  $S = k \log W$  (Boltzmann entropy probability relation) and Statistical interpretation of entropy.
- 4.5 Boltzmann Canonical distribution law: Application: average energy of one-dimensional harmonic oscillator.
- 4.6 Boltzmann partition function and derivation of expression for internal energy, Helmholtz free energy, Enthalpy and Gibbs free energy.

**Keywords/ Tags:** Probability, micro states, Ensemble theory, Partition function

## UNIT –V

### Quantum Statistics

[ 12 Lectures ]

- 5.1 Distinguishable and Indistinguishable particles and its consequences (in terms of microstates). Maxwell-Boltzmann statistics and its distribution law (Classical Statistics), Maxwell-Boltzmann distribution law of velocity and speed.
- 5.2 **Quantum statistics:**
  - a) Bose –Einstein statistics and distribution law, Derivation of Planck's radiation law from B-E statistics, Rayleigh-Jeans law, Wein's displacement law and Stefan's law.
  - b) Fermi-Dirac statistics and its distribution law, Qualitative explanation of free electron theory, Fermi level and Fermi energy.
  - c) Comparison between the Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac statistics.

**Keywords/ Tags:** Indistinguishability, classical and quantum statistics, velocity distribution, Fermi Level.

### Learning Resources:

#### Suggested Readings:

1. Zemansky M. W & Dittman R., "Heat and Thermodynamics", Tata McGraw Hill.
2. Sears and Salinger, "Thermodynamics, Kinetic Theory and Statistical Thermodynamics" Narosa.



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DST-FIST Supported & Star College Scheme by DBT.

## Department of Physics

Program: B.Sc.

PSO No.	Programme Specific Outcomes Upon completion of these courses the student would be able to:
PSO-1	Analyse the concepts and theories of Physics.
PSO-2	Analyse real world problems and develop mathematical equations to find acceptable solutions.
PSO-3	Develop problem solving skills and scientific reasoning by learning laboratory skills.
PSO-4	Develop written and oral communication skills in communicating with diverse stakeholders.
PSO-5	Create and collaborate in emergent physical, mathematical and computing technologies leading to innovative solutions for industry and academia.
PSO-6	Crack various competitive exams for higher studies and employment.

B.Sc III Sem

2023-24

(Waves and Optics)

Major & Minor

Course Code: S2-PHYSIT

**Pre-requisite:** To study this course, the student must have passed B.Sc. first year with Physics.

**Max. Marks:** 40+60

**Min. Passing Marks:** 35

**Credit Value:** 4 (60 hrs)

## Course Objective

The objectives of the course are:

	Course Objectives	Cognitive Level
CO -I	To make aware students about various aspects of harmonic oscillations and waves	U, R, E
CO -II	To make aware students about various phenomena of daily life based on acoustic and optics	U, R, Ap, E
CO -III	To understand interference and interferometry	R, U, Ap, An, E



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CO -IV	To learn about like diffraction, optical instruments depending on diffraction, Rayleigh's criterion	R, U, An, Ap, E, C
CO -V	To study polarization, double refraction in anisotropic media, Huygen's principle, optical instruments depending on polarization	U, An, Ap, E, R

## Course Learning Outcome (CLO)

CO No.	Course Outcomes	PSOs Addressed	Cognitive Level*
CLO -I	Students will be able to understand the various aspects of harmonic oscillations and waves specially superposition of collinear and perpendicular harmonic oscillations	1,2,3,4	U, R, E
CLO -II	Students will be able to explain various phenomena of daily life based on acoustic and optics	1,2,3,4,5	U, R, Ap, E
CLO -III	Students will be able to understand interference and its applications	1,2,3,6	R, U, Ap, An, E
CLO -IV	Students will understand diffraction and be able to outline the use of optical instruments depending on diffraction. Will be able to apply Rayleigh's criterion to optical instruments	1,2,3,4,5	R, U, An, Ap, E, C
CLO -V	Students will understand polarization, double refraction in anisotropic media and will be able to make use of optical instruments depending on polarization. Will be able to apply Huygen's principle to the phenomenon of polarization	1,2,3,4,5	U, An, Ap, E, R

CO- Course Objective; CLO – Course Learning Outcome; R- Remember; U- Understand; Ap – Apply; An – Analyse; E- Evaluate; C – Create

### UNIT-I

[No. of Lectures: 12]

#### Waves

##### 1.1 Superposition of Two Collinear Harmonic Oscillations:

Linearity and Superposition Principle- (i) Oscillations having equal frequencies and (ii) Oscillations having different frequencies (Beats).

##### 1.2 Superposition of Two Perpendicular Harmonic Oscillations:

Graphical and Analytical Methods; Lissajous Figures (1:1 and 1:2 frequency ratio) and their uses.

##### 1.3 Wave Motion :

Transverse wave in Stretched string ; Travelling and standing waves; Normal modes of string; Phase velocity; Group velocity ; Plane and Spherical waves; wave intensity.





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**Keywords/Tags:** Harmonic Oscillation, Superposition Principle, Wave Motion.

## UNIT-II

[No. of Lectures: 12]

### Sound and Light Waves

- 2.1 **Sound:** Simple harmonic motion; Forced vibrations and resonance; Fourier Theorem; Application to saw tooth wave and square wave; Intensity and loudness of sound; Decibels, Intensity levels; Musical notes; Musical scale.
- 2.2 **Acoustics of buildings:** reverberation and time of reverberation; Absorption coefficient; Sabine's formula; Measurement of reverberation time; Acoustic aspects of halls and auditoria
- 2.3 **Wave optics:** Electromagnetic nature of light; Wave front; Huygens Principle.
- 2.4 Electro-optic, Magneto-optic and acousto-optic effects (elementary idea)

**Keywords/Tags:** Sound, Musical notes, Acoustics of buildings, Wave optics

## UNIT-III

[No. of Lectures: 12]

### Interference of light

- 3.1 Interference: **Conditions necessary for interference**, Interference by Division of amplitude and division of wavefront; Young's Double Slit experiment; Lloyd's Mirror and Fresnel's Biprism.
- 3.2 Interference in Thin Films: Stokes' Law; Interference in parallel and wedge-shaped films; Fringes of equal inclination (Haidinger Fringes); Fringes of equal thickness (Fizeau Fringes); Applications of thin films interference: Antireflection coating; Dielectric Mirrors; Interference filter.
- 3.3 Newton's Ring: Measurement of wavelength and refractive index.
- 3.4 Michelson's Interferometer: (1) formation of fringes, (2) Determination of wavelength, (3) Wavelength difference, (4) Refractive index, (5) Visibility of fringes.

**Keywords/Tags:** Interference, Thin films interference, Michelson's Interferometer.

## UNIT-IV

[No. of Lectures: 12]

### Diffraction

- 4.1 Introduction; Distinction between interference and diffraction; Types of diffraction; Distinction between Fresnel and Fraunhofer diffraction.
- 4.2 Fresnel's diffraction: Fresnel's Assumptions; Huygens Fresnel's Theory; Half period zone; Construction and theory of Zone plate; Diffraction at straight edge; Diffraction at a circular aperture.



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- 4.3 Fraunhofer diffraction: Diffraction due to single, double and N slits; Plane diffraction grating.
- 4.4 Resolving and dispersive power: Rayleigh's criterion; Limit of resolution of the eye; Resolving power of Grating and Telescope; Expression for dispersive power of prism.

**Keywords/Tags:** Diffraction, Zone plate, Plane diffraction grating, Resolving power.

## UNIT-V

[No. of Lectures: 12]

### Polarisation

- 5.1 Introduction: Polarized light and its representation; Difference in Polarized and unpolarized light; Types of Polarisation; Application of polarization: Sunglasses; Three-dimensional movies; Photography.
- 5.2 Production of polarized light: Production of polarized light by reflection, refraction, **double refraction**, scattering and selective absorption; Brewster's Law; Polaroid sheets; Polarizer and analyzer; Malus law.
- 5.3 Anisotropic Crystals: Doubly refracting crystals (Uniaxial); Extra-ordinary rays and Ordinary rays; Polarization by double refraction and Huygens theory; Nicol prism; Retardation plates: Quarter-wave plate and Half-wave plate.
- 5.4 Optical Activity: Optical rotation; Specific rotation; Half shade & Biquartz polarimeter.

**Keywords/Tags:** Polarized light, Anisotropic Crystals, Optical Activity.

### Learning Resources

**Text Books, Reference Books, Other resources**

**Suggested Readings:**

1. **Fundamentals of Optics**, F.A. Jenkins and H.E. White, 1996, McGraw Hill.
2. **The Physics of Waves and Oscillations**, N. K. Bajaj, 1998, McGraw Hill.
3. **Principles of Optics**, B. K. Mathur, 1995, Gopal Printing
4. **University Physics**, F.W. Sears, M.W. Zemansky and H.D. Young 1986, Addison Wesley
5. **Optics**, A.K. Ghatak, McGraw Hill
6. **Principles of Optics**, Max Born and Wolf, Pregmon Press
7. **Optics and Atomic Physics**, D.P. Khandelwal Himalaya Publication
8. **Optics**, Brijlal and Subramaniyam, S. Chand Publications
9. **Physics for Degree Students**, C. L. Arora and P.S. Hemne, S. Chand Publications.
10. **The Physics of Vibrations and Waves**, H. J Pain, 2013 John Wiley and Sons,
11. **Fundamental of Optics**, A Kumar., H. R Gulati. and D. R Khanna., S. Chand Publications



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## B.Sc. III Year NEP Syllabus-2023-24

PSO No.	Programme Specific Outcomes Upon completion of these courses the student would be able to:
PSO-1	Analyse the concepts principle and theories of Physics
PSO-2	Analyse real world problems and develop mathematical equations to find acceptable solutions.
PSO-3	Develop problem solving skills and scientific reasoning by learning laboratory skills
PSO-4	Develop written and oral communication skills in communicating with diverse stakeholders.
PSO- 5	Create and collaborate in emergent physical, mathematical and computing technologies leading to innovative solutions for industry and academia.
PSO- 6	Crack various competitive exams for higher studies and employment.

### Group- A Paper- I Quantum Mechanics, Atomic and Molecular Physics

Max. Marks: 30+70

Min. Passing Marks: 35

Credit Value: 4 (60 hrs)

### Major

#### Course Objectives

The objectives of the course are

	Course Objectives	Cognitive Level
CO-I	To understand the necessity of quantum mechanics. Develop an understanding of Concept of wave packet and wave function	U, R, An, Ap, C, E
CO -II	Learn the formulation Schrodinger wave equation and its solution under various conditions.	U, R, An, Ap, E
CO -III	Learn the concept of Quantum Numbers/ Selection rules and explanation of Spectra of Alkali/Alkaline Earth metals.	R, U, Ap
CO -IV	Learn the behavior of an atom under magnetic field and elementary idea about X-Rays.	U,R,An



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## Unit-I

### Quantum Mechanics-I [12 Lectures]

1. Quantum technology in India : National Mission on Quantum Technologies & Applications( NM-QTA)
2. Particle nature of Wave: Limitations of Classical Mechanics, Blackbody radiation; Photoelectric effect; Planck's radiation law; Compton effect.
3. Wave nature of Particle: De-Broglie hypothesis; experimental verification of De-Broglie hypothesis; concept of wave packet; concept of phase and group velocities.
4. Heisenberg's uncertainty principle, experiments for the verification of uncertainty principle, Different forms of uncertainty principle.
5. The Schrodinger wave equation: Schrodinger's time dependent and time independent equation; Physical interpretation of wave function; Probability Current Density; Equation of Continuity and its physical significance, Normalisation of the wave function.

**Keywords:** Photoelectric effect, Compton Effect, Heisenberg uncertainty principle, Schrodinger equation.

## Unit-II

### Quantum Mechanics-II [12 Lectures]

1. Operators in Quantum mechanics : Eigen functions and Eigenvalues; Hermitian operator; Position and Momentum operator; Total energy ( Hamiltonian) operator; Expectation value; Concept of parity; Parity operator; Ehrenfest Theorem.
2. Application of Schrodinger equation: Free particle; Particle in one-dimensional box; Rectangular potential barrier; Tunnel effect, Applications of tunnel effect in barrier penetration(  $\alpha$ -decay); One dimensional Harmonic Oscillator and concept of zero-point energy.

**Keywords:** Eigen function, Hermitian operator, Harmonic Oscillator.

## Unit-III

### Atomic Structure [12 Lectures]

1. Brief review of Bohr and Sommerfeld model of atom; Electron orbits; Energy levels and spectra; Vector atom model; Concepts of space quantization ; Electron spin; Stern-Gerlach experiment; One and two valence electron systems; Pauli's exclusion principle



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and electron configuration; Spectroscopic notations of energy states, Multiplicity of energy level state.

2. Spin Orbit interaction; Selection rules; Spectra of alkaline atom; Fine structure of Sodium D line; Spectral terms of two electron atoms; L-S and j-j coupling; Spectra of Helium atom; Franck-Hertz experiment.

**Keywords:** Electron orbits, Exclusion principle, Spin Orbit Interaction.

## Unit-IV

### Zeeman Effect and X-Ray Spectroscopy [12 Lectures]

1. Zeeman Effect: Early discoveries and developments; Experimental arrangements, Normal and Anomalous Zeeman Effect; Zeeman shift, Stark effect.
2. Nature and Production of X-Rays: Discrete and continuous X-ray spectra; Characteristics X-ray spectrum; Duane and Hunts rule; X-ray emission spectra; Moseley's law and its applications; Auger effect; doublet structure of X-ray spectra; X-ray absorption spectra.

**Keywords:** Zeeman effect, X-Rays, Doublet structure.

## Unit-V

### Molecular Spectroscopy [12 Lectures]

1. Molecular Spectroscopy : Various types of spectra; Quantization of Vibrational and Rotational energies; Pure Rotational spectra; Determination of Intermolecular Distance of Diatomic Molecules; Pure Vibrational Spectra of Diatomic Molecules; Electronic Spectra of Diatomic Molecules.
2. Raman Spectroscopy: Raman Effect; Stoke and Anti Stoke lines; Experimental Setup of Raman effect; Classical theory of Raman effect; Quantum theory of Raman effect; Applications of Raman effect; Electronic Spectrum; Born-Oppenheimer approximation; Franck-Condon principle; Fluorescence and Phosphorescence.

**Keywords:** Molecular Spectroscopy, Vibrational spectra, Raman effect, Electronic spectra

### Suggested Books :

1. Beiser A. , "Concepts of Modern Physics", Mc-Graw Hill.
2. Ghatak & Loknathan, "Quantum Mechanics", McMillan.
3. Mani H S, Mehra G K, "Introduction to Modern Physics", East West Press.
4. Rajam J B, "Modern Physics", S. Chand



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<b>Class: B.Sc. I Sem</b>	<b>Subject: Mathematics</b>	<b>Session 2023-24</b>
<b>Course Code</b>	<b>S1-MATH IT</b>	
<b>Course Title</b>	<b>Algebra, Vector Analysis and Geometry</b>	
<b>Course Type</b>	<b>Major/ Minor</b>	
<b>Pre- requisite (if any)</b>	To study this course a student must have had the subject Mathematics in class 12 <sup>th</sup>	
<b>Course Learning Outcomes</b>	The course will enable the student to: 1. Recognize consistent and inconsistent systems of linear equation by the row, echelon from the augmented matrix, using the rank of matrix. 2. To find the Eigen values and corresponding Eigen vectors for a square matrix. 3. Using the knowledge of vector calculus in geometry 4. Enhance knowledge of three-dimensional geometrical figure (Cone and Cylinder)	
<b>Credit Value</b>	<b>6</b>	
<b>Total Marks</b>	<b>Max. Marks 40+60</b>	

Unit	Topics	No. of Lectures
<b>I</b>	<b>1.1 Historical Background:</b> 1.1.1. Development of Indian Mathematics: Later Classical Period (500-1250) 1.1.2. A brief biography of Varahamihira and Aryabhata <b>1.2 Rank of a Matrix</b> <b>1.3 Echelon and Normal Form of Matrix</b> <b>1.4 Characteristic Equations of a Matrix</b> 1.4.1 Eigen values 1.4.2 Eigen vectors	<b>15</b>
<b>II</b>	2.1 Cayley's Hamilton Theorem 2.2 Application of Cayley's Hamilton Theorem to find the inverse of a matrix 2.3 Application of Matrix to solve a System of linear equations	<b>18</b>

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	2.4 Theorems on consistency and inconsistency of a system of linear equations	
	2.5 Solving linear equations up to three unknowns	
III	3.1 Scalar and Vector product of three and four vectors 3.2 Reciprocal vectors 3.3 Vector differentiation 3.3.1 Rules of differentiation 3.3.2 Derivative of triple products 3.4 Gradient, Divergence and Curl 3.5 Directional derivatives 3.6 Vector identities 3.7 Vector equations	18
IV	4.1 Vector Integration 4.2 Gauss theorem (without proof) and problems based on it. 4.3 Green theorem (without proof) and problems based on it. 4.4 Stoke theorem (without proof) and problems based on it.	15
V	5.1 General equation of second degree 5.2 Tracing of conics 5.3 System of conics 5.4 Cone: 5.4.1 Equation of cone with given base 5.4.2 generators of cone 5.4.3 condition for three mutually perpendicular generators 5.4.4 Right circular cone 5.5 Cylinder 5.5.1 Equation of cylinder and its properties 5.5.2 Right Circular Cylinder, 5.5.3 Enveloping Cylinder	24
<b>Text Books, Reference Books, Other Resources</b>		

**Text Books:**

1. K.B. Datta: Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd. New Delhi 2000
2. Shanti Narayan- A Text Book of Vector Calculus, S. Chand & Co., New Delhi. 1987.

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Class: B.Sc. I Sem	Subject: Mathematics	Session 2023-24
Course Code	S1-MATH 2T	
Course Title	Calculus and Differential Equations	
Course Type	Major/ Minor	
Pre- requisite (if any)	To study this course a student must have had the subject Mathematics in class 12 <sup>th</sup>	
Course Learning Outcomes	The course will enable the student to: 1. Sketch curves in a plane using its mathematical in the different coordinate system of reference. 2. Using the derivatives in Optimization Social sciences, Physics and Life sciences etc. 3. Formulate the Differential equations for various Mathematical models. 4. Using techniques to solve and analyze various Mathematical models.	
Credit Value	6	
Total Marks	Max. Marks 40+60	

Unit	Topics	No. of Lectures
I	1.1 Historical Background: 1.1.1. Development of Indian Mathematics: Ancient and Early Classical Period (till 500 CE) 1.1.2. A brief biography of Bhaskaracharya (with special reference to Lilavati and Madhava) 1.2 Successive differentiation 1.2.1 Leibnitz theorem 1.2.2 Maclaurin's series expansions 1.2.3 Taylor's series expansions 1.3 Partial Differentiation 1.3.1 Partial derivative of higher order 1.3.2 Euler's theorem on homogeneous functions 1.4 Asymptotes 1.4.1 Asymptotes of algebraic curves 1.4.2 Conditions for existence of Asymptotes	15

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	1.4.3 Parallel Asymptotes 1.4.4 Asymptotes of polar curves	
II	2.1 Curvature 2.1.1 Formula of radius of Curvature 2.1.2 Curvature at origin 2.1.3 Centre of Curvature 2.2 Integration of transcendental functions 2.3 Introduction to Double and Triple Integral 2.4 Reduction formulae	18
III	3.1 Concavity and Convexity 3.1.1 Concavity and convexity of curves 3.1.2 Points of inflexion 3.1.3 Singular point 3.1.4 Multiple points 3.2 Tracing of curves 3.2.1 Curves represented by Cartesian Equation 3.2.1 Curves represented by Polar Equations 3.3 Quadrature 3.3.1 For Cartesian coordinates 3.3.2 For Polar coordinates 3.4 Rectification 3.4.1 For Cartesian coordinates 3.4.2 For Polar coordinates	18
IV	1.1 Linear differential equations 1.1.1 Linear equations 1.1.2 Equations reducible to the linear form 1.1.3 Change of variables 1.2 Exact differential equations 1.3 first order and higher degree equations 1.3.1 Equation solvable for x, y and p 1.3.2 Equations homogeneous in x and y 1.3.3 Clairaut's equation 1.3.4 singular solutions 1.3.5 geometrical meaning of a differential equation 1.3.6 Orthogonal trajectories	18
V	5.1 Linear differential equation with constant coefficients 5.2 Homogeneous linear ordinary differential equations 5.3 Linear differential equations of second order	18

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5.4 Transformation of equations by changing the dependent variable/ independent variable	
5.5 Method of variation of parameters.	
<b>Text Books, Reference Books, Other Resources</b>	

**Text Books:**

1. Gorakh Prasad- Differential Calculus, Pothishala Private Ltd., Allahabad.
2. Gorakh Prasad- Integral Calculus, Pothishala Pvt. Ltd, Allahabad.
3. M. D. Raisinghanusar: Ordinary and Partial Differential equations. S. Chand & Co Ltd.2017
4. Gerard G. Emch. R. Sridharan M.D. Srinivas; Contributions to the History of Indian Mathematics, Hindustan Book Agency Vol. 3,2005
5. मध्यप्रदेश हिंदी ग्रंथ अकादमी की पुस्तके ।

**Reference Books:**

1. N. Piskunov - Differential and Integral Calculus, CBS Publishers, 1996.
2. G.F. Simmons- Differential Equation, Tata McGraw Hill, 1972.
3. E.A. Codrington- An Introduction to ordinary differential Equation, Prentice Hall of India, 1961.
4. D.A. Murray- Introductory Course in Differential Equations, Orient Longman (India) 1967.
5. H.T.H. Piaggio- Elementary Treatise on Differential Equations and their Application, C.B.S. Publisher & Distributors, Delhi, 1985
6. Bibhutibhusan Datta and Avadhesh Narayan Singh: History of Hindu Mathematics, Asia Publishing House 1962

Assessment and Evaluation	
<b>Suggested Continuous Evaluation Methods:</b>	
Maximum Marks:	<b>100</b>
Continuous Comprehensive Evaluation (CCE):	<b>40 Marks</b>
External Exam:	<b>60 Marks</b>
<b>Internal Assessment:</b>	<b>Total Marks: 40</b>
Continuous Comprehensive Evaluation (CCE)	
<b>External Assessment:</b>	<b>Total Marks: 60</b>

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Class: B.Sc. IV Sem	Subject: Mathematics	Session 2023-24
Course Code	S2-MATH 2T	
Course Title	Advanced Calculus and Partial Differential Equations	
Course Type	Major /Minor	
Pre- requisite (if any)	To study this course, a student must have had the subject Mathematics in Certificate Course or equivalent.	
Course Learning Outcomes	The course will enable the students to: 1. Understand many properties of the real line and sequences. 2. Calculate the limit superior, the limit inferior, and the limit of a bounded sequence. 3. Apply the mean value theorems and Taylor's theorem. 4. Apply the various tests to determine convergence and absolute convergence of an infinite series of real numbers. 5. Formulate, classify and transform partial differential equations into canonical form.	
Credit Value	6	
Total Marks	Max. Marks 40+60	

Unit	Topics	No. of Lectures
I	1.1 Historical background; 1.1.1 A brief historical background of Calculus and partial differential equations in the context of India and Indian heritage and culture 1.1.2 A brief biography of Bodhayana 1.2 Field structure and ordered structure of $\mathbb{R}$ , intervals, bounded and unbounded sets, supremum and infimum, completeness in $\mathbb{R}$ , absolute value of a real number. 1.3 Sequence of real numbers 1.4 Limit of a sequence 1.5 Bounded and monotonic sequences 1.6 Cauchy's general principle of convergence 1.7 Algebra of sequence and some important theorems	18
II	2.1 Series of non-negative terms 2.2 Convergence of positive terms series	

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	2.3 Alternating series and Leibnitz's test 2.4 Absolute and Conditional Convergence of Series of real terms 2.5 Uniform continuity 2.6 Chain rule of differentiability 2.7 Mean value theorems and their geometrical interpretations	16
III	3.1 Limit and continuity of functions of two variables 3.2 Change of variables 3.3 Euler's theorem on homogeneous functions 3.4 Taylor's theorem for functions of two variables 3.5 Jacobians 3.6 Maxima and Minima of functions of two variables 3.7 Lagrange's multiplier method 3.8 Beta and Gamma Functions	18
IV	4.1 Partial differential equations of the first order 4.2 Lagrange's solution 4.3 Some special types of equations which can be solved easily by methods other than the general method 4.4 Charpit's general method 4.5 Partial differential equations of second and higher orders	18
V	5.1 Classification of partial differential equations of second order 5.2 Homogeneous and non-homogeneous partial differential equations of constant coefficients 5.3 Partial differential equations reducible to equations with constant Coefficients	18
<b>Keywords/Tags:</b> Bodhayana, Sequence, Series, Jacobians, Maxima and Minima, Beta and Gamma functions, Partial differential equations.		
<b>Text Books, Reference Books</b>		

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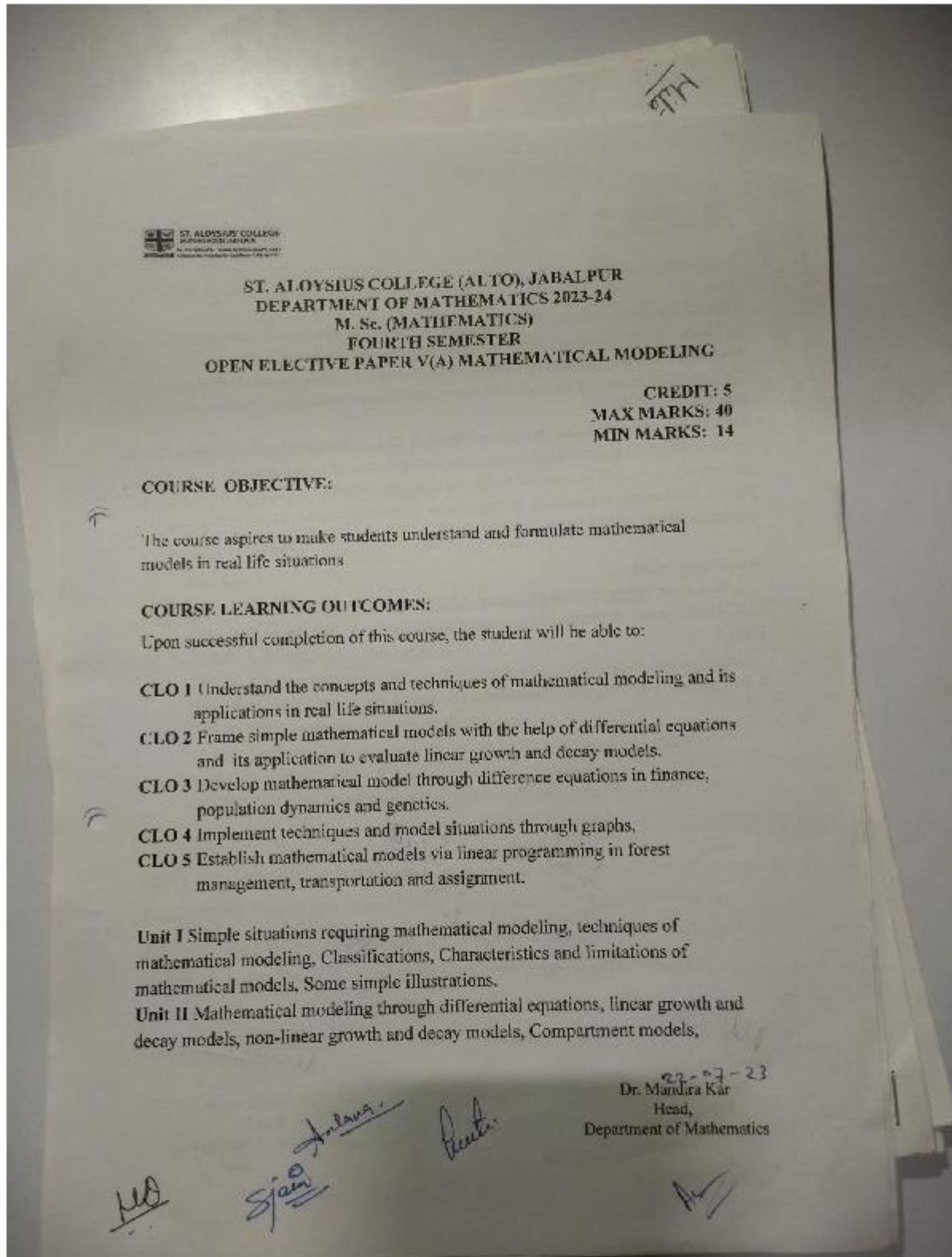
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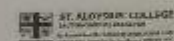
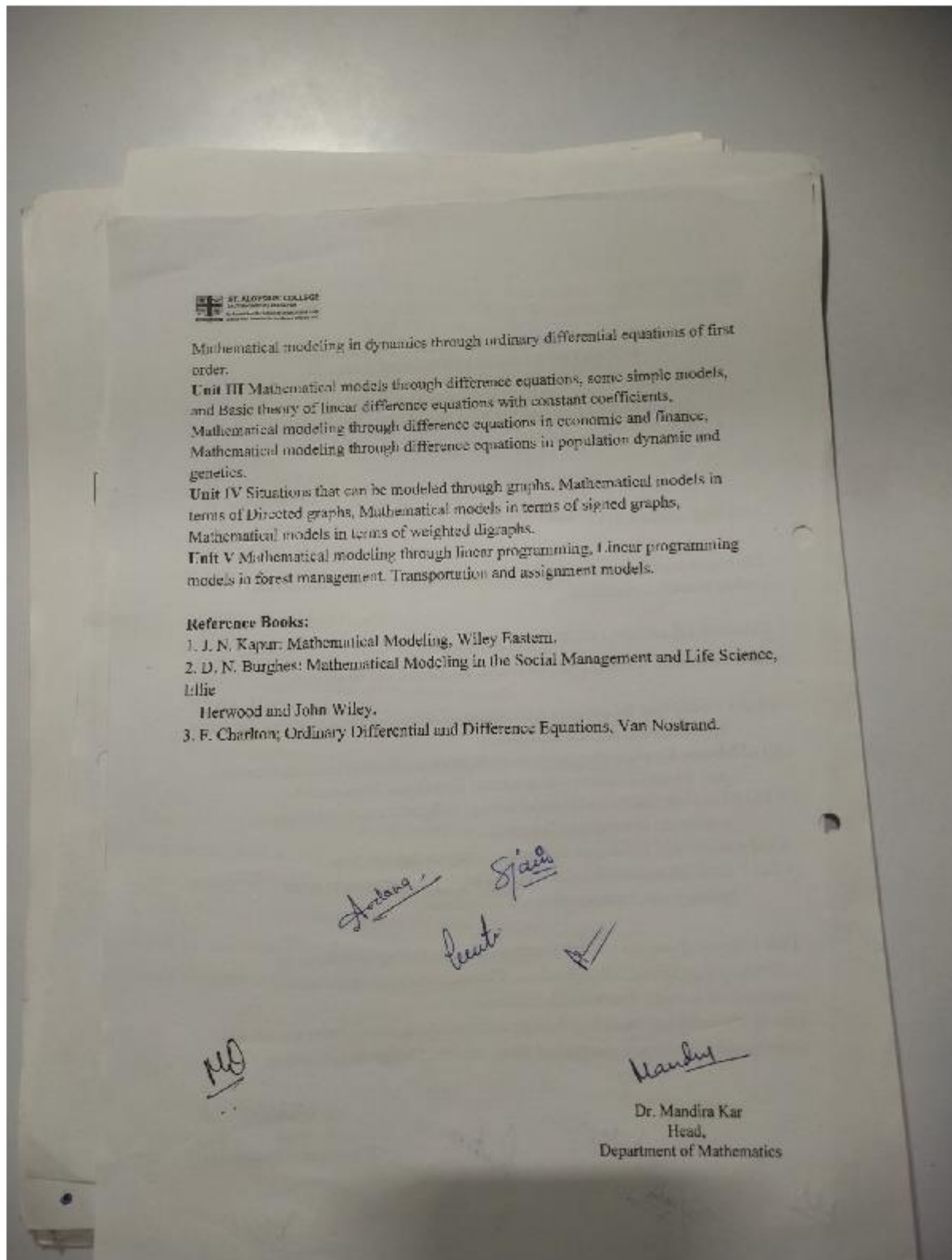
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Mathematical modeling in dynamics through ordinary differential equations of first order.

**Unit III** Mathematical models through difference equations, some simple models, and Basic theory of linear difference equations with constant coefficients.

Mathematical modeling through difference equations in economic and finance, Mathematical modeling through difference equations in population dynamic and genetics.

**Unit IV** Situations that can be modeled through graphs. Mathematical models in terms of Directed graphs, Mathematical models in terms of signed graphs, Mathematical models in terms of weighted digraphs.

**Unit V** Mathematical modeling through linear programming, Linear programming models in forest management, Transportation and assignment models.

#### Reference Books:

1. J. N. Kapran; Mathematical Modeling, Wiley Eastern.
2. D. N. Burghes; Mathematical Modeling in the Social Management and Life Science, Lillie Herwood and John Wiley.
3. F. Charlton; Ordinary Differential and Difference Equations, Van Nostrand.

Arbans  
Saini  
Rishi

MS

Mandira

Dr. Mandira Kar  
Head,  
Department of Mathematics



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College with Potential for Excellence by UGC  
DST-FIST supported

Class: B.Sc. III Year	Subject: Mathematics	Session 2023-2024
Course Title	Elements of Discrete Mathematics	
Course Type	Discipline Specific Elective (DSE) (Group- A, Paper - II)	
Course Code	S3-MATH 2T	
Course Learning Outcomes (CLO) -	The course will enable the students: 6. Apply the Boolean algebra, Switching circuits and their applications. 7. Minimizing the Boolean Function using Karnaugh Map. 8. Understand the lattices and their types. 9. Graphs, their types and its application in study of shortest path algorithms. 10. Test whether two given graphs are isomorphic. 11. Understand the Eulerian and Hamiltonian graphs. 12. Represent graphs using adjacency and incidence matrices.	
Credit Value	6	
Total Marks	Max. Marks: 30 + 70	

Unit	Topics	No. of Lectures
1	1.1 Indian Logic 1.1.1 Origins 1.1.2 The schools Vaisheshika 1.1.3 Catuskoti 1.1.4 Nyaya 1.1.5 Jain Logic 1.1.6 Buddhist Logic 1.1.7 Navya-Nyaya 1.1.8 Influence of Indian Logic on Modern Logic 1.1.9 Boolean Logic and Indian Thoughts 1.2 Relations 1.2.1 Binary, Inverse, Composite and Equivalence relation 1.2.2 Equivalence classes and its properties 1.2.3 Partition of a set 1.2.4 Partial order relation 1.2.5 Partially ordered and totally ordered sets 1.2.6 Hasse diagram 1.3 Lattices 1.3.1 Definition and examples	18

*Mandira*  
Dr. Mandira Kar 22-02-23  
Head  
Department of Mathematics

*MD*

*AL*

*Spair*

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*Punit*



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	1.3.2 Dual, bounded, distributive and complemented lattices	24
II	2.1 Boolean Algebra 2.1.1 Definition and properties 2.1.2 Switching circuits and its applications 2.1.3 Logic gates and circuits 2.2 Boolean functions 2.2.1 Disjunctive and conjunctive normal forms 2.2.2 Bool's expansion theorem 2.3 Minimize the Boolean function using Karnaugh Map	24
III	Graphs: 3.1 Definition and types of graphs 3.2 Subgraphs 3.3 Walk, path and circuit 3.4 Connected and disconnected graph 3.5 Euler graph 3.6 Hamiltonian path and circuit 3.7 Dijkstra's Algorithm for shortest paths in weighted graph	24
IV	Tree: 4.1 Trees and properties 4.2 Rooted, Binary and Spanning tree 4.3 Rank and nullity of a graph 4.4 Kruskal's and Prim's Algorithm 4.5 Cut- set and Its Properties 4.6 Fundamental Circuits and Cut- set 4.7 Planar graphs 4.8 Kuratowski's two graph 4.9 Matrix representation of graph 4.9.1 Incidence 4.9.2 Adjacency 4.9.3 Circuit 4.9.3 Cut - Set 4.9.4 Path	24
	<b>Text Books</b> 1. J. P. Tremblay and R. Manohar, Discrete Mathematical Structures with Applications to Computer Science, McGraw Hill Education, 1 <sup>st</sup> Edition 2017 2. Satinder Bal Gupta, C. P. Gandhi: Discrete Structures, Laxmi Publication, 2010 3. C. L. Liu: Elements of Discrete Mathematics, McGraw Hill Education, 4 <sup>th</sup> Edition 2017	

*M.O.* *AK* *Siva* *Jalava* *Bunt*

*Mandira*  
22-07-2023  
Dr. Mandira Kur  
Head  
Department of Mathematics





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Under Graduate Syllabus for B.Sc. (Bio)

As recommended by Central board of Studies in Zoology

Class - B.Sc. III Year

(Session 2023-24)

## Theory Paper

Part A Introduction			
Program: Degree	Class: B.Sc	Year: III	Session :2023-24
Subject: Zoology			
1	Course Code	S3-ZOOL2D	
2	Course Title	Wild Life Conservation and Management (Paper-II) Group-A	
3	Course Type (Core Course /Elective/Generic Elective/ Vocational/...)	Discipline Specific Elective (DSE)	
4	Pre-requisite (if any)	To study this course, a student must have had the subject Zoology in Diploma.	
5	Course Learning Outcome (CLO)	Upon completion of the course, students will  1. Identify and realize the values of wild animals, forests and the rare, threatened and endangered species of wildlife. 2. Gain knowledge of conservation of forest and wild animals (Ex situ and In situ) 3. Identify the role of local and tribal communities in protected areas. 4. Know the opportunities of employment in the field of wild life. 5. Develop an understanding for wise use and management of natural resources.	
6	Credit Value	4	
7	Total Marks	Max. Marks : 30+70	Min. Passing Marks – 35

## Part B- Content of the Course

Total No. of Lectures – Tutorials – Practical (2 hour per week): L-T-P: 60

Unit	Topic	No. of Lectures
I	1. Introduction to Wildlife and Conservation  1.1 Historical background of wildlife. 1.2 Values of wild life and valuable products of forests and wild animals. 1.3 Important wild animals of India. 1.4 Causes of extinction of forests and wild life. (a) Direct destruction (b) Indirect destruction 1.5 Importance and necessity of conservation of wild life and forests. 1.6 Principles of conservation and management.	12

*Prof. C.M. NTA 23* *Prof. N.P. 14/7/23* *Amritha* *Rama.* *Dr. S.*



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	<p>1.7 Conservation ethics and World wildlife conservation strategies.</p> <p>Keywords/Tags: Wildlife, Extinction, Values, Conservation, Strategy.</p>	
II	<p>1. Wild Life Conservation Measures in India</p> <p>1.1 Indian board for wildlife and wild life protection act. 1.2 Indian forest laws and their amendments, Indian forest act, Forest conservation act and Forest legislation of India.</p> <p>1.3 National organizations - Govt. and non-Govt. organisation for wildlife conservation.</p> <p>1.4 International organizations - IUCN, WWF.</p> <p>1.5 Wild life conservation measures. Ex situ conservation - Rehabilitation centers in situ conservation - Protected Areas.</p> <p>1.6 Important features, Flora and Fauna of protected areas. 1.7 National Parks, Sanctuaries and Biosphere Reserves of India.</p> <p>1.8 Methods of conservation and tracking of large territorial vertebrates- camera traps, mark and recapture techniques, trail camera, computer vision.</p> <p>2. Wildlife and important Tiger Reserves of M.P.</p> <p>2.1 Management challenges in Tiger Reserves.</p> <p>Keywords/Tags: Organizations', National parks, Protected areas, Methods, Large territorial animals.</p>	12
III	<p>1. Threatened and Endangered Species</p> <p>1.1 Major threats to wild life.</p> <p>1.2 Concept of threatened species.</p> <p>1.3 IUCN categories of threatened plants and animals - Endangered, Vulnerable, Rare, Threatened, Out of danger, Intermediate species.</p> <p>1.4 Special projects for endangered species - Project Tiger, Gir Lion Project.</p> <p>1.5 Musk Deer Project, Crocodile Project and Elephant Project.</p> <p>1.6 Biotelemetry and its utility in wildlife.</p> <p>Keywords/Tags: Threats, Projects, Endangered, IUCN Categories, Biotelemetry.</p>	12
IV	<p>1. Population Estimation</p> <p>1.1 Estimation and Computation of Population density, Natality, Birth rate, Mortality and sex ratio.</p> <p>1.2 Census method for density estimation of wild animals-</p> <p>1.3 Direct count method- Vehicle transect or road count method, King's census</p> <p>1.4 Indirect count method - Identification of Pug Marks, Hoof marks, Hair, Scats, Peller groups, Nest, Antlers</p> <p>1.5 Faecal analysis of Ungulates and Carnivores.</p> <p>1.6 Management planning of wildlife in protected areas, estimation of carrying capacity.</p> <p>2. Ecotourism / Wild life Tourism in forests</p> <p>2.1 Anthropogenic activities and livelihood of local communities in Reserved Forest Areas.</p>	12

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	Keywords/Tags: Population, Estimation, Pug Marks, Ecotourism, Local Communities.	
V	<p>1. Management of Habitat and Animal Health</p> <p>1.1 Care of injured and diseased animal. Equipment for locating, capture, handling and treatment of injured animal.</p> <p>1.2 Common diseases of wild animals.</p> <p>1.3 Translocation of animals, Quarantine measures and Quarantine act.</p> <p>1.4 Importance of forests, their conservation measures and management.</p> <p>1.5 Remote sensing and GIS.</p> <p>Food, Forage, Cover, Browse and Cover Estimation.</p> <p>1.6 Role of Tribal Communities in Management of Forest areas, Management challenges in Tiger Reserves.</p> <p>1.7 Elementary Idea of wild life forensics.</p> <p>1.8 Opportunities of employment in Reserve Forest Areas.</p>	14
	Keywords/Tags: Diseases, Remote sensing, GIS, Translocation, Quarantine act, Employment.	

## Part C – Learning Resources

### Text Book , Reference Books , Other resources

1. Babel, B.L. (Forest & Wildlife protection), Hindi, 4th edn., Eastern Book Company, 2014.
2. Kotwal, P.C. and Gopal, Rajesh. Radio-telemetry and field observations on territoriality of tigers in Kanha National Park. Vol. 22: No. 4 Oct-Dec. 1995.
3. Kotwal, P.C. Immobilisation of wild animals-Equipments, Drugs and Techniques. Kanha National Park and Project Tiger, Mandla, M.P., India, 1982.
4. Kotwal, P.C. Evaluation of Wildlife Habitats. Parameters and Procedures. Workshop on Wildlife Management, Kanha, 1982.
5. Khetrapal, B.S. & Khetrapal, Puja: 1972 (Wildlife Protection Act.1972) Puja Law House, Indore
6. Mathur, R.: Wildlife Conservation & Management, Rastogi Publications, 2018.
7. Mills, L. Scott: Conservation of Wildlife Populations, 2nd edn., Wiley Black well: Demography, Genetics & Management, 2019.
8. Kotwal P.C.: Biodiversity and Conservation. Agro Bios, Jodhpur, India, 1998.
9. Rajesh Gopal: Fundamentals of Wildlife Management, English. Natraj Publisher, Dehradun, 2011
10. Saharia, V.B., Wildlife in India Dehra Dun. Natraj Publishers, Dehradun, 1982.
11. Saharia, V.B., Guidelines for the preparation of Management Plans for Sanctuaries and National Parks. Natraj Publisher, Dehradun, 1983.
12. Tiwari, S.K., Wildlife in Central India. 3 Vols, Satup & Sons Publishers, New Delhi, 2004.
13. Shukla, C.P.: Raj Publication, New Delhi, 2016. 14. Shukla, G.S. & Upadhyay, V.B.: Economic Zoology 4th edn English, Rastogi Publications, Meerut, 2001.
15. Shukla, G.S. & Upadhyay, V.B.: vkfFkZd izkf.kfoKku 4<sup>th</sup> edn Hindi, Rastogi Publications, Meerut, 2001.
16. Books Published by MP Hindi Granth Academy, Bhopal.

#### Suggestive digital platforms web links:

1. <https://www.inlibnet.ac.in> - e books
2. <http://vlg.du.ac.in>
3. <http://wgenvis.miz.in>
4. <https://www.mphindigranthacademy.org/>

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Under Graduate Syllabus for B.Sc. (Bio)

As recommended by Central board of Studies in Zoology

Class - B.Sc. III Year

(Session 2023-24)

## Theory Paper

### Part A Introduction

Program: Degree	Class : B.Sc	Year :III	Session :2023-24
<b>Subject : Zoology</b>			
1	Course Code	S3-ZOOL2T	
2	Course Title	Genetics	
3	Course Type (Core Course /Elective/Generic Elective/ Vocational/...)	Minor/Elective	
4	Pre-requisite (if any)	To study this course, a student must have had the subject Zoology in Diploma.	
5	Course Learning Outcome (CLO)	On successful completion of this course, the students will be able to <ol style="list-style-type: none"><li>1. Gain knowledge of basic principles of inheritance and variations, DNA, RNA and their function.</li><li>2. Deeper understanding of linkage, Sex determination, Chromosomes, Mutations and mutagens.</li><li>3. Gain knowledge of human karyotype, Genome project, Inheritance of blood group and genetic diseases in human.</li><li>4. Demonstrate gene therapy, PCR, DNA fingerprinting techniques and their application.</li><li>5. Find Job Opportunities in Hospitals, Pharmaceutical Companies and other health services, Forensic Science Research Associates, Genetic Counselor, Clinical Research Associate, Animal Breeder, Genetic Laboratory Technician</li></ol>	
6	Credit Value	4	
7	Total Marks	Max. Marks : 30+70	Min. Passing Marks - 35

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## Part B- Content of the Course

Total No. of Lectures – Tutorials – Practical (2 hour per week): L-T-P: 30

Unit	Topic	No. Lectu
I	Overview of Genetics  1. Introduction and Historical background of genetics 2. Definition, Scope and Importance of Genetics 3. Chromosomes: Transmitters of Heredity 3.1. Structure and Organization of Chromosomes 3.2. Types of Chromosomes 3.3. Chemical composition of chromosomes 4. Nucleocytoplasmic Interaction 5. Mendel's laws of Heredity 6. Variations: Types and genetic basis of Variations on  Keywords: Heredity, Chromosome, Variation, Genetics, Nucleocytoplasmic Interaction	12
II	Gene and Genetic Material  1. Chemistry of Gene - Nucleic acids and their structure 2. Concept of DNA replication 3. Nucleosome (Solenoid Model) 4. Types of genes: Split genes, Overlapping genes and Pseudogenes	12

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	<p>5. Genetic code</p> <p>Keywords: Nucleic acids, DNA replication, Nucleosome, Pseudogenes, Split genes, Genetic code</p>	
III	<p>Linkage and Chromosomal Aberrations</p> <p>1. Gene linkage and recombination</p> <p>2. Sex-determination.</p> <p>3. Sex-linked Inheritance</p> <p>4. Structural changes in chromosomes: Deficiency, Duplication, Translocation and Inversion</p> <p>5. Numerical changes in chromosomes: Aneuploidy, Polyploidy</p> <p>6. Mutation: Types of mutations and mutagens</p> <p>Keywords - Linkage; Recombination, Sex-determination, Sex-linked Inheritance, Mutation, Mutagens, Polyploidy</p>	12
IV	<p>Human Genetics</p> <p>1. Human chromosomes: Human Karyotype and Human Genome Project</p> <p>2. Common genetic disorders</p> <p>3. Multiple factors and blood groups.</p>	12

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	<p>4. Twins: Fraternal, Maternal and Siamese twins</p> <p>5. Transgenic and knockout animals and their applications</p> <p>Keywords: Karyotype, Genetic disorders, Transgenic, Knockout animals</p>	
V	<p>Genetic Engineering</p> <p>1. Gene Therapy:- Germline, and Somatic cell gene therapy.</p> <p>2. Recombinant DNA technology</p> <p>3. Gene cloning</p> <p>4. Gene library 5. PCR and Hybridization techniques</p> <p>6. DNA finger printing</p> <p>Keywords: Genetic Engineering, Gene Therapy Recombinant DNA, Gene cloning Gene library, PCR, DNA finger printing.</p>	12



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## Practical Syllabus

Part A Introduction			
Program : Diploma		Class: B.Sc. B.Sc.	Year: IV Sem Session: 2023-24
Subject: Zoology			
1	Course Code	S2-ZOOL2P	
2	Course Title	System Physiology and Biochemistry	
3	Course Type (Core Course/Elective/Generic Elective/Vocational.....)	Core course	
4	Pre-requisite (if any)	To study this course, a student must have had the Subject Zoology in class B.Sc. IV Sem	
5	Course Learning outcomes (CLO)	Upon completion of this course, students will be able to understand— 1 The effect of temperature and pH on enzyme activity. 2 Qualitative estimations of biomolecules and gain knowledge of their role in our body. 3 Various parameters of hematology and know importance of it for our healthy life. 4 The principle and working of instruments required for performing exercises in laboratory. 5 Collaborative learning and communication skills through practical sessions in laboratory. 6 Assignment and project writing process which will give them a flow of research and writing skills.	
6	Credit Value	2	
7	Total Marks	Max. Marks: 40+60	Min. Passing Marks: 35

## Part: B — Content of the Course

Total No. of Lectures-Tutorials-Practical : (2 Hours per Week)		
L-T-P: No. of Lectures= 30		
Unit	Topics	No. of Lectures
I	1. Qualitative estimations of Protein, Carbohydrates and Lipids. 2. Study of effect of temperature and pH on salivary amylase activity. 3. Study of enzymatic activity of Trypsin and Lipase. 4. Detection of ammonia, urea and uric acid	7
II	5. Estimation of hemoglobin using haemometer. 6. Preparation of haemin crystals. 7. Preparation of blood smear, study and identification of blood cells. 8. Determination of ABO blood groups, RBC, WBC counting	12
III	9. Measurement of blood pressure using sphygmomanometer. 10. Principles and uses of instruments-Sphygmomanometer, Stethoscope, Biochemistry analyzer	5

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IV	11. Study of endocrine glands through histological slides of pituitary gland, adrenal gland, thyroid gland, pancreas, testis, ovary, spleen and thymus.	3
V	12. Study of histological slides of organ. systems of mammalian oesophagus, stomach, duodenum, ileum, rectum, liver, trachea, lung, and kidney.	3
Key word/Tags: Protein test, Haemoglobin, Blood Groups, Endocrine glands, Mammalian Systems.		

### Part D-Assessment and Evaluation

#### Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction/Quiz	10	Viva Voce on Practical	10
Attendance	10	Practical Record File	10
Assignments (Chart/Model/Seminar/Rural Service/Technology Dissemination/Report of Excursion/Lab Visits Survey/Industrial Visit)	20	Table work / Experiments 1. slides of organ system (Spotting-Histological slides, of endocrine glands (03), Histological (03), instruments 02 2. Estimation of protein/ carbohydrates /fat in given sample. (any two). 3. Detection of ammonia, urca, uric acid in the given sample. 4. Study of Enzyme Activity of salivary amylase/trypsin/lipase 5. Haematological experiment (any two)	16 06 06 04 08
<b>Total</b>	<b>40</b>	<b>Total</b>	<b>60</b>
Any Remark/Suggestions:			



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M.Sc. Zoology III Semester

Session 2023-24

ELECTIVE COURSE

Sericulture

Max M : 40

Unit-1	Introduction and Moriculture: 1. Historical background of sericulture, Scope of sericulture & Entrepreneurship in silk industry 2. Silk Producing organisms and types of silk. 3. Classification of races of <i>Bombyx mori</i> . 4. Life cycle of <i>Bombyx mori</i> 5. Propagation of Mulberry plant. 6. Process of Sericulture
Unit-2	Plant Pathology, silkworm diseases and Biology of <i>Bombyx mori</i> wsr: 1. Diseases of mulberry plant. 2. Diseases of silkworms wsr Pebrine (Protozoan disease), Bacterial, Fungal and Viral diseases 3. Silk gland of <i>Bombyx mori</i> . 4. Structure & chemical composition of silk.
Unit-3	Rearing facilities and operation wsr: 1. Rearing house and appliances for rearing of silk worms. 2. Disinfection operation before rearing of silk worms 3. Maintenance of optimum conditions for rearing. 4. Feeding, Bed cleaning and spacing
Unit-4	Moulting and Mounting wsr: 1. Moulting 2. Care during Moulting of silk worm. 3. Characteristic features of ripe silk worm 4. Process of mounting of silk worm. 5. Process of spinning & harvesting of cocoons
Unit-5	Cocoon Marketing, Silk Reeling and Non-Mulberry Silk Worm wsr: 1. Cocoon Quality. 2. Testing and grading of cocoon. 3. Silk reeling operation. 4. Non-Mulberry Silk Worm culture wsr Tasar culture, Eri culture and Muga culture.

#### List of books for Sericulture:

1. Hand book of Silk Worm rearing by Masatori, Shimizu, D. Agri.
2. Sericulture Manual -2
3. Sericulture Manual -3 by S. Kishanaswamy
4. Introduction to Sericulture by Dr. (Mrs.) G. Ganga Dr. (Mrs.) J. Sulochanachetty
5. Principles of Sericulture by Hisuo Aruga
6. A Manual of non-mulberry Silks Sericulture Vol-1 by Dr. M.S. Jolly, et al
7. Sericulture and Silk Industries by Tripurari Sharan
8. Sericulture Manual -1 Mulberry cultivation by Dr. G. Rang swami
9. Sericulture Manual -2 Silkworm rearing by Dr. S. Krishnaswami
10. Sericulture Manual -3 Silk reeling by Dr. S. Krishnaswami
11. Mulberry cultivation by Zheng, Ting-Zing
12. Silkworm rearing by Pva Pang- Chesan
13. Silk worm training manual by ScoHotim.

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BBA III Sem

Group A - Human Resource

Subject: Marketing Management

Paper: Minor

Code- M2-BBABIT

Credit Value:6

Max. Marks: 100

(External:60+ Internal:40)

### Course Learning Outcomes:

- Students will be able to identify the marketing process and its applicability in business operations.
- List best practices for responsible marketing and how to manage marketing efforts.
- Recognize how to identify target markets and environments by analyzing demographics and consumer behaviour.

### UNIT I

Nature and Scope of Marketing, Selling V/s Marketing, Marketing management philosophies, Market segmentation, Marketing Mix, Marketing Environment

### Unit II

Product Strategy, Product Classification & Product mix, Branding and Packaging decision, Integrated Marketing Communication-Promotion mix: Advertising, Publicity, Selling, Sales Promotion and Public Relations

### Unit III

Pricing Decision- Pricing Strategies, Rural Marketing, Modern & future Marketing –Concepts of Internet Marketing, Non-Profit Marketing, Holistic Marketing

### Unit IV

Service marketing – Introduction, growth of service sector, concept, characteristics, *classification of service designing*, marketing of services with special reference to (1. Financial Services 2. Health Services 3. Hospitality Services (travel, hotel, tourism) 4. Professional Services 5. Public Utility Services 6. Educational Services)

### Unit V

Channel of Distribution.Types of intermediaries and their roles,Factors affecting choice of channel. Introduction to Logistics Supply Chain Management , Retail Management (Definition, types)

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*Chaitank*  
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## MINOR

Part A – Introduction			
Program: Certificate	Class BBA I Year	Year: 2022	Session : 2022-23
Subject: Communication Skills			
Course Code	M1-BBAA2T(Group-I)		
Course Title	BBA		
Course Type	Core Course		
Pre-requisite (if any)	Not required (open for all)		
Course Learning Outcome	Learners will be able: <ol style="list-style-type: none"><li>1. To recall the types, channels and elements of communication and use them in managing organizational effectiveness.</li><li>2. To learn and practice verbal and non-verbal communication.</li><li>3. To equip themselves with the knowledge of business correspondence and use it in their work.</li><li>4. To engage effectively in discussions, interviews and conferences.</li><li>5. To recall and write reports effectively and other business documents.</li></ol>		
Credit Value	(Credits) 6		
Total Marks	Max Marks : 40+60	Min Passing Marks: 33	
Part – B Content of the Course			
Total No. Of Lectures- Tutorials- Practical (in hours per week):			
L-T-P: 90			
UNITS	TOPICS	No. Of Lectures	
1	Historical Background of Communication, Definition and process of communication. Essential of effective communication, Barriers to communication, Role of communication in organizational Effectiveness.	18	

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2	Public Speech –Composition, Principles, Speech Delivering skills. Group Discussion: Do's and Dont's, Communication in Committees, Seminars, Conferences, Symposia and Press Conference. Audience Analysis.	18
3	Non- Verbal Communication: Meaning, Types and Importance. Listening. Difference between Listening and Hearing.	18
4	Business Correspondence, Essentials of effective Business Correspondence, Structure of Business Letter, Types of Business Letter- Enquiry, Reply, Orders, Complaints, Circular Letter. Principles of clear business writing.	18
5	Drafting of Notices, Agenda, Minutes, Job Application Letters, Preparation of Curriculum Vitae.	18

## Part C- Learning Resources

	Text Books, Reference Books and Other Resources	
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### Suggested Reading:

- Business Communication Concepts & Skills, T. N. Chhabra, Sun India Publishers.
- Business Communication by Shashi k Gupta.
- Business Communication, R K Madhukar, Vikas Publication
- Business Communication, K. K. Ramachandran, Himalaya Publishing House.
- Business Communication, Dr. S M Shukla, Shaitya Bhawan Publication
- Essential of Business Communication, sixth Edition, Mary Ellen Guffey, South –Western College Publishing.
- Ace of Soft Skills Attitude Communication and Etiquette for Success by Gopalaswamy Ramesh, Pearson India.
- Rao N. & Das R. P. Communication Skills, Himalaya Publishing House.
- Mehta D. & Mehta N.K., A Handbook of Communication Skills Practices, Radha Pub., New Delhi.
- Sinha K K., Business Communication, Galgotia Publishing House, New Delhi
- Murphy A. & Peck Charles E., Effective Business Communication, Tata Mcgraw Hill, New Delhi.

### Suggested web links:

<http://books.google.co.in/books?id=Dzo1joiJVoIC>

### Suggested Equivalent Online Course:

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Group C

MAJOR

Part A Introduction			
Program : Certificate		Class: BBA 1 Year	Year : 2022 Session 2022- 2023
Subject: FINANCIAL ACCOUNTING			
1	Course Code	M I- BBAC1T (Group-III)	
2	Course Title	BBA	
3	Course Type (Core Course/ Elective/ Generic Elective/ Vocational/...)	(Core Course)	
4	Pre - requisite	Not Required (Open for All)	
5	Course Learning Outcomes (CLO)	1. Students will be able to understand the basics of book-keeping and accounting. 2. Students will be able to know about accounting software. 3. Students will be able to do the accounting work of the business unit. 4. They will be in a position to understand and technically use bank reconciliation, branch accounts and departments accounts. 5. Students will understand the concept of Royalty accounting and Hire- Purchase accounting and learn what accounting remedies relate to them and where it can be used.	
6	Credit Value	(Credit ) 6	
7	Total Marks	Max. Marks: 40+60	Min.passing Marks:33
Part B - Content of the Course			
Total No. of Lectures - Tutorials - Practical (in hours per week) : 3 hours			
L-T-P :90			
Unit	Topics	No. of Lectures	

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Vishu  
Chitanda  
Rabini  
Aparna

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1	Accounting and its place in business and relationship with other financial areas, double Entry System, Book Keeping – Meaning, Advantages, Concepts and convention, Difference between Financial Accounting, Cost Accounting, and Management Accounting.	10
2	Types of books of accounts and their preparation Journal, Ledger, Trial Balance and Depreciation . Computerized Accounting software (cloud books, wave and Tally)	20
3	Preparation of Final Accounts: Trading Account, Profit and Loss Account, Balance Sheet .Preparation of EMI Chart	20
4	Bank Reconciliation Statement, Branch Accounts(excluding stock and debtors method) and Department Accounts(excluding closing stock reserve calculation)	20
5	Royalty Accounts, Hire Purchase Accounts- Accounting records in the books of Purchase and vendor,	20

**Keywords / Tags:**

**Part C – Learning Resources**

Text Books, Reference Books, Other resource

**Suggested Readings:**

- Mukherjee & Hanif, Financial Accounting, Tata McGraw Hills, New Delhi
- Shukla & Grewal, Financial Accounting, S Chand Publication 2019, New Delhi
- J R Batliboi, Double Entry book keeping System: A complete treatise on the fundamentals of Accounting written specifically for Indian Studies and Businessmen, Standard Accountancy Publication, 1987, 29<sup>th</sup> edition, Mumbai
- Gupta, R L, Advanced Accounting, Sultan Chand & Sons, New Delhi
- S.M Shukla, Financial Accounting, Sahitya Bhavan Publication, Agra Latest Publication (Hindi and English Medium)
- Accounting Principles, Anthony R N, and Reece, J S 6<sup>th</sup> ed, Homewood Richard D Irwin Publication, Illinois Us

**Suggested Web**

links: <http://books.google.co.in/books/about/Financialaccounting.html?id=g7W0ZELBRy8C&re>

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B.Com.

Syllabus

St. Aloysius' College (Autonomous), Jabalpur	
<b>Part A – Introduction</b>	
<b>Session:</b>	2023-24
<b>Subject/ विषय:</b>	Commerce /कॉमर्स
<b>Programme/कार्यक्रम:</b>	Certificate / सर्टिफिकेट
<b>Class/कक्षा:</b>	B. Com 1 <sup>st</sup> Semester/ बी. कॉम1 <sup>st</sup> सेमेस्टर
<b>Course Code/ पाठ्यक्रम कोड:</b>	C1-COMA1T
<b>Course Type/ पाठ्यक्रम का प्रकार:</b>	MAJOR
<b>Course Title/पाठ्यक्रम का शीर्षक:</b>	Financial Accounting
<b>Pre – requisite/ पूर्वापेक्षा:</b>	OPEN FOR ALL
<b>Course Learning Outcome/ पाठ्यक्रम अध्ययन की परिलब्धियाः</b>	After completion of this course, it is expected that the student shall be able to  CO 1- To recall basic concepts of accounting and to prepare final accounts with adjustment.  CO 2- To describe the methods of depreciation and compute depreciation of fixed assets.  CO 3- To Prepare accounts of royalty, investment, NPOs and consignment.  CO 4 To understand and evaluate the complete process of accounting in a partnership firm  CO 5 To Equip with the knowledge of computerized accounting.
<b>Credit Value/ क्रेडिट मान:</b>	6 credits
<b>Total Marks/ कुल अंक:</b>	Max. Marks: (Internal 40) + (External 60) 100
<b>Part B – Course Content</b>	
Unit 1	Accounts: - Indian History, Definition, Objectives, Basic Concept and Principles of Double Entry System Journal Entry, Ledger, Subsidiary books, Trial Balance. Introduction of Indian Accounting Standard Final Accounts.





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इकाई 1	लेखांकन : भारतीय इतिहास परिभाषा, उद्देश्य, मूल अवधारणाएवंद्वारा प्रविष्टि प्रणालीके सिद्धांत जनल प्रविष्टि, बहीखातेसहायक पुस्तकें, तलपट भारतीय लेखा मानकों के परिचयका विस्तृत अध्ययन समाखेवन के साथ अंतिम खाता तैयार करना
Unit 2	Accounting for Depreciation (According to Accounting Standard – 6), Branch Account, Departmental Accounts.
इकाई 2	मूल्य ह्रास क लिए लेखांकन (लेखा मानक 6 के अनुसार), शाखा लेखे, विभागीय लेखे
Unit 3	Royalty Accounts, Accounting of Non- Profit Organization, Investment Account, Consignment Accounts.
इकाई 3	अधिकार शुल्क खाते, गैर लाभकारी संस्थानों के लेखे, विनियोग लेखे, प्रेषण खाते
Unit 4	Partnership Accounts: - Dissolution of Partnership (with Insolvency), Amalgamation of Partnership Firms, Conversion of Partnership firm in to joint stock company
इकाई 4	साझेदारीखातेसाझेदारीकाविघटनदिवालियासहित, साझेदारीफर्मोंकाएकीकरण, फर्मकासंयुक्तसंघप्रमंडलमेंपरिवर्तन
Unit 5	Computerized Accounts by using any popular accounting software creating a company, configure and feature setting, creating accounting leaders and groups, creating stock items and groups, vouchers entry (with maintenance of vouchers), generating report- cash book, ledger accounts, trial balance, profit and loss account and balance sheet
इकाई 5	कम्प्यूटरीकृतखाते: किसी भी लोकप्रिय लेखा सॉफ्टवेयर का उपयोग करके एक कंपनी बनाना, विन्यास करना और सुविधाओं को सेट करना, लेखांकन बहीखाता और समूह बनाना, स्टॉक मद और समूह बनाना, वाउचर प्रविष्टि (प्रमाणको कारखानेखातेके साथ), रिपोर्ट तैयार करना- कैशबुकखाता, बहीखाता, परीक्षणशेष, लाभ और हानिखाता और बैलेंसशीट

## Part C – Suggested Readings

S. No.	Author	Name of the Book	Publication
1.	S.M.Shukla	Financial Accounting	Sahitya Bhawan Agra
2.	Shukla & Grewal	Financial Accounting	S Chand & Sons New Delhi
3.	Dr Ramesh Mangal	Financial Accounting	Satish Printers and Publishers Indore
4.	Agrawal Dr Mahesh	Financial Accounting	Ram prasad and sons, Bhopal
5.	Gupta R.L. and Radhaswamy M	Advance Accounting	S Chand & Sons New Delhi





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St. Aloysius' College (Autonomous), Jabalpur	
<b>Part A – Introduction</b>	
Session:	2023-24
Subject/ विषय:	Commerce /कॉमर्स
Programme/कार्यक्रम:	Certificate / सर्टिफिकेट
Class/कक्षा:	B. Com 1 <sup>st</sup> Semester/ बी. कॉम1 <sup><sup>st</sup></sup> सेमेस्टर
Course Code/ पाठ्यक्रमकोड:	C1-COMA2T
Course Type/ पाठ्यक्रमकाप्रकार:	MINOR
Course Title/पाठ्यक्रमकाशीर्षक:	BUSINESS ORGANISATION
Pre – requisite/ पूर्वापेक्षा:	OPEN FOR ALL
Course Learning Outcome/ पाठ्यक्रमअध्ययनकीपरिलब्धियां:	After completion of this course, it is expected that the student will be able  CO 1- To state the process of starting a new business.  CO 2- To compare the structure and working of sole proprietorship and partnership businesses in India.  CO 3- To illustrate the difference between public and private companies.  CO 4- To sketch the functioning of cooperative societies.  CO 5- To analyze various business combinations.
Credit Value/ क्रेडिटमान:	6 credits
Total Marks/ कुलअंक:	Max. Marks: (Internal 40) + (External 60) 100
<b>Part B – Course Content</b>	
Unit 1	Indian traditional businesses and their organizational structures. Concepts of Business, Trade, Industry and Commerce Classification Relationship between Trade, Industry and Commerce. Business Organization – Concept, Characteristics Importance, and Objectives Functions of Business and Steps to Start an Enterprise.



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इकाई 1	परिचय: भारतकेपारम्परिकव्यवसायऔरउनकीसंगठनात्मकसंरचनाएँ, व्यापार, उद्योगऔरवाणिज्यकीअवधारणाव्यवसायउद्योगऔरवाणिज्यकासम्बंधऔरवर्गीकरण, व्यवसायिकसंगठन:अवधारणाविशेषताएँएवंउद्देश्यव्यवसायकेकार्यएवं नवप्रवर्तनहेतुआवश्यककदम।	व्यवसाय,	
Unit 2	FORMS OF BUSINESS ORGANIZATION: Business Organization - Classification - Factors Influencing the Choice of Suitable Form of Organization - Sole Proprietorship and Partnership - Meaning, Definition - Characteristics – Advantages, Limited liability Partnership.		
इकाई 2	व्यवसायिकसंगठनकेप्रकार: व्यावसायिकसंगठन:वर्गीकरणउपयुक्तसंगठनकेचयनकोप्रमाणितकरनेवालेतत्व। एकलव्यवसाय, एंव. साझेदारीव्यवसाय:अर्थ, परिभाषा, विशेषताएँलाभ, सीमित दायित्व साझेदारी।		
Unit 3	ORGANIZATION OF COMPANIES: Concepts, Meaning, Formation, Characteristics and Significance of Private Company and Public Company.		
इकाई 3	कम्पनीकासंगठन:निजीकम्पनीऔरसार्वजनिककम्पनीकीअवधारणा, अर्थ निर्माण, विशेषताएँएवंऔचित्य।		
Unit 4	Co-Operative Organization- Meaning Functions and Limitations of Co-operatives Societies. Social Responsibility of a business, Business Ethics- meaning, concept, role of ethics in business. Case Study on Co-operative Organization in Jabalpur.		
इकाई 4	कोऑपरेटिव-संगठन:अर्थ, कार्यएवंसीमाएँसामाजिकदायित्व, व्यवसायिकनैतिकता. अवधारणा,अर्थ, व्यापारमेंनैतिकताकीभूमिकाजबलपुर में सहकारी संगठन पर केस स्टडी।		
Unit 5	Multinational Companies (MNC'S) and the Challenges of their organization in India, Business Combination- meaning and its types.		
इकाई 5	बहुराष्ट्रीयकम्पनीयाकार्यऔरभारतमेंइनकेसंगठनमेंआनेवालीचुनौतियांव्यापारसंबंधी। अर्थएवंप्रकार		
<b>Part C – Suggested Readings</b>			
S. No.	Author	Name of the Book	Publication
1.	Dr S C Saxena	Business Organization and Communication	Sahitya Bhawan Publications
2.	Sanjay Gupta	Business Organization and Communication	SBPD Publication
<b>Part D: Assessment &amp; Evaluation</b>			
Suggested Continuous Evaluation Method			
Maximum Marks:			
Continuous Comprehensive Evaluation (CCE): 40 Marks			
External Exam: 60 marks			
<b>Internal Assessment:</b> Attainment Methods	Unit 1- Role play on steps to start a new business. (CO1)		



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St. Aloysius' College (Autonomous), Jabalpur	
Part A – Introduction	
Session:	2023-24
Subject/ विषय:	Commerce /कॉमर्स
Programme/कार्यक्रम:	Certificate / सर्टिफिकेट
Class/कक्षा:	B. Com 1 <sup>st</sup> Semester/ बी. कॉम 1 <sup>st</sup> सेमेस्टर
Course Code/ पाठ्यक्रमकोड:	C1-COMC1T
Course Type/ पाठ्यक्रमकाप्रकार:	GENERAL ELECTIVE
Course Title/पाठ्यक्रमकाशीर्षक:	BUSINESS ECONOMICS
Pre-requisite/ पूर्वपेक्षा:	OPEN FOR ALL
Course Learning Outcome/ पाठ्यक्रमअध्ययनकीपरिलब्धियाः	<p>After completion of this course, it is expected that the student shall be able</p> <p>CO 1- To understand the use of economic theory in business decision-making problems.</p> <p>CO 2- To analyze traditional and modern definitions of economics.</p> <p>CO 3- To demonstrate an understanding, usage, and application of basic economic principles or laws.</p> <p>CO 4- To understand the law of demand and how equilibrium price and quantity are determined.</p> <p>CO 5- To perform demand analysis to analyze the impact of economic events on Markets.</p> <p>CO 6- To derive demand curves from utility functions and identify income and substitution effects.</p> <p>CO 7- To demonstrate the measurement of demand and elasticity relative to changes in price, income, and price of substitute goods.</p> <p>CO 8- To interpret the relation between a price change and elasticity.</p> <p>CO 9- To understand the meaning of marginal revenue and marginal cost and their relevance for firm profitability. To learn</p>



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St. Aloysius' College (Autonomous), Jabalpur	
<b>Part A – Introduction</b>	
Session:	2023-24
Subject/ विषय:	Commerce / वाणिज्य
Programme/कार्यक्रम:	Certificate / सर्टिफिकेट
Class/कक्षा:	B. Com 1 <sup>st</sup> Semester/ बी. कॉम1 <sup>st</sup> सेमेस्टर
Course Code/ पाठ्यक्रमकोड:	M1-ASPM2T
Course Type/ पाठ्यक्रमकाप्रकार:	ELECTIVE
Course Title/पाठ्यक्रमकाशीर्षक:	Advertising & Sales Promotion/ विज्ञापन एवं विक्रय प्रबंध
Pre – requisite/ पूर्वपेक्षा:	open for all/सभीकेलिएउपलब्ध
Course Learning Outcome/ पाठ्यक्रमअध्ययनकीपरिलब्धियाः	After completion of this course, it is expected that the student shall be able  CO 1- To describe the basic concepts of advertisement.  CO 2- To evaluate the different media of Advertisement.  CO 3- To explain the role of advertisement agencies and their selection.  CO 4- To apply various means of advertisement in real business.
Credit Value/ क्रेडिटमान:	4 credits
Total Marks/ कुलअंक:	Max. Marks: (Internal 40) + (External 60) 100
<b>Part B – Course Content</b>	
Unit 1	Introduction- Concept, Scope, Objectives and Functions of advertising. Types of advertisement, Role of advertising in the marketing mix and the advertising process. Advertising and sales: the relationship and the difference, Approaches to Advertising -DAGMAR & AIDA Model.
इकाई 1	परिचय - विज्ञापन की अवधारणा, क्षेत्र उद्देश्य एवं कार्य, विज्ञापन के प्रकार, विज्ञापन में विपणन मिश्रण एवं प्रक्रिया की भूमिका, विज्ञापन और बिक्री संबंध और अंतर : विज्ञापन के दृष्टिकोण -DAGMAR और AIDA मॉडल।
Unit 2	Pre-launch Advertising Decision- Determination of target audience, Advertising media and their choice. Advertising Message: Preparing an effective advertising copy, Elements of a print copy- Headlines, body copy, slogan, logo, a seal of approval, Elements of a broadcast copy.



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इकाई 2	विज्ञापन निर्णयन पूर्व प्रदर्शन - लिखित श्रोताप्रादुर्भावों का निर्धारण, विज्ञापन माध्यम एवं उनका चयन (मीडिया), विज्ञापन संदेश: एक प्रभावी विज्ञापन प्रति तैयार करना, एक प्रिंट कॉपी के तत्व- हेडलाइंस, बॉडी कॉपी, स्लोगन, लोगो, अनुमोदन की मुहर, प्रसारण प्रति के तत्व।
Unit 3	Promotional Management: Advertising department, Role of advertising agencies and their selection, Advertising budget, and Evaluation of Advertising effectiveness.
इकाई 3	प्रचार प्रबंधन- प्रबंध विज्ञापन विभाग, विज्ञापन एजेंसी का योगदान एवं उसका चयन, विज्ञापन बजट, विज्ञापन की प्रभावशीलता का मूल्यांकन।
Unit 4	Legal, ethical and social aspects of advertising. Advertisement Scene in India, Means of advertising- Social Media Advertising & Digital Advertising. Digital Advertising: Concept, Effects, Digital Advertising in India.
इकाई 4	विज्ञापन के नैतिक, विधिक एवं सामाजिक पहलु। भारत में विज्ञापन दृश्य, विज्ञापन के साधनसोशल मीडिया और विज्ञापन -डिजिटल विज्ञापन, डिजिटल विज्ञापन-अवधारणा :, प्रभाव, भारत में डिजिटल विज्ञापन, डिजिटल विज्ञापन एजेंसियां संरचना और कार्य -।

### Part C – Suggested Readings

S. No.	Author	Name of the Book	Publication
1.	S H H Kazmi, Satish K Batra	Advertising And Sales Promotion	McGraw Hill
2.	Belch & Belch -	Advertising & Promotion -	Tata Mc Graw Hill
3.	डा. एसीजैनवनीरजसिंह.	विक्रयएवंविज्ञापन	एसबीपीडीपब्लिकेशनएआगरा
4.	Sanjay	Advertising And Sales Promotion-	SBPD Agra

Suggestive digital platforms and web links:

<https://raventools.com/blog/8-link-marketing-techniques-for-smbs/>

### Part D: Assessment & Evaluation

Suggested Continuous Evaluation and Attainment Methods

Maximum Marks: 100 Marks

Continuous Comprehensive Evaluation (CCE):30 Marks

External Exam : 70 Marks



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## St. Aloysius' College (Autonomous), Jabalpur

### Part A – Introduction

Session:	2023-24
Subject/ विषय:	Commerce / कॉमर्स
Programme/कार्यक्रम:	Certificate / सर्टिफिकेट
Class/कक्षा:	B. Com 2 <sup>nd</sup> semester / बी. कॉम 2 <sup>nd</sup> सेमेस्टर
Course Code/ पाठ्यक्रमकोड:	C1-COMA2T
Course Type/ पाठ्यक्रम का प्रकार:	CORE Major
Course Title/पाठ्यक्रमकाशीर्षक:	Business Regulatory Framework
Pre – requisite/ पूर्वापेक्षा:	(Open For all)
Course Learning Outcome/ पाठ्यक्रम अध्ययन की परिलब्धियां:	After completion of this course, it is expected that the student will be able  CO 1- To recognize the essential elements of a valid contract and describe the capacities of parties to contract.  CO 2- To evaluate the rights and duties of the parties at the time of breach, bailment, pledge, and contracts of indemnity & guarantee.  CO 3-. To distinguish among different kinds of Negotiable instruments.  CO 4- To analyze the Consumer Protection Act, 1986 and 2018, and apply the process and procedure of filing a complaint under the act.  CO 5- To interrelate the provisions of the Partnership Act 1932 and Limited Liability Partnership Act 2008.
Credit Value/ क्रेडिटमान:	6 credits
Total Marks/ कुलअंक:	Max. Marks: (Internal 40) + (External 60) 100
<b>Part B – Course Content</b>	
Unit 1	Historical Background of Mercantile Law in India – Scope and Characteristics, Indian Contracts Act 1872- General Laws Definition and Nature of contract, Agreement: Offer and Acceptance, Consideration, Capacities of parties to contract, Free consent, expressly declared void agreements.



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इकाई 1	भारत देश में व्यावसायिक सन्नियम की एतिहासिक पृष्ठभूमि - क्षेत्र, विशेषताएं, भारतीय अनुबंध अधिनियम 1872 - सामान्य नियम, परिभाषाएं, अनुबंध की प्रकृति, ठहराव-प्रस्ताव एवं स्वीकृति, प्रतिफल, पक्षकारों में अनुबंध करने की क्षमता, स्वतंत्र सहमति, स्पष्ट रूप से व्यर्थ घोषित ठहराव
Unit 2	Performance and Breach of contract, Contract Relating to Indemnity and Guarantee, Bailment and Pledge, Agency
इकाई 2	अनुबंधों का निष्पादन एवं अनुबंध भंग, क्षति पूर्ति एवं प्रतिभूति से सम्बंधित अनुबंध, गिरवी एवं निक्षेप, एजेंसी
Unit 3	Negotiable Instrument Act 1881-General Introduction, Negotiable Instrument (Amendment) Act 2002, Definition and features (Promissory Note, Bill of Exchange and Cheques), Crossing and Dishonor of Cheques, Dishonor of Negotiable Instruments
इकाई 3	विनिमय साध्य लेखपत्र अधिनियम 1881 - सामान्य प्रस्तावना, विनिमय साध्य लेखपत्र अधिनियम (संशोधन) 2002, परिभाषा, लक्षण (प्रतिज्ञापत्र, विनिमय विपत्र एवं चैक), चैक का रेखांकन एवं अनादरण, विनिमय साध्य लेखपत्र का अनादरण
Unit 4	General Introduction to Consumer Protection Act, 1986 and 2018, Introduction and features, Redressal agencies, Process, and procedure of filing a complaint under consumer protection act, Penalties, Difference between Consumer Protection Act, 1986 and 2018, FEMA, 2000, Introduction and salient features – Regulation and Management of foreign exchange; Authorized Person, Contravention and Penalties, Difference between FERA & FEMA
इकाई 4	उपभोक्ता संरक्षण अधिनियम 1986 एवं 2018 का सामान्य विषय परिचय, प्रस्तावना एवं लक्षण, शिकायत प्रकोष्ठ, दंड, उपभोक्ता संरक्षण अधिनियम 1986 एवम 2018 के मध्य अंतर, फेमा, 2000, प्रस्तावना एवं विभिन्न विशेषताएं - विदेशी विनिमय का प्रबंध एवं नियंत्रण; अधिकृत व्यक्ति, नियमों का उल्लंघन एवं दंड, फेरा एवं फेमा के मध्य अंतर।
Unit 5	Indian Partnership Act 1932 – General Introduction, Elements and Features, Partnership Deed, Limited Liability Partnership Act, 2008.- Introduction, Registration process, Winding up
इकाई 5	भारतीय साझेदारी अधिनियम 1932 - सामान्य परिचय, मुख्य तत्व एवम लक्षण, साझेदारी संलेख, सीमित दायित्व साझेदारी अधिनियम 2008. - प्रस्तावना, पंजीयन प्रक्रिया, साझेदारी का समापन।
<b>Part D: Assessment &amp; Evaluation</b>	







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## St. Aloysius' College (Autonomous), Jabalpur

### Part A – Introduction

Session:	2023-24
Subject/ विषय:	Commerce / कॉमर्स
Programme/ कार्यक्रम:	Certificate / सर्टिफिकेट
Class/ कक्षा:	B. Com II Semester
Course Code/ पाठ्यक्रम कोड:	C1-COMA2T
Course Type/ पाठ्यक्रम का प्रकार:	MINOR
Course Title/ पाठ्यक्रम का शीर्षक:	BUSINESS COMMUNICATION FOR MANAGERS
Pre – requisite/ पूर्वापेक्षा:	सभी के लिए उपलब्ध (Open For all)
Course Learning Outcome/ पाठ्यक्रम अध्ययन की परिलब्धियां:	After completion of this course, the students will, 1. Understand the basics of business communication. 2. Know the minute details about CV preparation 3. Learn the basic etiquette of facing an interview 4. Practice the written communication in different formats. 5. Acquire the knowledge of usual meetings in an office. 6. Be able to teach professional behavior.
Credit Value/ क्रेडिट मान:	6 credits
Total Marks/ कुल अंक:	Max. Marks: 40 (internal) + 60 (external) = 100

### Part B – Course Content

Unit 1	COMMUNICATION: Definition, Nature, Importance, Objectives of Communication. Communication theories and process-Information theory, Interaction theory, Transaction theory, Elements of communication process. Barriers to Communication: Linguistic Barriers, Psychological Barriers, Interpersonal Barriers, Cultural Barriers, Physical Barriers, and Organizational Barrier.
इकाई 1	संचार: परिभाषा , स्वभाव, महत्व, उद्देश्य। संचार के सिद्धांत एवं प्रक्रिया: जानकारी का सिद्धांत इंटरैक्शन का सिद्धांत (परस्पर क्रिया) ट्रान्सेक्शन सिद्धांत, संचार प्रक्रिया के आवश्यक तत्व प्रभावी संचार को प्रमाणित करने वाले तत्व बाधाएं। भाषायी बाधाएं मनोवैज्ञानिक बाधाएं अन्तरवैयक्तिक बाधाएं सांस्कृतिक बाधाएं, भौतिक बाधाएं, संगठनात्मक बाधाएं।
Unit 2	Written Communication: Writing Techniques and Guidelines. Letter writing - Basic Principles, Purpose, and Types of business letters. Report writing, types of reports, Drafting of reports. Oral Communication: Speeches for different occasions, Guidelines for Effective Listening, Job Interviews, and Type of Information. Modern forms of communication E-mail, Video Conferencing. International Communication for Global Business. Information



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	Technology: Form of technology, uses in modern communication system. Role of social media in modern business.
इकाई 2	लिखित संचार: लेखन तकनीक एवं निर्देश पत्र लेखन: व्यावसायिक पत्र: मूलभूत सिद्धांत आशय एवं प्रकार, रिपोर्ट लेखन एवं प्रकार । मौखिक संचार: विभिन्न अवसरों में दिए जाने वाले भाषण प्रभावी श्रवण हेतु दिशा निर्देश, नौकरी हेतु साक्षात्कार, जानकारियों के प्रकार संचार के आधुनिक आयाम: ई-मेल, वीडियो कॉन्फ्रेंसिंग, विश्व व्यापार हेतु अंतर्राष्ट्रीय संचार। सूचना प्रौद्योगिकी. प्रौद्योगिकी का रूप, आधुनिक संचार प्रणाली में उपयोग आधुनिक व्यवसाय में सोशल मीडिया की भूमिका।
Unit 3	Recruitment and Employment Correspondence- Drafting the Employment Notice, Job Application Letter, Curriculum Vitae/ Resumes; Joining Interview; An offer of employment; Job Description; Letter of Acceptance, Letter of Resignation and Promotion, Testimonials and References.
इकाई 3	भर्ती और रोजगार पत्राचार- रोजगार सूचना, नौकरी आवेदन पत्र का मसौदा तैयार करना; पाठ्यचर्या जीवनवृत्त/ बायोडाटा; साक्षात्कार में शामिल होना; रोजगार का प्रस्ताव; नौकरी का विवरण; स्वीकृति पत्र, त्यागपत्र और पदोन्नति पत्र, प्रशंसापत्र और संदर्भ.
Unit 4	Meetings- Ways and means of conducting meetings effectively, planning a meeting, meeting process, how to lead effective meeting, evaluation meeting, writing agenda and minutes of meeting, web conferencing Case Study- A special meeting of the executive committee
इकाई 4	बैठकें -प्रभावी ढंग से बैठकें आयोजित करने के तरीके और साधन, बैठक की योजना बनाना, बैठक की प्रक्रिया, प्रभावी बैठक का नेतृत्व कैसे करें, मूल्यांकन बैठक, बैठक का एजेंडा और कार्यवृत्त लिखना, वेब कॉन्फ्रेंसिंग, केस स्टडी- कार्यकारी समिति की एक विशेष बैठक .
Unit 5	Business and Social Etiquette - Professional conduct in a business setting: workplace hierarchy; the proper way to make introductions; Use of courteous phrases and language in the workplace. Professional Image: appropriate business attire; Telephone Etiquette; Table etiquette. Language lab class for practicals in business communication.





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## St. Aloysius' College (Autonomous), Jabalpur

### Part A – Introduction

Session:	2023-24
Subject/ विषय:	Commerce / वाणिज्य
Programme/कार्यक्रम:	Certificate / सर्टिफिकेट
Class/कक्षा:	B. Com 2 <sup>nd</sup> Semester/ बी. कॉम 2 <sup>nd</sup> सेमेस्टर
Course Code/ पाठ्यक्रमकोड:	M1-ASPM2T
Course Type/ पाठ्यक्रमका प्रकार:	ELECTIVE
Course Title/पाठ्यक्रमकाशीर्षक:	Advertising & sales Promotion/ विज्ञापन एवं विक्रय प्रबंध
Pre – requisite/ पूर्वपिछा:	Not required (Open For all)/ Not Required(open for all) / सभी के लिए उपलब्ध
Course Learning Outcome/ पाठ्यक्रमअध्ययनकीपरिलब्धिया:	After completion of this course, it is expected that the student will be able CO 1- Explain the basic concept, meaning, and importance of sales promotion. CO 2- Preparation of Sales promotion program. CO 3 To Familiarize the Students with the structure of sales department. CO4- To understand how Sales promotion results to increase sales of the organization.
Credit Value/ क्रेडिटमान:	4 credits
Total Marks/ कुलअंक:	Max. Marks: (Internal 40) + (External 60) 100

### Part B – Course Content

Unit 1	<p><b>Historical Background of Sales Promotion in India.</b> Nature and importance of sales promotion - Definition, Functions and limitations, Objectives, Sales Promotion Budget, Role in marketing.</p> <p><b>Salesmanship:</b> Skills and qualities required to enhance the personality of a salesman, Ethics, and Integrity in salesmanship.</p> <p><b>Forms of sales promotion</b> - Consumer Oriented, Trade Oriented, Sales Force Oriented. Major tools of sales promotion - Samples, Displays and Demonstrations, Fashion Shows, Digital Marketing, Sales contests, lotteries, gift offers, rebates, and rewards.</p>
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उकाई 1	भारत में बिक्री संवर्धन की ऐतिहासिक पृष्ठभूमि, विक्रय संवर्धन की प्रकृति और महत्व - परिभाषा, कार्य एवं सीमाएं, उद्देश्य विक्रय संवर्धन बजट, विपणन में भूमिका सेल्समैनशिप: विक्रेता के व्यक्तित्व को निखारने के लिए आवश्यक कौशल और गुण। विक्रय संवर्धन के रूप उपभोक्ताउन्मुख, व्यापारउन्मुख, विक्रयविभागउन्मुख। विक्रय संवर्धन के प्रमुख साधन नमूने प्रदर्शन एवं क्रियात्मक प्रदर्शन, फैशनशो,विक्रय प्रतियोगिता, लॉटरी, उपहार, छूट, पुरस्कार
Unit 2	<b>Sales promotion.</b> Requirement identification, designing of sales promotion campaign, Involvement of salesmen and dealers, Outsourcing sales promotion, National and International promotion strategies, and Coordination within the various promotion techniques. <b>Developing sales promotional programs,</b> pre-testing implementing, evaluating results, and making necessary modifications.
उकाई 2	विक्रय संवर्धन आवश्यकता की पहचान, विक्रयसंवर्धन अभियान की डिजाइनिंग, विक्रेता व डीलर की भागीदारी, आउटसोर्सिंग विक्रय संवर्धन,राष्ट्रीय एवं अंतर्राष्ट्रीय प्रचार रणनीतियाँ, विभिन्न प्रचार तकनीकों में समन्वय  विक्रय प्रचार कार्य क्रमविकसित करना,परीक्षण के पूर्वकार्यान्वयन,परिणामों का मूल्यांकन और आवश्यक संशोधन करना।
Unit 3	<b>Sales Force Management:</b> Estimating manpower requirements for the sales department; Planning for manpower recruitment and selection, training and development, placementand induction, Motivating and leading the sales force, Compensation and promotion policies, Sales meetings and contests. <b>Control Process:</b> Analysis of Sales Volume, costs, and profitability, managing expensesof Sales personnel, Evaluating sales force performance.
उकाई 3	बिक्री बल प्रबंधन: बिक्री विभाग के लिए मानव शक्ति आवश्यकताओं का अनुमान लगाना; जनशक्ति भर्ती और चयन, प्रशिक्षण और विकास, प्लेसमेंट और प्रेरण के लिए योजना, बिक्री बल को प्रेरित करना और नेतृत्व करना, मुआवजा और पदोन्नति नीतियां, बिक्री बैठकें और प्रतियोगिताएं।  नियंत्रण प्रक्रिया: बिक्री की मात्रा, लागत और लाभप्रदता का विश्लेषण, बिक्री कर्मियों के खर्चों का प्रबंधन, बिक्री बल के प्रदर्शन का मूल्यांकन।
Unit 4	<b>Sales Organization:</b> Setting up a sales organization, Principles of determining sales organization.
उकाई 4	विक्रय संगठन: विक्रय संगठन की स्थापना, विक्रय संगठन के निर्धारण के सिद्धांत।





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B.com syllabus 2023-24 as per National Education Policy 2020

	<b>Unit 3-</b> Illustrative based assignment on Hire purchase, lease financing, and credit rating (CO4) <b>Unit 4-</b> Summarize the role of SEBI with Case Study (CO5) (CO6) (CO7)	
<b>External Assessment:</b>  University/ Autonomous College	<b>Section A:</b> Four Objective-Type Questions <b>Section B:</b> Four Short Questions <b>Section C:</b> Four Long Questions	60 marks

## St. Aloysius' College (Autonomous), Jabalpur

### Part A - Introduction

<b>Session:</b>	2023-24
<b>Subject/ विषय:</b>	Commerce / कॉमर्स
<b>Programme/ कार्यक्रम:</b>	Diploma/ डिप्लोमा
<b>Class/ कक्षा:</b>	B. Com III semester / बी. कॉम तृतीय सेमेस्टर
<b>Course Code/ पाठ्यक्रम कोड:</b>	C2-comc 2T
<b>Course Type/ पाठ्यक्रम का प्रकार:</b>	Elective /एच्छिक
<b>Course Title/पाठ्यक्रम का शीर्षक:</b>	Principles of Management (प्रबंध के सिद्धांत)
<b>Pre – requisite/ पूर्वापेक्षा:</b>	Not Required (open for all) सभी के लिए उपलब्ध
<b>Course Learning Outcome/ पाठ्यक्रम अध्ययन की परिलब्धियां:</b>	After successful completion of the course, a student will be able to- CO 1 – Restate the concept of Management and identify the utility of Vedic management in the present era. CO 2- Compare and analyze the various thoughts of management and generalize the process of planning. CO 3- Describes the concept of organizing, staffing, and decision-making. CO 4- Explain the principles and techniques of direction.
<b>Credit Value/ क्रेडिट मान:</b>	4 credits
<b>Total Marks/ कुल अंक:</b>	Max. Marks: 40 (internal) + 60 (external)

### Part B – Course Content

Unit 1	Management: Concept/meaning -Definition, Nature Functions, Process, Scope, and Importance of Management. Role of Vedic Values and Ethics in Management, Difference between Management and Administration, Importance of Values and Ethics in Management.
इकाई 1	प्रबंध की अवधारणा/अर्थ - परिभाषा, प्रकृति, प्रक्रिया, क्षेत्र और प्रबंधन का महत्व, प्रबंधन में वैदिक मूल्यों और नैतिकता की भूमिका, प्रबंधन और प्रशासन के बीच अंतर, प्रबंधन में मूल्यों और नैतिकता का महत्व।
Unit 2	Evolution of Management Thought Early contributions: Taylor and Scientific Management, Fayol's Administrative Management, Bureaucracy, Human Relations, and Modern Approach, Managerial Ethics, Qualities and Characteristics of Managers. Planning - Meaning, Nature, Scope, Objective, Functions, and



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	Significance of Planning, Elements, and Steps of Planning, Strategies, and Policies,
इकाई 2	प्रबंधन का विकास विचार, टेलर और वैज्ञानिक प्रबंधन :प्रारंभिक योगदान., फेयोल का प्रशासनिक प्रबंधन, कर्मचारीतंत्र, मानवीय संबंध और आधुनिक दृष्टिकोण, प्रबंधकीय नैतिकता, प्रबंधकों के गुण और विशेषताएं. नियोजन . अर्थ, प्रकृति, क्षेत्र, उद्देश्य कार्य और नियोजन का महत्व, तत्व और नियोजन के चरण, रणनीतियाँ और नीतियां।
Unit 3	Organization - Meaning, Definition, Types, Scope, Principles, Line and Staff Relationship, Authority, Delegation, and Decentralization. Effective Organizing, Organizational Structures, and Staffing. Decision- Meaning, Definition, Types, Scope, Principles, decision making.
इकाई 3	संगठन. अर्थ, परिभाषा, प्रकार, क्षेत्र, सिद्धांत, रेखा और कर्मचारी संबंध, अधिकार, केंद्रीकरण और विकेंद्रीकरण। प्रभावी संगठन, संगठनात्मक संरचना, स्टाफिंग। निर्णयन. अर्थ, परिभाषा, प्रकार, क्षेत्र, सिद्धांत, निर्णयन
Unit 4	Direction- Meaning and definition of direction, importance, and principles of direction, techniques of direction, meaning of supervision,
इकाई 4	निर्देशन .निर्देशन का अर्थ और परिभाषा, निर्देशन का महत्व और सिद्धांत, निर्देशन की तकनीक, पर्यवेक्षण का अर्थ.

#### Part C – Suggested Readings

S. No.	Author	Name of the Book	Publication
1.	Koontz Harold & Wehrich	Essentials of management	Tata McGraw Hill New Delhi.
2.	Ramasamy, T.	Principles of Management	Himalaya Publishing House Pvt. Ltd. Nagpur
3.	Prasad, L.M	Principles and Practice of Management	S. Chand & Company Ltd New Delhi
4.	Gupta R.N.	Principles of Management	Vikash & S. Chand Company Ltd New Delhi
5.	आर.एल. नौलखा	प्रबंध के सिद्धांत	रमेश बुक डिपो
6.	राजीव जैन	व्यावसायिक प्रबन्ध	Himalaya Publishing House Pvt. Ltd.
7.	डॉ. एस. सी. सक्सेना	प्रबन्ध के सिद्धान्त	Sahitya Bhawan Publications
8.	आर सी अग्रवाल	प्रबंध के सिद्धांत	Sahitya Bhawan Publications

#### Suggestive digital platforms, and web links:

<https://ncert.nic.in/textbook/pdf/lhbs102.pdf>  
[https://www.tutorialspoint.com/management\\_principles/management\\_principles\\_tutorial.pdf](https://www.tutorialspoint.com/management_principles/management_principles_tutorial.pdf)  
<https://d3bxy9euw4e147.cloudfront.net/media/documents/PrinciplesofManagement-OP.pdf>  
<https://www.israheta.org/wp-content/uploads/2019/09/FYBMS-Principles-of-malt-.pdf>  
<https://faculty.mercer.edu/jacksonr/Ownership/chap02.pdf>  
<https://www.freebookcentre.net/business-books-download/Introduction-to-Principles-of-Management.html>



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St. Aloysius' College (Autonomous), Jabalpur	
<b>Part A – Introduction</b>	
Session:	2023-24
Subject/ विषय:	Commerce / कॉमर्स
Programme/ कार्यक्रम:	Diploma / डिप्लोमा
Class/ कक्षा:	B. Com III Sem / बी. कॉम तृतीय सेमेस्टर
Course Code/ पाठ्यक्रम कोड:	C2—COME2T
Course Type/ पाठ्यक्रम का प्रकार:	Elective / ऐच्छिक
Course Title/पाठ्यक्रम का शीर्षक:	Financial Market Operations / वित्तीय बाजार संचालन
Pre – requisite/ पूर्वपिक्षा:	Not Required (open for all) / सभी क के लिए उपलब्ध है
Course Learning Outcome/ पाठ्यक्रम अध्ययन की परिलब्धियां:	On successful completion of the course students will be able to: - CO 1- Describe the role and importance of the Indian financial market and intermediaries. CO 2- Explain the Concepts relevant to Indian financial markets and financial institutions. CO 3- Visualise Merchant Banking, leasing, and hire purchase concepts. CO 4 Stimulates ideas about the fundamentals of Credit Rating and venture capital. CO 5-Evaluate and create strategies to promote financial products and services. CO 6 - Compare and analyze specific problems or issues related to financial markets and institutions CO 7- Appraise the challenges faced by the regulators in the financial service industry.
Credit Value/ क्रेडिट मान:	4 credits
Total Marks/ कुल अंक:	Maximum Marks: 100 (40 internal + 60 external ) Minimum Passing Marks:35
<b>Part B – Course Content</b>	
Unit 1	Historical background and Introduction of the financial system in India, formal and informal financial sectors. Financial system and economic growth. An overview of the Indian financial system from 1951 to 1990. Financial sectors reforms after liberalization in 1990 to 1991.
इकाई 1	ऐतिहासिक पृष्ठभूमि और भारत में वित्तीय प्रणाली का परिचय , औपचारिक और अनौपचारिक वित्तीय क्षेत्र . वित्तीय प्रणाली और आर्थिक विकास. 1951 से 1990 तक भारतीय वित्तीय प्रणाली का अवलोकन. 1990 से 1991 में उदारीकरण के बाद वित्तीय क्षेत्रों में सुधार ।
Unit 2	Financial Services- Introduction of the Financial services industry in India. Merchant- Banking meaning and scope, Underwriting and regulatory framework of Merchant Banking in India. Consumers and Housing Finance.





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इकाई 2	वित्तीय सेवाएं- भारत में वित्तीय सेवा उद्योग का परिचय. मर्चेट- बैंकिंग अर्थ और कार्यक्षेत्र, अभिगोपन , भारत में मर्चेट बैंकिंग का नियामक ढांचा । उपभोक्ता और आवास वित्त ।
Unit 3	Leasing and hire purchase, Venture Capital finance, factoring services, Concept function, and types of Credit rating.
इकाई 3	पट्टा और किराया खरीद, उद्यम पूंजी वित्त, फैक्ट्रिंग सेवाएं, संकल्पना कार्य और क्रेडिट रेटिंग के प्रकार ।
Unit 4	Stock Exchange Board of India- SEBI as a capital market regulator. Objectives, functions, powers, and Organizational structure of SEBI. SEBI Guideline on the primary and secondary market. Listing procedure and legal requirements. Public issue pricing and marketing.
इकाई 4	स्टॉक एक्सचेंज बोर्ड ऑफ इंडिया- पूंजी बाजार नियामक के रूप में सेबी । सेबी के उद्देश्य, कार्य, शक्तियां और संगठनात्मक संरचना । प्राथमिक और द्वितीयक बाजार पर सेबी दिशानिर्देश । लिस्टिंग प्रक्रिया और कानूनी आवश्यकताएं। सार्वजनिक निर्गम मूल्य निर्धारण और विपणन ।

### Part C – Suggested Readings

S.No	Author	Name of the Book	Publication
1.	E. Gordan, K. Natarajan	Financial Markets and Operation	Himalaya Publishing House, New Delhi.
2.	Alok Goyal, Mridula Goyal	Financial Markets Operation	V K Global Publications, Pvt. Ltd Faridabad.
3.	Dr. F.C Sharma	Financial Markets Operation	SBPD Publication, Agra.
4.	डॉ. एफ. सी. शर्मा	वित्तीय बाजार संचालन	एस .बी. पी. डी. प्रकाशन, आगरा
5.	ई. गोर्डन, के. नटराजन, ओ.पी. अग्रवाल	भारतीय वित्तीय बाजार और सेवाएं	हिमालय पब्लिशिंग हाउस, नई दिल्ली
6.	आलोक गोयल, मृदुला गोयल	वित्तीय बाजार प्रक्रियाएं	वी के ग्लोबल पब्लिकेशन, प्राइवेट लिमिटेड फरीदाबाद

### Suggestive digital platforms and web links:

- <http://ncert.nic.in/textbook/pdf/Thb5202.pdf>
- <https://www.aisectfi.com/user/download/iibf/TTBF%20BOOK-2.pdf>

### Part D: Assessment & Evaluation

Suggested Continuous Evaluation Method

Maximum Marks: 100

Continuous Comprehensive Evaluation (CCE): 40 Marks

External Exam: 60 marks

Internal Assessment: Attainment Methods	Unit 1- Summarize the major events in financial sector reforms before and after liberalization (CO1) (CO2) Unit 2- Project-based learning on merchant banking and underwriting (C03)	40 Marks
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	the Cost theory and equilibrium to Analyze the Cost and Revenue of a firm. CO 10- To understand the major characteristics of different market structures.		
<b>Credit Value/ क्रेडिटमान:</b>	4 credits		
<b>Total Marks/ कुलअंक:</b>	Max. Marks: (Internal 40) + (External 60) 100		
<b>Part B – Course Content</b>			
Unit 1	Historical background of economics in India with special reference to Kautilya, Amartya Sen, and Nobel laureate Abhijeet Banerjee, Definition of Economics, Economics Law and their nature, Significance of Economics, Basics problems. Concept of Micro and Macro Economics, Methods of Economics study.		
इकाई 1	भारतमेंअर्थशास्त्रकीऐतिहासिकपृष्ठभूमिकोटील्य, अमर्त्ये सेन एवं नोबेल पुरस्कार विजेताअभिजीत बनर्जीकेविशेषसंदर्भमें, अर्थशास्त्रकीपरिभाषा, अर्थशास्त्र के नियमऔरउनकीप्रकृति, अर्थशास्त्रकामहत्व, अर्थशास्त्रकीआधारभूत समस्याएं, सूक्ष्मऔरव्यापकअर्थशास्त्रकीअवधारणा, आर्थिक अध्ययनकी रीतियां।		
Unit 2	Law of Demand- Meaning and Definition, Characteristics, Types of demand, Determinants of Law of Demand, Demand Function – determinants of individual demand – Market v/s Individual demand - Consumer Equilibrium Exceptions of Law of Demand.		
इकाई 2	मांगकेनियम- अर्थशास्त्रमेंमांगका, विशेषताएं, मांगकेप्रकार, मांगकेनियमकेनिर्धारकतत्व, मांग फलन-व्यक्तिगत मांग के निर्धारक-बाजार बनाम व्यक्तिगत मांग-उपभोक्ता संतुलन, मांगकेनियमकेअपवाद मांग फलन-व्यक्तिगत मांग के निर्धारक-बाजार बनाम व्यक्तिगत मांग-उपभोक्ता संतुलन।		
Unit 3	Elasticity of Demand, Concept and measurement of Elasticity of Demand, Price, Income and cross elasticity and Elasticity of Demand, Determination of Elasticity of Demand, Importance of Elasticity of Demand.		
इकाई 3	मांगकीलोच, मांगकीलोचकीअवधारणाऔरमांगकीकीमत, आयऔरआइलोच, औसतआगम, सीमांतआगमऔरमांगकीलोच, मांगकीलोचकापरिचय, मांगकीमूल्यसापेक्षताकामहत्व।		
Unit 4	Cost and Revenue Analysis: Short Run and Long Run, Average and Marginal Cost, Average and Marginal Revenue, Theory of cost. Market Concept and their classification.		
इकाई 4	लागतऔरआगमविश्लेषण: अल्पावधिऔरदीर्घावधि - औसत और सीमांत लागतऔसत और सीमांत आगम, लागतकासिद्धांतबाजारसंरचनाऔरउनकावर्गीकरण।		
<b>Part C – Suggested Readings</b>			
S. No.	Author	Name of the Book	Publication
1.	Kennedy John	Fundamentals of Business Economics	Himalaya Pub. Nagpur



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St. Aloysius' College (Autonomous), Jabalpur	
<b>Part A – Introduction</b>	
Session:	2023-24
Subject/ विषय:	Commerce / कॉमर्स
Programme/कार्यक्रम:	Certificate / सर्टिफिकेट
Class/कक्षा:	B. Com 1 <sup>st</sup> Semester / बी. कॉम
Course Code/ पाठ्यक्रमकोड:	C1-COMC2T
Course Type/ पाठ्यक्रमकाप्रकार:	ELECTIVE
Course Title/पाठ्यक्रम का शीर्षक:	Banking and Insurance
Pre – requisite/ पूर्वपेक्षा:	open for all/सभीकेलिएउपलब्ध
Course Learning Outcome/ पाठ्यक्रम अध्ययन की परिलब्धियां:	CO1: To list functions and importance of Indian commercial banks. CO2: To identify important events in the history of Indian banking system. CO3: To analyze functions performed by RBI and their impact on day-to-day life. CO4: To differentiate amongst various account facilities provided by banks. CO5: To Develop an understanding on the procedure and essential conditions to apply for different loans and advances.
Credit Value/ क्रेडिटमान:	4 Credits
Total Marks/ कुलअंक:	Max. Marks: (Internal 40) + (External 60) 100
<b>Part B – Course Content</b>	
Unit 1	Introduction to Banking: Historical background of banking, Definition, principles and importance of bank. Classification of bank. Functions of commercial bank. Structure of commercial banking in India. Features of Indian banking system, Modern Banking Practices in India- Mobile Banking.
इकाई-1	अधिकोषणकारिचय:अधिकोषणकीऐतिहासिकपृष्ठभूमिबैककीपरिभाषा, सिद्धान्तएवंमहत्वबैककावर्गीकरण, बैंको का वर्गीकरण, वाणिज्यिकबैंककेकार्य, भारतमेंवाणिज्यिकअधिकोषणकीसंरचना, भारतीयअधिकोषणव्यवस्थाकीविशेषताएँ भारत में आधुनिक बैंकिंग व्यवहार- मोबाइल बैंकिंग





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Unit 2	Central banking: RBI and its functions. Credit control. Nationalization and Merger of banks: General Introduction to Nationalization of Banks, Objective and Introduction to Private Banks Functioning and Usefulness or Importance and its effects. Evaluation of nationalization and merger of Indian banks.
इकाई-2	केन्द्रीय अधिकरण: भारतीय रिजर्व बैंक एवं उसके कार्य, सार्व नियंत्रण। बैंकों का राष्ट्रीयकरण एवं विलय: बैंकों के राष्ट्रीयकरण का सामान्य परिचय, उद्देश्य, निजी बैंकों के कामकाज का परिचय और उपयोगिता या महत्व और इसके प्रभाव। भारत में राष्ट्रीयकरण एवं विलय का मूल्यांकन।
Unit 3	Bank Deposits: Meaning and types. Features of bank accounts. Auto Sweep Account. Procedure to open and close bank accounts (Including online procedure). Non-Banking Financial Institution: Introduction, Function and Significance, Types of NBFCs, Difference between Banks & NBFCs
इकाई-3	बैंकवमा: अर्थ एवं प्रकार, बैंकखाता की विशेषताएं आदि स्वीप खाता। बैंकखाते खोलने एवं बंद करने की प्रक्रिया (ऑनलाइन प्रक्रिया सहित)। गैर-बैंकिंग वित्तीय संस्थान: परिचय, कार्य और महत्व, एनबीएफसी के प्रकार, बैंकों और एनबीएफसी के बीच अंतर।
Unit 4	Loans and Advances: Principles to sanction loans and advances. Classification of loans and advances. Procedure to apply for house loan, personal loan, education loan and commercial loan. Introduction to Micro Finance.
इकाई - 4	ऋण एवं अग्रिम: ऋण एवं अग्रिम स्वीकृति के सिद्धान्त, ऋण एवं अग्रिम का वर्गीकरण, गृह ऋण व्यक्तिगत ऋण, शिक्षा ऋण एवं वाणिज्यिक ऋण हेतु आवेदन प्रक्रिया।

### Part C – Suggested Readings

S. No.	Author	Name of the Book	Publication
1.	Gordon Natrajan,	Banking Law and Practice,	Himalaya Pub.Mumbai
2.	S.N.Maheshwari	Banking Law and Practice,	Kalyana Publishers, New Delhi (Bath
3.	Shekar,	Banking Law and Practice	Vikash Publishing House, New Delhi
4.	ओझा बी.एल	भारत में बैंकिंग विधि	आरडीहाऊस
5.	शर्मा एच. सी.	भारत में बैंकिंग विधि एवं व्यवहार	साहित्यभवनपब्लिकेशन

### Part D: Assessment & Evaluation

Suggested Continuous Evaluation Method

Maximum Marks: 100

Continuous Comprehensive Evaluation (CCE): Marks