



SMART INDIAN SCHOOL
(UNDER THE AEGIS OF BHAVANS MIDDLE EAST)

(SENIOR SECTION)

ANNUAL SYLLABUS

2022-23

(AS PER THE CBSE CURRICULUM)
RELEASED ON 21 APRIL 2022

CLASSES : XII

COMMERCE STREAM

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Accountancy (Code No. 055)
Class-XII (2022-23)

Theory: 80 Marks

3 Hours

Project: 20 Marks

| Units | | Periods | Marks |
|---------------|---|---------------------|-----------|
| Part A | Accounting for Partnership Firms and Companies | | |
| | Unit 1. Accounting for Partnership Firms | 105 | 36 |
| | Unit 2. Accounting for Companies | 45 | 24 |
| | | 150 | 60 |
| Part B | Financial Statement Analysis | | |
| | Unit 3. Analysis of Financial Statements | 30 | 12 |
| | Unit 4. Cash Flow Statement | 20 | 8 |
| | | 50 | 20 |
| Part C | Project Work | 20 | 20 |
| | Project work will include: | | |
| | Project File | 4 Marks | |
| | Written Test | 12 Marks (One Hour) | |
| | Viva Voce | 4 Marks | |
| Or | | | |
| Part B | Computerized Accounting | | |
| | Unit 4. Computerized Accounting | 50 | 20 |
| Part C | Practical Work | 20 | 20 |
| | Practical work will include: | | |
| | Practical File 4 Marks | | |
| | Practical Examination 12 Marks (One Hour) | | |
| | Viva Voce 4 Marks | | |

Part A: Accounting for Partnership Firms and Companies

Unit 1: Accounting for Partnership Firms

| Units/Topics | Learning Outcomes |
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| <ul style="list-style-type: none">Partnership: features, Partnership Deed.Provisions of the Indian Partnership Act 1932 in the absence of partnership deed.Fixed v/s fluctuating capital accounts. Preparation of Profit and Loss Appropriation account- division of profit among partners, guarantee of profits.Past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio).Goodwill: meaning, nature, factors affecting and methods of valuation - average profit, super profit and capitalization. <p>Note: Interest on partner's loan is to be treated as a charge against profits.</p> <p>Goodwill: meaning, factors affecting, need for valuation, methods for calculation (average profits, super profits and capitalization) , adjusted through partners capital/ current account or by raising and writing off goodwill (AS 26)</p> <p>Accounting for Partnership firms - Reconstitution and Dissolution.</p> <ul style="list-style-type: none">Change in the Profit Sharing Ratio among the existing partners - sacrificing ratio, gaining ratio, accounting for revaluation of assets and reassessment of liabilities and treatment of reserves, accumulated profits and losses. Preparation of revaluation account and balance sheet.Admission of a partner - effect of admission of a partner on change in the profit sharing ratio, treatment of goodwill (as per AS 26), treatment for revaluation of assets and re-assessment of liabilities, treatment of | <p>After going through this Unit, the students will be able to:</p> <ul style="list-style-type: none">state the meaning of partnership, partnership firm and partnership deed.describe the characteristic features of partnership and the contents of partnership deed.discuss the significance of provision of Partnership Act in the absence of partnership deed.differentiate between fixed and fluctuating capital, outline the process and develop the understanding and skill of preparation of Profit and Loss Appropriation Account.develop the understanding and skill of preparation profit and loss appropriation account involving guarantee of profits.develop the understanding and skill of making past adjustments.state the meaning, nature and factors affecting goodwilldevelop the understanding and skill of valuation of goodwill using different methods.state the meaning of sacrificing ratio, gaining ratio and the change in profit sharing ratio among existing partners.develop the understanding of accounting treatment of revaluation assets and reassessment of liabilities and treatment of reserves and accumulated profits by preparing revaluation account and balance sheet.explain the effect of change in profit sharing ratio on admission of a new partner.develop the understanding and skill of |

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| <p>reserves, accumulated profits and losses, adjustment of capital accounts and preparation of capital, current account and balance sheet.</p> <ul style="list-style-type: none"> • Retirement and death of a partner: effect of retirement / death of a partner on change in profit sharing ratio, treatment of goodwill (as per AS 26), treatment for revaluation of assets and reassessment of liabilities, adjustment of accumulated profits, losses and reserves, adjustment of capital accounts and preparation of capital, current account and balance sheet. Preparation of loan account of the retiring partner. • Calculation of deceased partner's share of profit till the date of death. Preparation of deceased partner's capital account and his executor's account. • Dissolution of a partnership firm: meaning of dissolution of partnership and partnership firm, types of dissolution of a firm. Settlement of accounts - preparation of realization account, and other related accounts: capital accounts of partners and cash/bank a/c (excluding piecemeal distribution, sale to a company and insolvency of partner(s)). <p>Note:</p> <p>(i) If the realized value of tangible assets is not given it should be considered as realized at book value itself.</p> <p>(ii) If the realized value of intangible assets is not given it should be considered as nil (zero value).</p> <p>(iii) In case, the realization expenses are borne by a partner, clear indication should be given regarding the payment thereof.</p> | <p>treatment of goodwill as per AS-26, treatment of revaluation of assets and re-assessment of liabilities, treatment of reserves and accumulated profits, adjustment of capital accounts and preparation of capital, current account and balance sheet of the new firm.</p> <ul style="list-style-type: none"> • explain the effect of retirement / death of a partner on change in profit sharing ratio. • develop the understanding of accounting treatment of goodwill, revaluation of assets and re-assessment of liabilities and adjustment of accumulated profits, losses and reserves on retirement / death of a partner and capital adjustment. • develop the skill of calculation of deceased partner's share till the time of his death and prepare deceased partner's and executor's account. • discuss the preparation of the capital accounts of the remaining partners and the balance sheet of the firm after retirement / death of a partner. • understand the situations under which a partnership firm can be dissolved. • develop the understanding of preparation of realisation account and other related accounts. |
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Unit-3 Accounting for Companies

| Units/Topics | Learning Outcomes |
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| Accounting for Share Capital <ul style="list-style-type: none"> • Features and types of companies | After going through this Unit, the students will be able to: |

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| <ul style="list-style-type: none"> • Share and share capital: nature and types. • Accounting for share capital: issue and allotment of equity and preference shares. Public subscription of shares - over subscription and under subscription of shares; issue at par and at premium, calls in advance and arrears (excluding interest), issue of shares for consideration other than cash. • Concept of Private Placement and Employee Stock Option Plan (ESOP), Sweat Equity. • Accounting treatment of forfeiture and re-issue of shares. • Disclosure of share capital in the Balance Sheet of a company. <p>Accounting for Debentures</p> <ul style="list-style-type: none"> • Debentures: Meaning, types, Issue of debentures at par, at a premium and at a discount. Issue of debentures for consideration other than cash; Issue of debentures with terms of redemption; debentures as collateral security-concept, interest on debentures. Writing off discount / loss on issue of debentures. <p>Note: Discount or loss on issue of debentures to be written off in the year debentures are allotted from Security Premium Reserve (if it exists) and then from Statement of Profit and Loss as Financial Cost (AS 16)</p> | <ul style="list-style-type: none"> • state the meaning of share and share capital and differentiate between equity shares and preference shares and different types of share capital. • understand the meaning of private placement of shares and Employee Stock Option Plan. • explain the accounting treatment of share capital transactions regarding issue of shares. • develop the understanding of accounting treatment of forfeiture and re-issue of forfeited shares. • describe the presentation of share capital in the balance sheet of the company as per schedule III part I of the Companies Act 2013. • explain the accounting treatment of different categories of transactions related to issue of debentures. • develop the understanding and skill of writing of discount / loss on issue of debentures. • understand the concept of collateral security and its presentation in balance sheet. • develop the skill of calculating interest on debentures and its accounting treatment. • state the meaning of redemption of debentures. |
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Part B: Financial Statement Analysis

Unit 4: Analysis of Financial Statements

| Units/Topics | Learning Outcomes |
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| Financial statements of a Company: Meaning, Nature, Uses and importance of financial Statement. | After going through this Unit, the students will be able to: <ul style="list-style-type: none"> • develop the understanding of major headings |

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| <p>Statement of Profit and Loss and Balance Sheet in prescribed form with major headings and sub headings (as per Schedule III to the Companies Act, 2013)</p> <p>Note: <i>Exceptional items, extraordinary items and profit (loss) from discontinued operations are excluded.</i></p> <ul style="list-style-type: none"> • Financial Statement Analysis: Meaning, Significance Objectives, importance and limitations. • Tools for Financial Statement Analysis: Cash flow analysis, ratio analysis. • Accounting Ratios: Meaning, Objectives, Advantages, classification and computation. • Liquidity Ratios: Current ratio and Quick ratio. • Solvency Ratios: Debt to Equity Ratio, Total Asset to Debt Ratio, Proprietary Ratio and Interest Coverage Ratio. Debt to Capital Employed Ratio. • Activity Ratios: Inventory Turnover Ratio, Trade Receivables Turnover Ratio, Trade Payables Turnover Ratio, Fixed Asset Turnover Ratio, Net Asset Turnover Ratio and Working Capital Turnover Ratio. • Profitability Ratios: Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, Net Profit Ratio and Return on Investment. | <p>and sub-headings (as per Schedule III to the Companies Act, 2013) of balance sheet as per the prescribed norms / formats.</p> <ul style="list-style-type: none"> • state the meaning, objectives and limitations of financial statement analysis. • discuss the meaning of different tools of 'financial statements analysis'. • state the meaning, objectives and significance of different types of ratios. • develop the understanding of computation of current ratio and quick ratio. • develop the skill of computation of debt equity ratio, total asset to debt ratio, proprietary ratio and interest coverage ratio. • develop the skill of computation of inventory turnover ratio, trade receivables and trade payables ratio and working capital turnover ratio and others. • develop the skill of computation of gross profit ratio, operating ratio, operating profit ratio, net profit ratio and return on investment. |
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Note: Net Profit Ratio is to be calculated on the basis of profit before and after tax.

Unit 5: Cash Flow Statement

| Units/Topics | Learning Outcomes |
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| <ul style="list-style-type: none"> • Meaning, objectives Benefits, Cash and Cash Equivalents, Classification of Activities and preparation (as per AS 3 (Revised) (Indirect Method only) | <p>After going through this Unit, the students will be able to:</p> <ul style="list-style-type: none"> • state the meaning and objectives of cash flow statement. • develop the understanding of preparation of |

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| <p>Note:</p> <p><i>(i) Adjustments relating to depreciation and amortization, profit or loss on sale of assets including investments, dividend (both final and interim) and tax.</i></p> <p><i>(ii) Bank overdraft and cash credit to be treated as short term borrowings.</i></p> <p><i>(iii) Current Investments to be taken as Marketable securities unless otherwise specified.</i></p> | <p>Cash Flow Statement using indirect method as per AS 3 with given adjustments.</p> |
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Note: Previous years' Proposed Dividend to be given effect, as prescribed in AS-4, Events occurring after the Balance Sheet date. Current years' Proposed Dividend will be accounted for in the next year after it is declared by the shareholders.

Project Work

Note: Kindly refer to the Guidelines published by the CBSE.
The comprehensive project may contain simple GST calculations.

OR

Part B: Computerised Accounting

Unit 4: Computerised Accounting

Overview of Computerised Accounting System

- Introduction: Application in Accounting.
- Features of Computerised Accounting System.
- Structure of CAS.
- Software Packages: Generic; Specific; Tailored.

Accounting Application of Electronic Spreadsheet.

- Concept of electronic spreadsheet.
- Features offered by electronic spreadsheet.
- Application in generating accounting information - bank reconciliation statement; asset accounting; loan repayment of loan schedule, ratio analysis
- Data representation- graphs, charts and diagrams.

Using Computerized Accounting System.

- Steps in installation of CAS, codification and Hierarchy of account heads, creation of accounts.
- Data: Entry, validation and verification.
- Adjusting entries, preparation of balance sheet, profit and loss account with closing entries and opening entries.
- Need and security features of the system.

Part C: Practical Work

Please refer to the guidelines published by CBSE.

Prescribed Books:

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|--|-----------|-------------------|
| Financial Accounting -I | Class XI | NCERT Publication |
| Accountancy -II | Class XI | NCERT Publication |
| Accountancy -I | Class XII | NCERT Publication |
| Accountancy -II | Class XII | NCERT Publication |
| Accountancy – Computerised Accounting System | Class XII | NCERT Publication |

Guidelines for Project Work in Accounting and Practical work in computerised Accounting Class XII CBSE Publication

Suggested Question Paper Design
Accountancy (Code No. 055)
Class XII (2022-23)

Theory: 80 Marks
Project: 20 Marks

3 hrs.

| S N | Typology of Questions | Marks | Percentage |
|----------------|--|--------------|-------------------|
| 1 | Remembering and Understanding: Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas | 44 | 55% |
| 3 | Applying: Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way. | 19 | 23.75% |
| 4 | Analysing, Evaluating and Creating: Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations. Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions. | 17 | 21.25% |
| | TOTAL | 80 | 100% |

Business Studies CLASS–XII (2022-23)

Theory: 80 Marks
Project: 20 Marks

3 Hours

| Units | | Periods | Marks |
|---------------|---|------------|-----------|
| Part A | Principles and Functions of Management | | |
| 1. | Nature and Significance of Management | 12 | 16 |
| 2 | Principles of Management | 14 | |
| 3 | Business Environment | 12 | |
| 4 | Planning | 14 | 14 |
| 5 | Organising | 15 | |
| 6 | Staffing | 16 | 20 |
| 7 | Directing | 15 | |
| 8 | Controlling | 12 | |
| | Total | 110 | 50 |
| Part B | Business Finance and Marketing | | |
| 9 | Financial Management | 20 | 15 |
| 10 | Financial Markets | 18 | |
| 11 | Marketing Management | 30 | 15 |
| 12 | Consumer Protection | 12 | |
| | Total | 80 | 30 |
| Part C | Project Work (One) | 30 | 20 |

Part A: Principles and Functions of Management

Unit 1: Nature and Significance of Management

| Concept | After going through this unit, the student/ learner would be able to: |
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| Management - concept, objectives, and importance | <ul style="list-style-type: none"> Understand the concept of management. Explain the meaning of 'Effectiveness and Efficiency. Discuss the objectives of management. Describe the importance of management. |
| Management as Science, Art and Profession | <ul style="list-style-type: none"> Examine the nature of management as a science, art and profession. |
| Levels of Management | <ul style="list-style-type: none"> Understand the role of top, middle and lower levels of management |
| Management functions-planning, organizing, staffing, directing and controlling | <ul style="list-style-type: none"> Explain the functions of management |
| Coordination- concept and importance | <ul style="list-style-type: none"> Discuss the concept and |

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| | <p>characteristics of coordination.</p> <ul style="list-style-type: none"> • Explain the importance of coordination. |
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Unit 2: Principles of Management

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| Principles of Management- concept and significance | <ul style="list-style-type: none"> • Understand the concept of principles of management. • Explain the significance of management principles. |
| Fayol's principles of management | <ul style="list-style-type: none"> • Discuss the principles of management developed by Fayol. |
| Taylor's Scientific management- principles and techniques | <ul style="list-style-type: none"> • Explain the principles and techniques of 'Scientific Management'. • Compare the contributions of Fayol and Taylor. |

Unit 3: Business Environment

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| Business Environment- concept and importance | <ul style="list-style-type: none"> • Understand the concept of 'Business Environment'. • Describe the importance of business environment |
| Dimensions of Business Environment- Economic, Social, Technological, Political and Legal | <ul style="list-style-type: none"> • Describe the various dimensions of 'Business Environment'. • Understand the concept of demonetization |
| Demonetization - concept and features | |

Unit 4: Planning

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| Concept, importance and limitation | <ul style="list-style-type: none"> • Understand the concept of planning. • Describe the importance of planning. • Understand the limitations of planning. |
| Planning process | <ul style="list-style-type: none"> • Describe the steps in the process of planning. |
| Single use and standing plans. Objectives, Strategy, Policy, Procedure, method Rule, budget and Programme | <ul style="list-style-type: none"> • Develop an understanding of single use and standing plans • Describe objectives, policies, strategy, procedure, method, rule, budget and programme as types of plans. |

Unit 5: Organising

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| Concept and importance | <ul style="list-style-type: none"> • Understand the concept of organizing as a structure and as a |
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| | process. <ul style="list-style-type: none"> • Explain the importance of organising. |
| Organising Process | <ul style="list-style-type: none"> • Describe the steps in the process of organizing |
| Structure of organisation- functional and divisional concept. Formal and informal organisation- concept | <ul style="list-style-type: none"> • Describe functional and divisional structures of organisation. • Explain the advantages, disadvantages and suitability of functional and divisional structure. • Understand the concept of formal and informal organisation. • Discuss the advantages, disadvantages of formal and informal organisation. |
| Delegation: concept, elements and importance | <ul style="list-style-type: none"> • Understand the concept of delegation. • Describe the elements of delegation. • Appreciate the importance of Delegation. |
| Decentralization: concept and importance | <ul style="list-style-type: none"> • Understand the concept of decentralisation. • Explain the importance of decentralisation. • Differentiate between delegation and decentralisation. |

Unit 6: Staffing

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| Concept and importance of staffing | <ul style="list-style-type: none"> • Understand the concept of staffing. • Explain the importance of staffing |
| Staffing as a part of Human Resource Management concept | <ul style="list-style-type: none"> • Understand the specialized duties and activities performed by Human Resource Management |
| Staffing process | <ul style="list-style-type: none"> • Describe the steps in the process of staffing |
| Recruitment process | <ul style="list-style-type: none"> • Understand the meaning of recruitment. • Discuss the sources of recruitment. • Explain the merits and demerits of internal and external sources of recruitment. |
| Selection – process | <ul style="list-style-type: none"> • Understand the meaning of selection. • Describe the steps involved in the process of selection. |
| Training and Development - Concept and importance, Methods of training - on the | <ul style="list-style-type: none"> • Understand the concept of training and development. |

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| job and off the job - vestibule training, apprenticeship training and internship training | <ul style="list-style-type: none"> • Appreciate the importance of training to the organisation and to the employees. • Discuss the meaning of induction training, vestibule training, apprenticeship training and internship training. • Differentiate between training and development. • Discuss on the job and off the job methods of training. |
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Unit 7: Directing

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| Concept and importance | <ul style="list-style-type: none"> • Describe the concept of directing. • Discuss the importance of directing |
| Elements of Directing | <ul style="list-style-type: none"> • Describe the various elements of directing |
| Motivation - concept, Maslow's hierarchy of needs, Financial and non-financial incentives | <ul style="list-style-type: none"> • Understand the concept of motivation. • Develop an understanding of Maslow's Hierarchy of needs. • Discuss the various financial and non-financial incentives. |
| Leadership - concept, styles - authoritative, democratic and laissez faire | <ul style="list-style-type: none"> • Understand the concept of leadership. • Understand the various styles of leadership. |
| Communication - concept, formal and informal communication; barriers to effective communication, how to overcome the barriers | <ul style="list-style-type: none"> • Understand the concept of communication • Understand the elements of the communication process. • Discuss the concept of formal and informal communication. • Discuss the various barriers to effective communication. • Suggest measures to overcome barriers to communication. |

Unit 8: Controlling

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| Controlling - Concept and importance | <ul style="list-style-type: none"> • Understand the concept of controlling. • Explain the importance of controlling. |
| Relationship between planning and controlling | <ul style="list-style-type: none"> • Describe the relationship between planning and controlling |
| Steps in process of control | <ul style="list-style-type: none"> • Discuss the steps in the process of controlling. |

Part B: Business Finance and Marketing

Unit 9: Financial Management

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| Concept, role and objectives of Financial Management | <ul style="list-style-type: none">• Understand the concept of financial management.• Explain the role of financial management in an organisation.• Discuss the objectives of financial management |
| Financial decisions: investment, financing and dividend- Meaning and factors affecting | <ul style="list-style-type: none">• Discuss the three financial decisions and the factors affecting them. |
| Financial Planning - concept and importance | <ul style="list-style-type: none">• Describe the concept of financial planning and its objectives.• Explain the importance of financial planning. |
| Capital Structure – concept and factors affecting capital structure | <ul style="list-style-type: none">• Understand the concept of capital structure.• Describe the factors determining the choice of an appropriate capital structure of a company. |
| Fixed and Working Capital - Concept and factors affecting their requirements | <ul style="list-style-type: none">• Understand the concept of fixed and working capital.• Describe the factors determining the requirements of fixed and working capital. |

Unit 10: Financial Markets

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| Financial Markets: Concept | <ul style="list-style-type: none">• Understand the concept of financial market. |
| Money Market: Concept | <ul style="list-style-type: none">• Understand the concept of money market. |
| Capital market and its types (primary and secondary) | <ul style="list-style-type: none">• Discuss the concept of capital market.• Explain primary and secondary markets as types of capital market.• Differentiate between capital market and money market.• Distinguish between primary and secondary markets. |
| Stock Exchange - Functions and trading procedure | <ul style="list-style-type: none">• Give the meaning of a stock exchange.• Explain the functions of a stock exchange.• Discuss the trading procedure in a stock exchange. |

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| | <ul style="list-style-type: none"> • Give the meaning of depository services and demat account as used in the trading procedure of securities. |
| Securities and Exchange Board of India (SEBI) - objectives and functions | <ul style="list-style-type: none"> • State the objectives of SEBI. • Explain the functions of SEBI. |

Unit 11: Marketing

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| Marketing – Concept, functions and philosophies | <ul style="list-style-type: none"> • Understand the concept of marketing. • Explain the features of marketing. • Discuss the functions of marketing. • Explain the marketing philosophies. |
| Marketing Mix – Concept and elements | <ul style="list-style-type: none"> • Understand the concept of marketing mix. • Describe the elements of marketing mix. |
| Product - branding, labelling and packaging – Concept | <ul style="list-style-type: none"> • Understand the concept of product as an element of marketing mix. • Understand the concept of branding, labelling and packaging. |
| Price - Concept, Factors determining price | <ul style="list-style-type: none"> • Understand the concept of price as an element of marketing mix. • Describe the factors determining price of a product. |
| Physical Distribution – concept, components and channels of distribution | <ul style="list-style-type: none"> • Understand the concept of physical distribution. • Explain the components of physical distribution. • Describe the various channels of distribution. |
| Promotion – Concept and elements; Advertising, Personal Selling, Sales Promotion and Public Relations | <ul style="list-style-type: none"> • Understand the concept of promotion as an element of marketing mix. • Describe the elements of promotion mix. • Understand the concept of advertising. • Understand the concept of sales promotion. • Discuss the concept of public relations. |

Unit 12: Consumer Protection

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| Concept and importance of consumer protection | <ul style="list-style-type: none"> • Understand the concept of consumer protection. • Describe the importance of |
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| | <p>consumer protection.</p> <ul style="list-style-type: none"> • Discuss the scope of Consumer Protection Act, 2019 |
| <p>The Consumer Protection Act, 2019: <i>Source:</i> http://egazette.nic.in/WriteReadData/2019/210422.pdf</p> <p>Meaning of consumer Rights and responsibilities of consumers Who can file a complaint? Redressal machinery Remedies available</p> | <ul style="list-style-type: none"> • Understand the concept of a consumer according to the Consumer Protection Act, 2019. • Explain the consumer rights • Understand the responsibilities of consumers • Understand who can file a complaint and against whom? • Discuss the legal redressal machinery under Consumer Protection Act, 2019. • Examine the remedies available to the consumer under Consumer Protection Act, 2019. |
| <p>Consumer awareness - Role of consumer organizations and Non-Governmental Organizations (NGOs)</p> | <ul style="list-style-type: none"> • Describe the role of consumer organizations and NGOs in protecting consumers' interests. |

Unit 13: Project Work

PROJECT WORK IN BUSINESS STUDIES FOR CLASS XI AND XII

Introduction

The course in Business Studies is introduced at Senior School level to provide students with a sound understanding of the principles and practices bearing in business (trade and industry) as well as their relationship with the society. Business is a dynamic process that brings together technology, natural resources and human initiative in a constantly changing global environment. With the purpose to help them understand the framework within which a business operates, and its interaction with the social, economic, technological and legal environment, the CBSE has introduced Project Work in the Business Studies Syllabus for Classes XI and XII. The projects have been designed to allow students to appreciate that business is an integral component of society and help them develop an understanding of the social and ethical issues concerning them.

The project work also aims to empower the teacher to relate all the concepts with what is happening around the world and the student's surroundings, making them appear more clear and contextual. This will enable the student to enjoy studies and use his free time effectively in observing what's happening around.

By means of Project Work the students are exposed to life beyond textbooks giving them opportunities to refer materials, gather information, analyze it further to obtain relevant information and decide what matter to keep.

Objectives

After doing the Project Work in Business Studies, the students will be able to do the following:

- develop a practical approach by using modern technologies in the field of business and management;
- get an opportunity for exposure to the operational environment in the field of business management and related services;
- inculcate important skills of team work, problem solving, time management, information collection, processing, analysing and synthesizing relevant information to derive meaningful conclusions
- get involved in the process of research work; demonstrate his or her capabilities while working independently and
- make studies an enjoyable experience to cherish.

CLASS XI: GUIDELINES FOR TEACHERS

This section provides some basic guidelines for the teachers to launch the projects in Business Studies. It is very necessary to interact, support, guide, facilitate and encourage students while assigning projects to them.

The teachers must ensure that the project work assigned to the students whether individually or in group are discussed at different stages right from assignment to drafts review and finalization. Students should be facilitated in terms of providing relevant

materials or suggesting websites, or obtaining required permissions from business houses, malls etc for their project. The periods assigned to the Project Work should be suitably spaced throughout the academic session. The teachers MUST ensure that the students actually go through the rigors and enjoy the process of doing the project rather than depending on any readymade material available commercially.

The following steps might be followed:

1. Students must take any one topic during the academic session of Class XI.
2. The project may be done in a group or individually.
3. The topic should be assigned after discussion with the students in the class and should then be discussed at every stage of submission of the draft/final project work.
4. The teacher should play the role of a facilitator and should closely supervise the process of project completion.
5. The teachers must ensure that the student's self esteem should go up, and he /she should be able to enjoy this process.
6. The project work for each term should culminate in the form of Power Point Presentation/Exhibition/ Skit before the entire class. This will help in developing ICT and communication skills among them.

The teacher should help students to identify any one project from the given topics.

I. Project One: Field Visit

The objective of introducing this project among the students is to give a first hand experience to them regarding the different types of business units operating in their surroundings, to observe their features and activities and relate them to the theoretical knowledge given in their text books. The students should select a place of field visit from the following: – (Add more as per local area availability.)

1. Visit to a Handicraft unit.
2. Visit to an Industry.
3. Visit to a Whole sale market (vegetables, fruits, flowers, grains, garments, etc.)
4. Visit to a Departmental store.
5. Visit to a Mall.

The following points should be kept in mind while preparing this visit.

1. Select a suitable day free from rush/crowd with lean business hours.
2. The teacher must visit the place first and check out on logistics. It's better to seek permission from the concerned business- incharge.
3. Visit to be discussed with the students in advance. They should be encouraged to prepare a worksheet containing points of observation and reporting.
4. Students may carry their cameras (at their own risk) with prior permission for collecting evidence of their observations.

1. Visit to a Handicraft Unit

The purpose of visiting a Handicraft unit is to understand nature and scope of its business, stake holders involved and other aspects as outlined below

- a) The raw material and the processes used in the business: People /parties/firms from which they obtain their raw material.
- b) The market, the buyers, the middlemen, and the areas covered. c) The countries to which exports are made.
- d) Mode of payment to workers, suppliers etc.
- e) Working conditions.
- f) Modernization of the process over a period of time.
- g) Facilities, security and training for the staff and workers.
- h) Subsidies available/ availed.
- i) Any other aspect that the teachers deem fit.

2. Visit to an Industry.

The students are required to observe the following:

- a) Nature of the business organisation.
- b) Determinants for location of business unit.
- c) Form of business enterprise: Sole Proprietorship, Partnership, Undivided Hindu Family, Joint Stock Company (a Multinational Company).
- d) Different stages of production/process
- e) Auxiliaries involved in the process.
- f) Workers employed, method of wage payment, training programmes and facilities available.
- g) Social responsibilities discharged towards workers, investors, society, environment and government.
- h) Levels of management.
- i) Code of conduct for employers and employees.
- j) Capital structure employed- borrowed v/s owned.
- k) Quality control, recycling of defective goods.
- l) Subsidies available/availed.
- m) Safety Measures employed.
- n) Working conditions for labour in observation of Labour Laws.
- o) Storage of raw material and finished goods.
- p) Transport management for employees, raw material and finished goods.
- q) Functioning of various departments and coordination among them (Production, Human Resource, Finance and Marketing)
- r) Waste Management.
- s) Any other observation.

3. Visit to a whole sale market: vegetables/fruits/flowers/grains/garments etc.

The students are required to observe the following:

- a) Sources of merchandise.
- b) Local market practices.
- c) Any linked up businesses like transporters, packagers, money lenders, agents, etc.
- d) Nature of the goods dealt in.
- e) Types of buyers and sellers.
- f) Mode of the goods dispersed, minimum quantity sold, types of packaging employed.
- g) Factors determining the price fluctuations.

- h) Seasonal factors (if any) affecting the business.
- i) Weekly/ monthly non-working days.
- j) Strikes, if any- causes thereof.
- k) Mode of payments.
- l) Wastage and disposal of dead stock.
- m) Nature of price fluctuations, reason thereof.
- n) Warehousing facilities available\availed.
- o) Any other aspect.

4. Visit to a Departmental store

The students are required to observe the following:

- a) Different departments and their lay out.
- b) Nature of products offered for sale.
- c) Display of fresh arrivals.
- d) Promotional campaigns.
- e) Spaces and advertisements.
- f) Assistance by Sales Personnel.
- g) Billing counter at store – Cash, Credit Card/ Debit Card, swipe facility. Added attractions and facilities at the counter.
- h) Additional facilities offered to customers
- i) Any other relevant aspect.

5. Visit to a Mall.

The students are required to observe the following:

- a) Number of floors, shops occupied and unoccupied.
- b) Nature of shops, their ownership status
- c) Nature of goods dealt in: local brands, international brands,
- d) Service business shops- Spas, gym, saloons etc.
- e) Rented spaces, owned spaces,
- f) Different types of promotional schemes.
- g) Most visited shops.
- h) Special attractions of the Mall- Food court, Gaming zone or Cinema etc.
- i) Innovative facilities.
- j) Parking facilities. Teachers may add more to the list.

II. Project Two: Case Study on a Product

- a) Take a product having seasonal growth and regular demand with which students can relate. For example,
 - Apples from Himachal Pradesh, Kashmir.
 - Oranges from Nagpur,
 - Mangoes from Maharashtra/U.P./Bihar/Andhra Pradesh etc.
 - Strawberries from Panchgani,
 - Aloe vera from Rajasthan,
 - Walnuts/almonds from Kashmir,
 - Jackfruit from South,
 - Guavas from Allahabad,

- Pineapples from North East India,
- Tea from Assam,
- Orchids from Sikkim and Meghalaya,
- Pottery of Manipur,
- Fishes from coastal areas.

Students may develop a Case Study on the following lines:

- (i) Research for change in price of the product. For example, apples in Himachal Pradesh during plucking and non plucking season.
- (ii) Effect on prices in the absence of effective transport system.
- (iii) Effect on prices in the absence of suitable warehouse facilities.
- (iv) Duties performed by the warehouses.
- (v) Demand and supply situation of the product during harvesting season, prices near the place of origin and away.

Students may be motivated to find out the importance of producing and selling these products and their processed items along with the roles of Transport, Warehousing, Advertising, Banking, Insurance, Packaging, Wholesale selling, Retailing, Co-operative farming, Co-operative marketing etc.

The teacher may develop the points for other projects on similar lines for students to work on.

The teacher may assign this project as 'group' project and may give different products to different groups. It could conclude in the form of an exhibition.

III. Project Three: Aids to Trade

Taking any one AID TO TRADE, for example Insurance and gathering information on following aspects

1. History of Insurance Lloyd's contribution.
2. Development of regulatory Mechanism.
3. Insurance Companies in India
4. Principles of Insurance.
5. Types of Insurance. Importance of insurance to the businessmen.
6. Benefits of crop, orchards, animal and poultry insurance to the farmers.
7. Terminologies used (premium, face value, market value, maturity value, surrender value) and their meanings.
8. Anecdotes and interesting cases of insurance. Reference of films depicting people committing fraudulent acts with insurance companies.
9. Careers in Insurance.

Teachers to develop such aspects for other aids to trade.

IV. Project Four: Import /Export Procedure

Any one from the following

1. Import /Export procedure

The students should identify a product of their city/country which is imported /exported. They are required to find the details of the actual import/export procedure. They may take help from the Chambers of Commerce, Banker, existing Importers/Exporters, etc.

They should find details of the procedure and link it with their Text knowledge.

The specimens of documents collected should be pasted in the Project file with brief description of each. They may also visit railway godowns/dockyards/ transport agencies and may collect pictures of the same.

Presentation and submission of project report.

At the end of the stipulated term, each student will prepare and submit his/her project report.

Following essentials are required to be fulfilled for its preparation and submission.

1. The total project will be in a file format, consisting of the recordings of the value of shares and the graphs.
2. The project will be handwritten.
3. The project will be presented in a neat folder.
4. The project report will be developed in the following sequence-
 - ☐ Cover page should project the title, student information, school and year.
 - ☐ List of contents.
 - ☐ Acknowledgements and preface (acknowledging the institution, the news papers read, T.V. channels viewed, places visited and persons who have helped).
 - ☐ Introduction.
 - ☐ Topic with suitable heading.
 - ☐ Planning and activities done during the project, if any.
 - ☐ Observations and findings while conducting the project.
 - ☐ News paper clippings to reflect the changes of share prices.
 - ☐ Conclusions (summarised suggestions or findings, future scope of study).
 - ☐ Appendix (if needed).
 - ☐ Teachers report.
 - ☐ Teachers will initial preface page.
 - ☐ At the completion of the evaluation of the project, it will be punched in the centre so that the report cannot be reused but is available for reference only.
 - ☐ The projects will be returned after evaluation. The school may keep the best projects.

V. Project Five: A visit to any State Emporium (other than your school state).

The purpose of this project is that it leads to -

- ☐ Development of deeper understanding of the diversity of products in the states like Assam, Tripura, Nagaland, Mizoram, Manipur, Meghalaya, Sikkim, Arunachal Pradesh, Jammu and Kashmir, Kerala, Chhatisgarh, Telangana, Andhra Pradesh and other states of the country.
- ☐ Sensitization and orientation of students about other states, their trade, business and commerce,
- ☐ Understanding the cultural and socio-economic aspects of the state by the students,

- ☐ Developing the understanding of role of folk art, artisanship and craftsmanship of the state in its growth and economic development
- ☐ Understanding the role of gifts of nature and natural produce in the development of trade, business and commerce
- ☐ Understanding the role of vocational skills and abilities on the livelihood of artisans/craftsman
- ☐ Understanding of entrepreneurial skills and abilities of the artisans/craftsman
- ☐ Understanding of the unemployment problem of the state and role of art and craft of the state in generating employment opportunities
- ☐ Value aspect -
 - ☐ Sense of gratitude - by appreciating the contributions made by others in the betterment of our lives
 - ☐ Appreciating the dignity of work
 - ☐ Sensitivity towards social, cultural, ethnical and religious differences Benefits of social harmony and peace
 - ☐ Understanding and appreciating the unity in diversity in India
 - ☐ Appreciating differences in race, skin colour, languages, religion, habits, festivals, clothing coexistence

Presentation and Submission of Project Report

At the end of the stipulated term, each student will prepare and submit his/her project report.

Following essentials are required to be fulfilled for its preparation and submission.

1. Nature of the business organisation (emporium)
2. Determinants for location of the concerned emporium
3. Is the space rented or owned
4. Nature of the goods dealt in
5. Sources of merchandise of the emporium
6. Role of co-operative societies in the manufacturing and/or marketing of the merchandise
7. Role of gifts of nature or natural produce in the development of goods/merchandise
8. Types of buyers and sellers
9. Modes of goods dispersed, minimum quantity sold and type of carrying bag or package used for delivery of the products sold
10. Factors determining the pricing at the emporium
11. Comparison between the prices of goods available at the emporium with the prices in the open market. Also highlight probable causes of variations if any.
12. Kind of raw material available naturally, used in making the products
13. The technique used in making the products i.e., hand made or machine made
14. Has the child labour being used in making the products sold at the emporium
15. Are the products eco-friendly, in terms of manufacturing, disposal and packing
16. Seasonal factors if any affecting the business of the emporium
17. Weekly/ Monthly non-working days
18. Mode of billing and payments - Cash, Credit Card/ Debit Card, Swipe facility.
19. Does the emporium sell its merchandise in installment / deferred payment basis
20. Do they provide home delivery and after sales services.
21. Different types of promotional campaigns / schemes
22. Assistance by Sales Personnel
23. Export orientation of this emporium and procedure used

24. Policies related to damaged/ returned goods
25. Any government facility available to the emporium
26. Warehousing facilities available / availed
27. Impact of tourism on the business of emporium
28. Additional facility offered to customers
29. Any Corporate Social Responsibility (CSR) assumed by the emporium
30. Contribution made by the emporium to its locality

ASSESSMENT

The marks will be allocated on the following heads.

| | | |
|---|---|-----------------|
| 1 | Initiative, cooperativeness and participation | 2 Mark |
| 2 | Creativity in presentation | 2 Mark |
| 3 | Content, observation and research work | 4 Marks |
| 4 | Analysis of situations | 4 Marks |
| 5 | Viva | 8 Marks |
| | Total | 20 Marks |

CLASS XII: GUIDELINES FOR TEACHERS

Students are supposed to select one unit out of four and are required to make only **ONE project** from the selected unit. (Consist of one project of 20 marks)

1. Help students to select any ONE Topic for the entire year.
2. The topic should be assigned after discussion with the students in the class and should then be discussed at every stage of the submission of the project.

The teacher should play the role of a facilitator and should closely supervise the process of project completion. The teachers must ensure that the project work assigned to the students whether individually or in group are discussed at different stages right from assignment to drafts review and finalization. Students should be facilitated in terms of providing relevant materials or suggesting websites, or obtaining required permissions from business houses, malls etc for their project. The periods assigned to the Project Work should be suitably spaced throughout the academic session. The teachers **MUST** ensure that the student actually go through the rigors and enjoy the process of doing the project rather than depending on any readymade material available outside.

3. The students must make a presentation of the project before the class.
4. The teachers must ensure that the student's self-esteem and creativity is enhanced and both the teacher and the student enjoy this process.
5. The teachers should feel pride in the fact that they have explored the different dimensions of the project in an innovative way and their students have put in genuine work.

I. Project One: Elements of Business Environment

The teachers should help the students in selecting any one element of the following:

1. Changes witnessed over the last few years on mode of packaging and its economic impact. The teacher may guide the students to identify the following changes:

- a) The changes in transportation of fruits and vegetables such as cardboard crates being used in place of wooden crates, etc. Reasons for above changes.
- b) Milk being supplied in glass bottles, later in plastic bags and now in tetra-pack and through vending machines.
- c) Plastic furniture [doors and stools] gaining preference over wooden furniture.
- d) The origin of cardboard and the various stages of changes and growth.
- e) Brown paper bags packing to recycled paper bags to plastic bags and cloth bags.
- f) Re use of packaging [bottles, jars and tins] to attract customers for their products.
- g) The concept of pyramid packaging for milk.
- h) Cost being borne by the consumer/manufacturer.
- i) Packaging used as means of advertisements.

2. The reasons behind changes in the following:

Coca – Cola and Fanta in the seventies to Thums up and Campa Cola in the eighties to Pepsi and Coke in nineties.

The teacher may guide the students to the times when India sold Coca Cola and Fanta which were being manufactured in India by the foreign companies.

The students may be asked to enquire about

- a) Reasons of stopping the manufacturing of the above mentioned drinks in India THEN.
- b) The introduction of Thums up and Campa cola range.
- c) Re entry of Coke and introduction of Pepsi in the Indian market.
- d) Factors responsible for the change.
- e) Other linkages with the above.
- f) Leading brands and the company having the highest market share.
- g) Different local brands venturing in the Indian market.
- h) The rating of the above brands in the market.
- i) The survival and reasons of failure in competition with the international brands.
- j) Other observations made by the students

The teacher may develop the following on the above lines

3. Changing role of the women in the past 25 years relating to joint families, nuclear families, women as a bread earner of the family, changes in the requirement trend of mixers, washing machines, micro wave and standard of living.

4. The changes in the pattern of import and export of different Products.

5. The trend in the changing interest rates and their effect on savings.

6. A study on child labour laws, its implementation and consequences.

7. The state of 'anti plastic campaign,' the law, its effects and implementation.

8. The laws of mining /setting up of industries, rules and regulations, licences required for running that business.

9. Social factors affecting acceptance and rejection of an identified product. (Dish washer, Atta maker, etc)

10. What has the effect of change in environment on the types of goods and services?

The students can take examples like:

- a) Washing machines, micro waves, mixers and grinder.
- b) Need for crèche, day care centre for young and old.
- c) Ready to eat food, eating food outside, and tiffin centres.

11. Change in the man-machine ratio with technological advances resulting in change of cost structure.
12. Effect of changes in technological environment on the behaviour of employee.

II. Project Two: Principles of Management

The students are required to visit any one of the following:

1. A departmental store.
2. An Industrial unit.
3. A fast food outlet.
4. Any other organisation approved by the teacher.

They are required to observe the application of the general Principles of management advocated by Fayol.

Fayol's principles

1. Division of work.
2. Unity of command.
3. Unity of direction.
4. Scalar chain
5. Espirit de corps
6. Fair remuneration to all.
7. Order.
8. Equity.
9. Discipline
10. Subordination of individual interest to general interest.
11. Initiative.
12. Centralisation and decentralisation.
13. Stability of tenure.
14. Authority and Responsibility

OR

They may enquire into the application of scientific management techniques by F.W. Taylor in the unit visited.

Scientific techniques of management.

1. Functional foremanship.
2. Standardisation and simplification of work.
3. Method study.
4. Motion Study.
5. Time Study.
6. Fatigue Study
7. Differential piece rate plan.

Tips to teacher

- (i) The teacher may organize this visit.
- (ii) The teacher should facilitate the students to identify any unit of their choice and guide them to identify the principles that are being followed.
- (iii) Similarly they should guide the students to identify the techniques of scientific management implemented in the organisation.
- (iv) It may be done as a group activity.

(v) The observations could be on the basis of

- ☐ The different stages of division of work resulting to specialisation.
- ☐ Following instructions and accountability of subordinates to higher authorities.
- ☐ Visibility of order and equity in the unit.
- ☐ Balance of authority and responsibility.
- ☐ Communication levels and pattern in the organisation.
- ☐ Methods and techniques followed by the organisation for unity of direction and coordination amongst all.
- ☐ Methods of wage payments followed. The arrangements of fatigue study.
- ☐ Derivation of time study.
- ☐ Derivation and advantages of method study.
- ☐ Organisational chart of functional foremanship.
- ☐ Any other identified in the organisation

vi. It is advised that students should be motivated to pick up different areas of visit. As presentations of different areas in the class would help in better understanding to the other students.

vii. The students may be encouraged to develop worksheets. Teachers should help students to prepare observation tools to be used for undertaking the project.

Examples; worksheets, questionnaire, interviews and organisational chart etc.

III. Project Three: Stock Exchange

The purpose of this project is to teach school students the values of investing and utilising the stock market. This project also teaches important lessons about the economy, mathematics and financial responsibility.

The basis of this project is to learn about the stock market while investing a specified amount of fake money in certain stocks. Students then study the results and buy and sell as they see fit.

This project will also guide the students and provide them with the supplies necessary to successfully monitor stock market trends and will teach students how to calculate profit and loss on stock.

The project work will enable the students to:

- ☐ understand the topics like sources of business finance and capital market
- ☐ understand the concepts used in stock exchange
- ☐ inculcate the habit of watching business channels, reading business journals/newspapers and seeking information from their elders.

The students are expected to:

- a) Develop a brief report on History of Stock Exchanges in India. (your country)
- b) Prepare a list of at least 25 companies listed on a Stock Exchange.
- c) To make an imaginary portfolio totalling a sum of Rs. 50,000 equally in any of the 5 companies of their choice listed above over a period of twenty working days.

The students may be required to report the prices of the stocks on daily basis and present it diagrammatically on the graph paper.

- ☐ They will understand the weekly holidays and the holidays under the Negotiable Instruments Act.

They will also come across with terms like closing prices, opening prices, etc.

- ☐ During this period of recording students are supposed to distinctively record the daily and starting and closing prices of the week other days under the negotiable instrument act so that they acquire knowledge about closing and opening prices.
- ☐ The students may conclude by identifying the causes in the fluctuations of prices. Normally it would be related to the front page news of the a business journal, for example,
 - ☐ Change of seasons.
 - ☐ Festivals.
 - ☐ Spread of epidemic.
 - ☐ Strikes and accidents
 - ☐ Natural and human disasters.
 - ☐ Political environment.
 - ☐ Lack of faith in the government policies.
 - ☐ Impact of changes in government policies for specific industry.
 - ☐ International events.
 - ☐ Contract and treaties at the international scene.
 - ☐ Relations with the neighbouring countries.
 - ☐ Crisis in developed countries, etc.

The students are expected to find the value of their investments and accordingly rearrange their portfolio. The project work should cover the following aspects;

1. Graphical presentation of the share prices of different companies on different dates.
2. Change in market value of shares due to change of seasons, festivals, natural and human disasters.
3. Change in market value of shares due to change in political environment/ policies of various countries/crisis in developed countries or any other reasons
4. Identify the top ten companies out of the 25 selected on the basis of their market value of shares.

It does not matter if they have made profits or losses.

IV. Project Four: Marketing

- | | |
|-------------------------|---------------------|
| 1. Adhesives | 20. Cutlery |
| 2. Air conditioners | 21. Cycle |
| 3. Baby diapers | 22. DTH |
| 4. Bathing Soap | 23. Eraser |
| 5. Bathroom cleaner | 24. e-wash |
| 6. Bike | 25. Fairness cream |
| 7. Blanket | 26. Fans |
| 8. Body Spray | 27. Fruit candy |
| 9. Bread | 28. Furniture |
| 10. Breakfast cereal | 29. Hair Dye |
| 11. Butter | 30. Hair Oil |
| 12. Camera | 31. Infant dress |
| 13. Car | 32. Inverter |
| 14. Cheese spreads | 33. Jams |
| 15. Chocolate | 34. Jeans |
| 16. Coffee | 35. Jewellery |
| 17. Cosmetology product | 36. Kurti |
| 18. Crayons | 37. Ladies bag |
| 19. Crockery | 38. Ladies footwear |

39. Learning Toys
40. Lipstick
41. Microwave oven
42. Mixers
43. Mobile
44. Moisturizer
45. Music player
46. Nail polish
47. Newspaper
48. Noodles
49. Pen
50. Pen drive
51. Pencil
52. Pickles
53. Razor
54. Ready Soups
55. Refrigerator
56. RO system
57. Roasted snacks
58. Salt

59. Sarees
60. Sauces/ Ketchup
61. Shampoo
62. Shaving cream
63. Shoe polish
64. Shoes
65. Squashes
66. Suitcase/ airbag
67. Sunglasses
68. Tea
69. Tiffin Wallah
70. Toothpaste
71. Wallet
72. Washing detergent
73. Washing machine
74. Washing powder
75. Water bottle
76. Water storage tank
77. Wipes

Any more as suggested by the teacher.

The teacher must ensure that the identified product should not be items whose consumption/use is discouraged by the society and government like alcohol products/pan masala and tobacco products, etc.

Identify one product/service from the above which the students may like to manufacture/provide [pre-assumption].

Now the students are required to make a project on the identified product/service keeping in mind the following:

1. Why have they selected this product/service?
2. Find out '5' competitive brands that exist in the market.
3. What permission and licences would be required to make the product?
4. What are your competitors Unique Selling Proposition.[U.S.P.]?
5. Does your product have any range give details?
6. What is the name of your product?
7. Enlist its features.
8. Draw the 'Label' of your product.
9. Draw a logo for your product.
10. Draft a tag line.
11. What is the selling price of your competitor's product?
 - (i) Selling price to consumer
 - (ii) Selling price to retailer
 - (iii) Selling price to wholesaler

What is the profit margin in percentage to the

- ☐ Manufacturer.
- ☐ Wholesaler.
- ☐ Retailer.

12. How will your product be packaged?
 13. Which channel of distribution are you going to use? Give reasons for selection?
 14. Decisions related to warehousing, state reasons.
 15. What is going to be your selling price?
 - (i) To consumer
 - (ii) To retailer
 - (iii) To wholesaler
 16. List 5 ways of promoting your product.
 17. Any schemes for
 - (i) The wholesaler
 - (ii) The retailer
 - (iii) The consumer
 18. What is going to be your 'U.S.P'?
 19. What means of transport you will use and why?
 20. Draft a social message for your label.
 21. What cost effective techniques will you follow for your product.
 22. What cost effective techniques will you follow for your promotion plan.
- At this stage the students will realise the importance of the concept of marketing mix and the necessary decision regarding the four P's of marketing.
- ☐ Product
 - ☐ Place
 - ☐ Price
 - ☐ Promotion

On the basis of the work done by the students the project report should include the following:

1. Type of product /service identified and the (consumer/industries) process involve there in.
2. Brand name and the product.
3. Range of the product.
4. Identification mark or logo.
5. Tagline.
6. Labeling and packaging.
7. Price of the product and basis of price fixation.
8. Selected channels of distribution and reasons thereof.
9. Decisions related to transportation and warehousing. State reasons.
10. Promotional techniques used and starting reasons for deciding the particular technique.
11. Grading and standardization.

Presentation and Submission of Project Report

At the end of the stipulated term, each student will prepare and submit his/her project report.

Following essentials are required to be fulfilled for its preparation and submission.

1. The total length of the project will be of 25 to 30 pages.
2. The project should be handwritten.
3. The project should be presented in a neat folder.
4. The project report should be developed in the following sequence-
 - ☐ Cover page should include the title of the Project, student information, school and year.

- ☐ List of contents.
- ☐ Acknowledgements and preface (acknowledging the institution, the places visited and the persons who have helped).
- ☐ Introduction.
- ☐ Topic with suitable heading.
- ☐ Planning and activities done during the project, if any.
- ☐ Observations and findings of the visit.
- ☐ Conclusions (summarized suggestions or findings, future scope of study).
- ☐ Photographs (if any).
- ☐ Appendix
- ☐ Teacher's observation.
- ☐ Signatures of the teachers.
- ☐ At the completion of the evaluation of the project, it should be punched in the centre so that the report may not be reused but is available for reference only.
- ☐ The project will be returned after evaluation. The school may keep the best projects.

ASSESSMENT

Allocation of Marks = 20 Marks

The marks will be allocated under the following heads:

| | | |
|---|---|-----------------|
| 1 | Initiative, cooperativeness and participation | 2 Mark |
| 2 | Creativity in presentation | 2 Mark |
| 3 | Content, observation and research work | 4 Marks |
| 4 | Analysis of situations | 4 Marks |
| 5 | Viva | 8 Marks |
| | Total | 20 Marks |

Suggested Question Paper Design
Business Studies (Code No. 054)
Class XII (2022-23)
March 2023 Examination

Marks: 80

Duration: 3 hrs.

| SN | Typology of Questions | Marks | Percentage |
|----|--|-----------|-------------|
| 1 | Remembering and Understanding: Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas | 44 | 55% |
| 2 | Applying: Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way | 19 | 23.75% |
| 3 | Analysing, Evaluating and Creating: Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations. Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions. | 17 | 21.25% |
| | Total | 80 | 100% |

ECONOMICS CLASS - XII (2022-23)

Theory: 80 Marks

3 Hours

Project: 20 Marks

| Units | | Marks | Periods |
|---------------|--|-----------|------------|
| Part A | Introductory Macroeconomics | | |
| | National Income and Related Aggregates | 10 | 30 |
| | Money and Banking | 06 | 15 |
| | Determination of Income and Employment | 12 | 30 |
| | Government Budget and the Economy | 06 | 17 |
| | Balance of Payments | 06 | 18 |
| | | 40 | |
| | | | |
| Part B | Indian Economic Development | | |
| | Development Experience (1947-90) and Economic Reforms since 1991 | 12 | 28 |
| | Current Challenges facing Indian Economy | 20 | 50 |
| | Development Experience of India – A Comparison with Neighbours | 08 | 12 |
| | Theory Paper (40+40 = 80 Marks) | 40 | |
| | | | 200 |
| | | | |
| Part C | Project Work | 20 | 20 |

Part A: Introductory Macroeconomics

Unit 1: National Income and Related Aggregates

30 Periods

What is Macroeconomics?

Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.

Circular flow of income (two sector model); Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method.

Aggregates related to National Income:

Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost; Real and Nominal GDP.

GDP and Welfare

Unit 2: Money and Banking**15 Periods**

Money – meaning and functions, supply of money - Currency held by the public and net demand deposits held by commercial banks.

Money creation by the commercial banking system.

Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.

Unit 3: Determination of Income and Employment**30 Periods**

Aggregate demand and its components.

Propensity to consume and propensity to save (average and marginal).

Short-run equilibrium output; investment multiplier and its mechanism.

Meaning of full employment and involuntary unemployment.

Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply.

Unit 4: Government Budget and the Economy**17 Periods**

Government budget - meaning, objectives and components.

Classification of receipts - revenue receipts and capital receipts;

Classification of expenditure – revenue expenditure and capital expenditure.

Balanced, Surplus and Deficit Budget – measures of government deficit.

Unit 5: Balance of Payments**18 Periods**

Balance of payments account - meaning and components;

Balance of payments – Surplus and Deficit

Foreign exchange rate - meaning of fixed and flexible rates and managed floating.

Determination of exchange rate in a free market, Merits and demerits of flexible and fixed exchange rate.

Managed Floating exchange rate system

Part B: Indian Economic Development

Unit 6: Development Experience (1947-90) and Economic Reforms since 1991:

28 Periods

A brief introduction of the state of Indian economy on the eve of independence.

Indian economic system and common goals of Five Year Plans.

Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy), industry (IPR 1956; SSI – role & importance) and foreign trade.

Economic Reforms since 1991:

Features and appraisals of liberalisation, globalisation and privatisation (LPG policy);

Concepts of demonetization and GST

Unit 7: Current challenges facing Indian Economy

60 Periods

Human Capital Formation: How people become resource; Role of human capital in economic development; Growth of Education Sector in India

Rural development: Key issues - credit and marketing - role of cooperatives; agricultural diversification; alternative farming - organic farming

Employment: Growth and changes in work force participation rate in formal and informal sectors; problems and policies

Sustainable Economic Development: Meaning, Effects of Economic Development on Resources and Environment, including global warming

Unit 8: Development Experience of India:

12 Periods

A comparison with neighbours

India and Pakistan

India and China

Issues: economic growth, population, sectoral development and other Human Development Indicators

Part C: Project in Economics

20 Periods

Prescribed Books:

1. Statistics for Economics, NCERT
2. Indian Economic Development, NCERT
3. Introductory Microeconomics, NCERT
4. Macroeconomics, NCERT
5. Supplementary Reading Material in Economics, CBSE

Note: The above publications are also available in Hindi Medium.

Suggested Question Paper Design
Economics (Code No. 030)
Class XII (2022-23)
March 2023 Examination

Marks: 80

Duration: 3 hrs.

| SN | Typology of Questions | Marks | Percentage |
|----|--|-----------|-------------|
| 1 | Remembering and Understanding: Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas | 44 | 55% |
| 2 | Applying: Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way. | 18 | 22.5% |
| 3 | Analysing, Evaluating and Creating: Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations. Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions. | 18 | 22.5% |
| | Total | 80 | 100% |

Guidelines for Project Work in Economics (Class XI and XII)

The **objectives** of the project work are to enable learners to:

- probe deeper into theoretical concepts learnt in classes XI and XII
- analyse and evaluate real world economic scenarios using theoretical constructs and arguments
- demonstrate the learning of economic theory
- follow up aspects of economics in which learners have interest
- develop the communication skills to argue logically

The **expectations** of the project work are that:

- learners will complete only **ONE** project in each academic session
- project should be of 3,500-4,000 words (excluding diagrams & graphs), preferably hand-written
- it will be an independent, self-directed piece of study

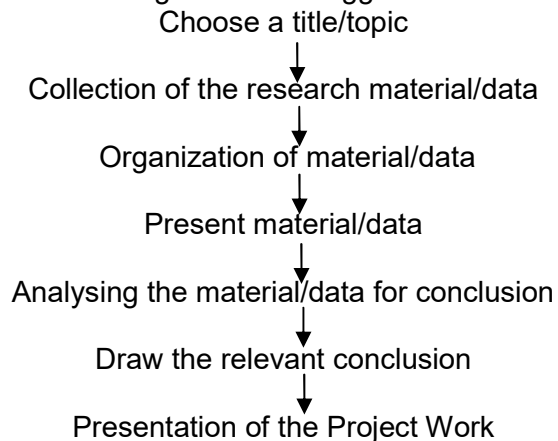
Role of the teacher:

The teacher plays a critical role in developing thinking skills of the learners. A teacher should:

- help each learner select the topic based on recently published extracts from the news media, government policies, RBI bulletin, NITI Aayog reports, IMF/World Bank reports etc., after detailed discussions and deliberations of the topic
- play the role of a facilitator and supervisor to monitor the project work of the learner through periodic discussions
- guide the research work in terms of sources for the relevant data
- educate learner about plagiarism and the importance of quoting the source of the information to ensure authenticity of research work
- prepare the learner for the presentation of the project work
- arrange a presentation of the project file

Scope of the project:

Learners may work upon the following lines as a suggested flow chart:



Expected Checklist:

- Introduction of topic/title
- Identifying the causes, consequences and/or remedies
- Various stakeholders and effect on each of them
- Advantages and disadvantages of situations or issues identified
- Short-term and long-term implications of economic strategies suggested in the course of research
- Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file
- Presentation and writing that is succinct and coherent in project file
- *Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.*

Mode of presentation/submission of the Project:

At the end of the stipulated term, each learner will present the research work in the Project File to the External and Internal examiner. **The questions should be asked from the Research Work/ Project File of the learner. The Internal Examiner should ensure that the study submitted by the learner is his/her own original work.** In case of any doubt, authenticity should be checked and verified.

Marking Scheme :

Marks are suggested to be given as –

| S. No. | Heading | Marks Allotted |
|--------|---------------------------------|----------------|
| 1. | Relevance of the topic | 3 |
| 2. | Knowledge Content/Research Work | 6 |
| 3. | Presentation Technique | 3 |
| 4. | Viva-voce | 8 |
| | Total | 20 Marks |

Suggestive List of Projects:

| Class XI | |
|--|---|
| • Effect on PPC due to various government policies | • Invisible Hand (Adam Smith) |
| • Opportunity Cost as an Economic Tool (taking real life situations) | • Effect of Price Change on a Substitute Good (taking prices from real life visiting local market) |
| • Effect on equilibrium Prices in Local Market (taking real life situation or recent news) | • Effect of Price Change on a Complementary Good (taking prices from real life visiting local market) |
| • Solar Energy, a Cost Effective Comparison with Conventional Energy Sources | • Bumper Production- Boon or Bane for the Farmer |
| • Any other newspaper article and its evaluation on basis of economic principles | • Any other topic |

| Class XII | |
|--|--|
| • Micro and Small Scale Industries | • Food Supply Channel in India |
| • Contemporary Employment situation in India | • Disinvestment policy of the government |
| • Goods and Services Tax Act and its Impact on GDP | • Health Expenditure (of any state) |
| • Human Development Index | • Inclusive Growth Strategy |
| • Self-help group | • Trends in Credit availability in India |
| • Monetary policy committee and its functions | • Role of RBI in Control of Credit |
| • Government Budget & its Components | • Trends in budgetary condition of India |
| • Exchange Rate determination – Methods and Techniques | • Currency War – reasons and repercussions |
| • Livestock – Backbone of Rural India | • Alternate fuel – types and importance |
| • Sarwa Siksha Abhiyan – Cost Ratio Benefits | • Golden Quadrilateral- Cost ratio benefit |
| • Minimum Support Prices | • Relation between Stock Price Index and Economic Health of Nation |
| • Waste Management in India – Need of the hour | • Minimum Wage Rate – approach and Application |
| • Digital India- Step towards the future | • Rain Water Harvesting – a solution to water crises |
| • Vertical Farming – an alternate way | • Silk Route- Revival of the past |
| • Make in India – The way ahead | • Bumper Production- Boon or Bane for the farmer |
| • Rise of Concrete Jungle- Trend Analysis | • Organic Farming – Back to the Nature |
| • Any other newspaper article and its evaluation on basis of economic principles | • Any other topic |

ELECTIVE SUBJECTS

CLASS-XII
(2022-23)

One Paper

Max Marks: 80

| No. | Units | No. of Periods | Marks |
|------|--|----------------|-------|
| I. | Relations and Functions | 30 | 08 |
| II. | Algebra | 50 | 10 |
| III. | Calculus | 80 | 35 |
| IV. | Vectors and Three - Dimensional Geometry | 30 | 14 |
| V. | Linear Programming | 20 | 05 |
| VI. | Probability | 30 | 08 |
| | Total | 240 | 80 |
| | Internal Assessment | | 20 |

Unit-I: Relations and Functions

1. Relations and Functions **15 Periods**

Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.

2. Inverse Trigonometric Functions **15 Periods**

Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions.

Unit-II: Algebra

1. Matrices **25 Periods**

Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).

2. Determinants **25 Periods**

Determinant of a square matrix (up to 3 x 3 matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

Unit-III: Calculus

1. Continuity and Differentiability

20 Periods

Continuity and differentiability, chain rule, derivative of inverse trigonometric functions, like $\sin^{-1} x$, $\cos^{-1} x$ and $\tan^{-1} x$, derivative of implicit functions. Concept of exponential and logarithmic functions.

Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives.

2. Applications of Derivatives

10 Periods

Applications of derivatives: rate of change of bodies, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).

3. Integrals

20 Periods

Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them.

$$\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2 - x^2}}, \int \frac{dx}{ax^2 + bx + c}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}$$

$$\int \frac{px + q}{ax^2 + bx + c} dx, \int \frac{px + q}{\sqrt{ax^2 + bx + c}} dx, \int \sqrt{a^2 \pm x^2} dx, \int \sqrt{x^2 - a^2} dx$$

$$\int \sqrt{ax^2 + bx + c} dx,$$

Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

4. Applications of the Integrals

15 Periods

Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only)

5. Differential Equations

15 Periods

Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type:

$$\frac{dy}{dx} + py = q, \text{ where } p \text{ and } q \text{ are functions of } x \text{ or constants.}$$

$$\frac{dx}{dy} + px = q, \text{ where } p \text{ and } q \text{ are functions of } y \text{ or constants.}$$

Unit-IV: Vectors and Three-Dimensional Geometry

1. Vectors

15 Periods

Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors.

2. Three - dimensional Geometry

15 Periods

Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. Angle between two lines.

Unit-V: Linear Programming

1. Linear Programming

20 Periods

Introduction, related terminology such as constraints, objective function, optimization, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

Unit-VI: Probability

1. Probability

30 Periods

Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.

MATHEMATICS (Code No. - 041)
QUESTION PAPER DESIGN CLASS - XII
(2022-23)

Time: 3 hours

Max. Marks: 80

| S. No. | Typology of Questions | Total Marks | % Weightage |
|--------|--|-------------|-------------|
| 1 | Remembering: Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. Understanding: Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas | 44 | 55 |
| 2 | Applying: Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way. | 20 | 25 |
| 3 | Analysing : Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations Evaluating: Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. Creating: Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions | 16 | 20 |
| | Total | 80 | 100 |

1. No chapter wise weightage. Care to be taken to cover all the chapters
2. Suitable internal variations may be made for generating various templates keeping the overall weightage to different form of questions and typology of questions same.

Choice(s):

There will be no overall choice in the question paper.

However, 33% internal choices will be given in all the sections

| INTERNAL ASSESSMENT | 20 MARKS |
|---|----------|
| Periodic Tests (Best 2 out of 3 tests conducted) | 10 Marks |
| Mathematics Activities | 10 Marks |

Note: For activities NCERT Lab Manual may be referred.

Conduct of Periodic Tests:

Periodic Test is a Pen and Paper assessment which is to be conducted by the respective subject teacher. The format of periodic test must have questions items with a balance mix, such as, very short answer (VSA), short answer (SA) and long answer (LA) to effectively assess the knowledge, understanding, application, skills, analysis, evaluation and synthesis. Depending on the nature of subject, the subject teacher will have the liberty of incorporating any other types of questions too. The modalities of the PT are as follows:

- a) **Mode:** The periodic test is to be taken in the form of pen-paper test.
- b) **Schedule:** In the entire Academic Year, three Periodic Tests in each subject may be conducted as follows:

| Test | Pre Mid-term (PT-I) | Mid-Term (PT-II) | Post Mid-Term (PT-III) |
|-----------------|---------------------|------------------|------------------------|
| Tentative Month | July-August | November | December-January |

This is only a suggestive schedule and schools may conduct periodic tests as per their convenience. The winter bound schools would develop their own schedule with similar time gaps between two consecutive tests.

- c) **Average of Marks:** Once schools complete the conduct of all the three periodic tests, they will convert the weightage of each of the three tests into ten marks each for identifying best two tests. The best two will be taken into consideration and the average of the two shall be taken as the final marks for PT.
- d) The school will ensure simple documentation to keep a record of performance as suggested in detail circular no.Acad-05/2017.
- e) **Sharing of Feedback/Performance:** The students' achievement in each test must be shared with the students and their parents to give them an overview of the level of learning that has taken place during different periods. Feedback will help parents formulate interventions (conducive ambience, support materials, motivation and morale-boosting) to further enhance learning. A teacher, while sharing the feedback with student or parent, should be empathetic, non- judgmental and motivating. It is recommended that the teacher share best examples/performances of IA with the class to motivate all learners.

Assessment of Activity Work:

Throughout the year any 10 activities shall be performed by the student from the activities given in the NCERT Laboratory Manual for the respective class (XI or XII) which is available on the link: <http://www.ncert.nic.in/exemplar/labmanuals.html> a record of the same may be kept by the student. An year end test on the activity may be conducted

The weightage are as under:

- The activities performed by the student throughout the year and record keeping : 5 marks
- Assessment of the activity performed during the year end test: 3 marks
- Viva-voce: 2 marks

Prescribed Books:

- 1) Mathematics Textbook for Class XI, NCERT Publications
- 2) Mathematics Part I - Textbook for Class XII, NCERT Publication
- 3) Mathematics Part II - Textbook for Class XII, NCERT Publication
- 4) Mathematics Exemplar Problem for Class XI, Published by NCERT
- 5) Mathematics Exemplar Problem for Class XII, Published by NCERT
- 6) Mathematics Lab Manual class XI, published by NCERT
- 7) Mathematics Lab Manual class XII, published by NCERT

Informatics Practices
CLASS XII
Code No. 065
2022-2023

1. **Prerequisite:** Informatics Practices – Class XI

2. **Learning Outcomes**

At the end of this course, students will be able to:

- Create Series, Data frames and apply various operations.
- Visualize data using relevant graphs.
- Design SQL queries using aggregate functions.
- Import/Export data between SQL database and Pandas.
- Learn terminology related to networking and internet.
- Identify internet security issues and configure browser settings.
- Understand the impact of technology on society including gender and disability issues.

3. **Distribution of Marks and Periods**

| Unit No | Unit Name | Marks | Periods Theory | Periods Practical | Total Period |
|---------|---|-------|----------------|-------------------|--------------|
| 1 | Data Handling using Pandas and Data Visualization | 25 | 25 | 25 | 50 |
| 2 | Database Query using SQL | 25 | 20 | 17 | 37 |
| 3 | Introduction to Computer Networks | 10 | 12 | 0 | 12 |
| 4 | Societal Impacts | 10 | 14 | - | 14 |
| | Project | - | - | 7 | 7 |
| | Practical | 30 | - | - | - |
| | Total | 100 | 71 | 49 | 120 |

4. **Unit Wise syllabus**

Unit 1: Data Handling using Pandas -I

Introduction to Python libraries- Pandas, Matplotlib.

Data structures in Pandas - Series and Data Frames.

Series: Creation of Series from – ndarray, dictionary, scalar value; mathematical operations; Head and Tail functions; Selection, Indexing and Slicing.

Data Frames: creation - from dictionary of Series, list of dictionaries, Text/CSV files; display; iteration; Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Indexing using Labels, Boolean Indexing;

Importing/Exporting Data between CSV files and Data Frames.

Data Visualization

Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, bar graph,

histogram

Customizing plots: adding label, title, and legend in plots.

Unit 2: Database Query using SQL

Math functions: POWER (), ROUND (), MOD ().

Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM ().

Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME ().

Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*).

Querying and manipulating data using Group by, Having, Order by.

Unit 3: Introduction to Computer Networks

Introduction to networks, Types of network: LAN, MAN, WAN.

Network Devices: modem, hub, switch, repeater, router, gateway

Network Topologies: Star, Bus, Tree, Mesh.

Introduction to Internet, URL, WWW, and its applications- Web, email, Chat, VoIP.

Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website.

Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.

Unit 4: Societal Impacts

Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act.

E-waste: hazards and management.

Awareness about health concerns related to the usage of technology.

Project Work

The aim of the class project is to create tangible and useful IT application. The learner may identify a real-world problem by exploring the environment. e.g. Students can visit shops/business places, communities or other organizations in their localities and enquire about functioning of the organization, and how data are generated, stored, and managed.

The learner can take data stored in csv or database file and analyze using Python libraries and generate appropriate charts to visualize.

If an organization is maintaining data offline, then the learner should create a database using MySQL and store the data in tables. Data can be imported in Pandas for analysis and visualization.

Learners can use Python libraries of their choice to develop software for their school or any other social good.

Learners should be sensitized to avoid plagiarism and violation of copyright issues while working on projects. Teachers should take necessary measures for this. Any resources (data, image etc.) used in the project must be suitably referenced.

The project can be done individually or in groups of 2 to 3 students. The project should be started by students at least 6 months before the submission deadline.

Practical Marks Distribution

| S. No. | Unit Name | Marks |
|--------|--------------------------------------|-------|
| 1 | Programs using Pandas and Matplotlib | 8 |
| 2 | SQL Queries | 7 |

| | | |
|---|--|----|
| 3 | Practical file (minimum of 15 programs based on Pandas, 4 based on Matplotlib and 15 SQL queries must be included) | 5 |
| 4 | Project Work (using concepts learned in class XI and XII) | 5 |
| 5 | Viva-Voce | 5 |
| | TOTAL | 30 |

5. Suggested Practical List

5.1 Data Handling

1. Create a panda's series from a dictionary of values and a ndarray
2. Given a Series, print all the elements that are above the 75th percentile.
3. Create a Data Frame quarterly sales where each row contains the item category, item name, and expenditure. Group the rows by the category and print the total expenditure per category.
4. Create a data frame for examination result and display row labels, column labels data types of each column and the dimensions
5. Filter out rows based on different criteria such as duplicate rows.
6. Importing and exporting data between pandas and CSV file

5.2 Visualization

1. Given the school result data, analyses the performance of the students on different parameters, e.g subject wise or class wise.
2. For the Data frames created above, analyze, and plot appropriate charts with title and legend.
3. Take data of your interest from an open source (e.g. data.gov.in), aggregate and summarize it. Then plot it using different plotting functions of the Matplotlib library.

5.3 Data Management

1. Create a student table with the student id, name, and marks as attributes where the student id is the primary key.
2. Insert the details of a new student in the above table.
3. Delete the details of a student in the above table.
4. Use the select command to get the details of the students with marks more than 80.
5. Find the min, max, sum, and average of the marks in a student marks table.
6. Find the total number of customers from each country in the table (customer ID, customer Name, country) using group by.
7. Write a SQL query to order the (student ID, marks) table in descending order of the marks.

COURSE STRUCTURE
CLASS XII (2022-2023)

Theory Paper

3 Hours
Marks: 70

| Units | Topics | No. of periods | Marks |
|-------|--|----------------|-----------|
| I | Variations in Psychological Attributes | 30 | 13 |
| II | Self and Personality | 32 | 13 |
| III | Meeting Life Challenges | 23 | 9 |
| IV | Psychological Disorders | 30 | 12 |
| V | Therapeutic Approaches | 25 | 9 |
| VI | Attitude and Social Cognition | 16 | 8 |
| VII | Social Influence and Group Processes | 14 | 6 |
| | Total | 170 | 70 |

COURSE CONTENT

| | | |
|----------------|--|-------------------|
| Unit I | Variations in Psychological Attributes <i>The topics in this unit are:</i> <ol style="list-style-type: none"> 1. Introduction 2. Individual Differences in Human Functioning 3. Assessment of Psychological Attributes 4. Intelligence 5. Psychometric Theories of Intelligence, Information Processing Theory: Planning, Attention-arousal and Simultaneous successive Model of Intelligence, Triarchic Theory of Intelligence; Theory of Multiple Intelligences. 6. Individual Differences in Intelligence 7. Culture and Intelligence 8. Emotional Intelligence 9. Special Abilities: Aptitude: Nature and Measurement 10. Creativity | 30 Periods |
| Unit II | Self and Personality <i>The topics in this unit are:</i> <ol style="list-style-type: none"> 1. Introduction 2. Self and Personality 3. Concept of Self 4. Cognitive and Behavioural aspects of Self | 32 Periods |

| | | |
|-----------------|--|-------------------|
| | 5. Culture and Self 6. Concept of Personality 7. Major Approaches to the Study of Personality <ul style="list-style-type: none"> • Type Approaches • Trait Approaches • Psychodynamic Approach and Post Freudian Approaches • Behavioural Approach • Cultural Approach • Humanistic Approach 8. Assessment of Personality <ul style="list-style-type: none"> • Self-report Measures • Projective Techniques • Behavioural Analysis | |
| Unit III | Meeting Life Challenges <i>The topics in this unit are:</i> <ol style="list-style-type: none"> 1. Introduction 2. Nature, Types and Sources of Stress 3. Effects of Stress on Psychological Functioning and Health <ul style="list-style-type: none"> • Stress and Health • General Adaptation Syndrome • Stress and Immune System • Lifestyle 4. Coping with Stress <ul style="list-style-type: none"> • Stress Management Techniques 5. Promoting Positive Health and Well-being <ul style="list-style-type: none"> • Life Skills • Positive Health | 23 periods |
| Unit IV | Psychological Disorders <i>The topics in this unit are:</i> <ol style="list-style-type: none"> 1. Introduction 2. Concepts of Abnormality and Psychological Disorders <ul style="list-style-type: none"> • Historical Background 3. Classification of Psychological Disorders 4. Factors Underlying Abnormal Behaviour 5. Major Psychological Disorders | 30 Periods |

| | | |
|----------------|--|-------------------|
| | <ul style="list-style-type: none"> • Anxiety Disorders • Obsessive-Compulsive and Related Disorders • Trauma-and Stressor-Related Disorders • Somatic Symptom and Related Disorders • Dissociative Disorders • Depressive Disorder • Bipolar and Related Disorders • Schizophrenia Spectrum and Other Psychotic Disorders • Neurodevelopmental Disorders • Disruptive, Impulse-Control and Conduct Disorders • Feeding and Eating Disorders • Substance Related and Addictive Disorders | |
| Unit V | <p>Therapeutic Approaches</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Nature and Process of psychotherapy <ul style="list-style-type: none"> • Therapeutic relationship 2. Types of Therapies <ul style="list-style-type: none"> • Behaviour Therapy • Cognitive Therapy • Humanistic-Existential Therapy • Alternative Therapies • Factors contributing to healing in Psychotherapy • Ethics in Psychotherapy 3. Rehabilitation of the Mentally Ill | 25 Periods |
| Unit VI | <p>Attitude and Social Cognition</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Explaining Social Behaviour 3. Nature and Components of Attitudes 4. Attitude Formation and Change <ul style="list-style-type: none"> • Attitude Formation • Attitude Change • Attitude-Behaviour Relationship 5. Prejudice and Discrimination 6. Strategies for Handling Prejudice | 16 Periods |

| | | | | | | | | | | |
|--|--|-----------------------------------|----------|---|----------|---|----------|--------------|-----------------|-------------------|
| Unit VII | Social Influence and Group Processes <i>The topics in this unit are:</i> <div><div>1. Introduction</div><div>2. Nature and Formation of Groups</div><div>3. Type of Groups</div><div>4. Influence of Group on Individual Behaviour<ul style="list-style-type: none">• Social Loafing• Group Polarisation</div></div> | 14 Periods | | | | | | | | |
| Practical <div><div>A. Development of case profile: Using appropriate methods like interview, observation & psychological tests.</div><div>B. Test administration: Students are required to administer and interpret five psychological tests related to various psychological attributes like intelligence, aptitude, attitude, personality, etc.</div><div>C. In the Practical examination, the student will be required to administer and interpret two psychological tests.</div></div> Distribution of Marks: <table><tr><td>• Practical File and Case Profile</td><td>10 Marks</td></tr><tr><td>• Viva Voce (Case Profile & Two Practicals)</td><td>05 Marks</td></tr><tr><td>• Two Practicals (5 marks for conduct of practicals and 10 marks for reporting)</td><td>15 Marks</td></tr><tr><td>Total</td><td>30 Marks</td></tr></table> | | • Practical File and Case Profile | 10 Marks | • Viva Voce (Case Profile & Two Practicals) | 05 Marks | • Two Practicals (5 marks for conduct of practicals and 10 marks for reporting) | 15 Marks | Total | 30 Marks | 60 Periods |
| • Practical File and Case Profile | 10 Marks | | | | | | | | | |
| • Viva Voce (Case Profile & Two Practicals) | 05 Marks | | | | | | | | | |
| • Two Practicals (5 marks for conduct of practicals and 10 marks for reporting) | 15 Marks | | | | | | | | | |
| Total | 30 Marks | | | | | | | | | |

QUESTION PAPER DESIGN
CLASS – XII (2022-23)

I. Board Examination: Theory

| Time: 3 Hours | | Maximum Marks: 70 | |
|----------------------|---|--------------------------|--------------------|
| S. No. | Competencies | Total Marks | % Weightage |
| 1 | Remembering and Understanding: Exhibiting memory of previously learned material by recalling facts, terms, basic concepts, and answers; Demonstrating understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating main ideas | 25 | 35% |
| 2 | Applying: Solving problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way | 31 | 45% |
| 3 | Formulating, Analysing, Evaluating and Creating: Examining and breaking information into parts by identifying motives or causes; Making inferences and finding evidence to support generalizations; Presenting and defending opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria; Compiling information together in a different way by combining elements in a new pattern or proposing alternative solutions | 14 | 20% |
| | Total | 70 | 100% |

II. Practical: 30 Marks

Prescribed Books:

1. Psychology, Class XI, Published by NCERT
2. Psychology, Class XII, Published by NCERT

Note: The above textbooks are also available in Hindi medium.

COURSE STRUCTURE**CLASS XII (2022-23)****Theory Paper****Time: 3 hours****Maximum marks: 70**

| S.No. | Unit | No. of Periods | Marks |
|--------------|------------------------------|-----------------------|--------------|
| Unit 1 | Entrepreneurial Opportunity | 40 | 30 |
| Unit 2 | Entrepreneurial Planning | 40 | |
| Unit 3 | Enterprise Marketing | 40 | 20 |
| Unit 4 | Enterprise Growth Strategies | 20 | |
| Unit 5 | Business Arithmetic | 40 | 20 |
| Unit 6 | Resource Mobilization | 20 | |
| | Total | 200 | 70 |
| | Project Work | 40 | 30 |
| | Total | 240 | 100 |

COURSE CONTENT

| Unit 1: Entrepreneurial Opportunity | | 40 Periods |
|---|---|-------------------|
| Competencies: Scanning the environment; Analytical and logical thinking; Innovation and creativity; Decision making; self-confidence. | | |
| Contents | Learning Outcomes | |
| <ul style="list-style-type: none">• Sensing Entrepreneurial Opportunities• Environment Scanning• Problem Identification• Idea fields• Spotting Trends• Creativity and Innovation• Selecting the Right Opportunity | After going through this unit, the student/ learner would be able to: <ul style="list-style-type: none">• Comprehend the concept and elements of business opportunity• Discuss the process of sensing opportunities• Understand the need to scan the environment• Enlist the various forces affecting business environment• Identify the different idea field | |

| | |
|---|--|
| | <ul style="list-style-type: none"> • Understand the concept of opportunity and market assessment • Appreciate the ways in which trends can be spotted • Understand the process of creativity and innovation • Transform ideas into business opportunities |
| Unit 2: Entrepreneurial Planning | |
| 40 Periods | |
| Competencies: Analytical and critical thinking; personal responsibility; determination; Resourceful; collaboration | |
| Contents | Learning Outcomes |
| <ul style="list-style-type: none"> • Forms of business organization- Sole proprietorship, Partnership, Company • Business Plan: concept, format. • Components: Organisational plan; Operational plan; Production plan; Financial plan; Marketing plan; Human Resource plan | <p>After going through this unit, the student/ learner would be able to:</p> <ul style="list-style-type: none"> • Recall the meaning of the various forms of business organization • Understand the characteristics of the various forms of business organization • Understand the difference between a Public and Private Company • Appreciate the reasons for a private company being more desirable • Appreciate the concept and importance of a Business Plan • Describe the various components of Business plan • Differentiate among the various components of Business plan • Develop a Business Plan |
| Unit 3: Enterprise Marketing | |
| 40 Periods | |
| Competencies: Persistence, Negotiation, Collaboration, Ethical behavior, team spirit; | |
| Contents | Learning Outcomes |

| | |
|---|---|
| <ul style="list-style-type: none"> • Marketing and Sales Strategy • Branding, Logo, Tagline • Promotion Strategy | <p>After going through this unit, the student/ learner would be able to:</p> <ul style="list-style-type: none"> • Discuss the various marketing strategies used in a business • Explain Marketing Mix. • Understand the concept of Branding, Packaging and Labeling • Describe the various methods of Pricing • Discuss the various factors affecting the channels of distribution • Understand the concept and types of sales strategy • Discuss different tools of promotion • Appreciate the objectives and different modes of Advertising • Understand the concept of personal selling, sales promotion, public relations • Discuss the various techniques of sales promotion |
| Unit 4: Enterprise Growth Strategies | |
| 20 Periods | |
| Competencies: Need for achievement, Initiative, Analytical thinking, risk vs reward, collaboration, synergy, leadership, | |
| Contents | Learning Outcomes |
| <ul style="list-style-type: none"> • Franchising: Concept and types • Franchising: Advantages and limitations to franchisor and franchisee. • Mergers and Acquisition: Concept, reasons and types. • Reasons for mergers and acquisitions | <p>After going through this unit, the student/ learner would be able to:</p> <ul style="list-style-type: none"> • Understand the concept of growth & development of an enterprise • Discuss the concept, types, advantages and limitations of franchising • Appreciate growth of business through mergers and acquisitions • Discuss the different types of mergers and acquisitions • Discuss the reasons for mergers and acquisitions |
| Unit 5: Business Arithmetic | |
| 40 Periods | |
| Competencies: Arithmetic skills, critical analysis, decision making, self-confidence, problem solving. | |
| Contents | Learning Outcomes |

| <ul style="list-style-type: none"> • Unit of Sale, Unit Cost for multiple products or services • Break even Analysis for multiple products or services • Computation of Working Capital • Inventory Control and EOQ • Return on Investment (ROI) and Return on Equity (ROE) | <p>After going through this unit, the student/ learner would be able to:</p> <ul style="list-style-type: none"> • Understand the concept of Unit Cost and Unit Price • Calculate Break-even point for Multiple products and services. • Understand the concept of Inventory Control • Compute the working capital of a business. • Calculate Return on Investment; Return on Equity and Economic Order Quantity |
|--|--|
| Unit 6: Resource Mobilization 20 Periods | |
| Competencies: Risk taking, Communication, Persuasion, Networking, Ethical behavior | |
| Contents | Learning Outcomes |
| <ul style="list-style-type: none"> • Capital Market: Concept • Primary market: Concept, methods of issue • Angel Investor: Features • Venture Capital: Features, funding. | <p>After going through this unit, the student/ learner would be able to:</p> <ul style="list-style-type: none"> • Understand the need of finance in Business • Discuss the various sources of funds required for a firm • Understand the ways of raising funds in primary market • Appreciate the Angel Investors and Venture Capitalists as a source of business finance. |

PROJECT WORK

Students have to do **TWO projects** in the entire academic session.

TOPICS FOR THE PROJECT:

1. Business Plan
 2. Market Survey
- 10 Marks each for 02 Projects
 - 5 Marks for Numerical Assessment
 - 5 Marks for Viva

Note: Students need to complete both the projects. Guidelines for both projects are given in the CBSE Textbook.

1.The objectives of the project work:

Objectives of project work are to enable learners to:

- probe deeper into personal enquiry, initiate action and reflect on knowledge and skills, views etc. acquired during the course of class XI-XII.
- analyse and evaluate real world scenarios using theoretical constructs and arguments
- demonstrate the application of critical and creative thinking skills and abilities to produce an independent and extended piece of work
- follow up aspects in which learners have interest
- develop the communication skills to argue logically

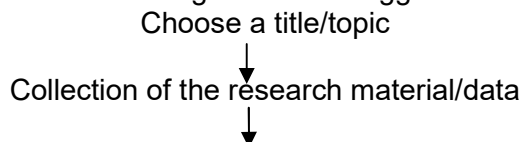
2. Role of the teacher:

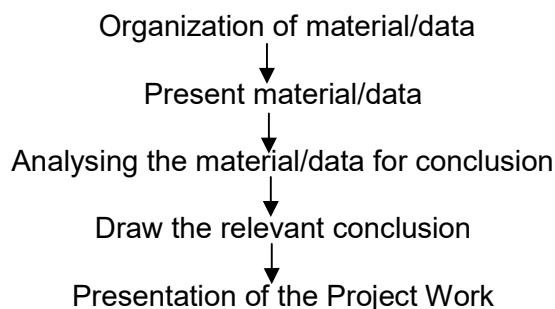
The teacher plays a critical role in developing thinking skills of the learners. A teacher should:

- help each learner select the topic after detailed discussions and deliberations of the topic;
- play the role of a facilitator to support and monitor the project work of the learner through periodic discussions;
- guide the research work in terms of sources for the relevant data;
- ensure that students must understand the relevance and usage of primary evidence and other sources in their projects and duly acknowledge the same;
- ensure that the students are able to derive a conclusion from the content; cite the limitations faced during the research and give appropriate references used in doing the research work.
- educate learner about plagiarism and the importance of quoting the source of the information to ensure authenticity of research work.
- prepare the learner for the presentation of the project work.
- arrange a presentation of the project file.

3. Steps involved in the conduct of the project:

Students may work upon the following lines as a suggested flow chart:





4. **Expected Checklist for the Project Work:**

- Introduction of topic/title
- Identifying the product/service
- Various stakeholders and effect on each of them
- Use of different tools for market assessment and it's analysis
- Implication of 4P's in the process of marketing
- Calculation of various costs involved in the business planning process
- Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file
- Presentation and writing that is succinct and coherent in project file
- Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

5. **Viva-Voce**

- At the end of the academic session, each learner will present the research work in the Project File to the External examiner.
- The questions should be asked from the Research Work/ Project File of the learner.
- The Internal Examiner should ensure that the study submitted by the learner is his/her own original work.
- In case of any doubt, authenticity should be checked and verified.

Guidelines to do the project is given in the textbook

Prescribed Books:

1. Entrepreneurship - Class XI- C.B.S.E, Delhi
2. Entrepreneurship - Class XII - C.B.S.E., Delhi
3. Udyamita (in Hindi) by Dr. MMP. Akhouri and S.P Mishra, pub. By National Institute for Entrepreneurship and Small Business Development (NIESBUD), NSIC-PATC Campus, Okhla

Magazines

1. Udyamita Samachar Patra (Monthly, Hindi), Pub. By Centre for Entrepreneurship Development, M.P. (CEDMAP), 60 Jail Road, Jhangerbad, Bhopal-462008.
2. Science Tec. Entrepreneur (A Bi Monthly Publication), Centre for Entrepreneurship Development, M.P (CEDMAP), 60 Jail Road, Jhangerbad, Bhopal -462008
3. Laghu Udyog Samachar
4. Project Profile by DCSSI

ENTREPRENEURSHIP (Code no. 066)
QUESTION PAPER DESIGN
CLASS XII (2022-23)

| S.No. | Competencies | Total Marks | % Weightage |
|-------|--|-------------|-------------|
| 1. | <p>Remembering: Exhibit memory of previously learned material by recalling facts, listing elements, terms and basic concepts</p> <p>Understanding: Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas</p> | 20 | 28.5% |
| 2. | Applying: Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in different ways. | 30 | 43% |
| 3. | <p>Analysing and Evaluating: Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations, integrated learning; Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.</p> <p>Creating: Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions</p> | 20 | 28.5% |
| | TOTAL | 70 | 100% |

PHYSICAL EDUCATION (048)

Class XII (2022–23)

Theory

Max. Marks 70

Unit I Management of Sporting Events

- Functions of Sports Events Management (Planning, Organising, Staffing, Directing & Controlling)
- Various Committees & their Responsibilities (pre; during & post)
- Fixtures and its Procedures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic)

Unit II Children & Women in Sports

- Common Postural Deformities - Knock Knee; Bow Legs; Flat Foot; Round Shoulders; Lordosis, Kyphosis, and Scoliosis and their corrective measures
- Special consideration (Menarche & Menstrual Dysfunction)
- Female Athletes Triad (Osteoporosis, Amenorrhea, Eating Disorders)

Unit III Yoga as Preventive measure for Lifestyle Disease

- Obesity: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Pavanmuktasana, Matsayāsana, Halāsana, Pachimottāsana, Ardha – Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan pranayama.
- Diabetes: Procedure, Benefits & Contraindications for Katichakrasana, Pavanmuktasana, Bhujangāsana, Shalabhasana, Dhanurasana, Supta-vajarasana, Paschimottāsana, Ardha-Matsyendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana, Kapalabhati.
- Asthma: Procedure, Benefits & Contraindications for Tadasana, Urdhwahastottāsana, UttanMandukasana, Bhujangāsana, Dhanurasana, Ushtrasana, Vakrasana, Kapalabhati, Gomukhasana Matsyaasana, Anuloma-Viloma.
- Hypertension: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Uttanpadasana, Ardha Halāsana, Sarala Matyasana, Gomukhasana, UttanMandukasana, Vakrasana, Bhujangāsana, Makarasana, Shavasana, Nadi-shodhanapranayam, Sitlipranayam.

Unit IV Physical Education & Sports for CWSN (Children with Special Needs - *Divyang*)

- Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics)
- Advantages of Physical Activities for children with special needs.
- Strategies to make Physical Activities assessable for children with special needs.

Unit V Sports & Nutrition

- Concept of balance diet and nutrition
- Macro and Micro Nutrients: Food sources & functions
- Nutritive & Non-Nutritive Components of Diet

Unit VI Test & Measurement in Sports

- Fitness Test – SAI Khelo India Fitness Test in school:
 - Age group 5-8 yrs/ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test
 - Age group 9-18yrs/ class 4-12: BMI, 50mt Speed test, 600mt Run/Walk, Sit & Reach flexibility test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls).
- Computing Basal Metabolic Rate (BMR)

- Rikli & Jones - Senior Citizen Fitness Test
 - I. Chair Stand Test for lower body strength
 - II. Arm Curl Test for upper body strength
 - III. Chair Sit & Reach Test for lower body flexibility
 - IV. Back Scratch Test for upper body flexibility
 - V. Eight Foot Up & Go Test for agility
 - VI. Six Minute Walk Test for Aerobic Endurance

Unit VII Physiology & Injuries in Sports

- Physiological factors determining components of physical fitness
- Effect of exercise on Muscular System
- Effect of exercise on Cardio-Respiratory System
- Sports injuries: Classification (Soft Tissue Injuries -Abrasion, Contusion, Laceration, Incision, Sprain & Strain; Bone & Joint Injuries - Dislocation, Fractures - Green Stick, Comminuted, Transverse Oblique & Impacted)

Unit VIII Biomechanics & Sports

- Newton's Law of Motion & its application in sports
 - Equilibrium – Dynamic & Static and Centre of Gravity and its application in sports
- Friction & Sports
- Projectile in Sports

Unit IX Psychology & Sports

- Personality; its definition & types (Jung Classification & Big Five Theory)
- Meaning, Concept & Types of Aggressions in Sports
- Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting

Unit X Training in Sports

- Concept of Talent Identification and Talent Development in Sports
- Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle.
- Types & Method to Develop – Strength, Endurance and Speed
- Types & Method to Develop – Flexibility and Coordinative Ability

Practical

Max. Marks 30

01. Physical Fitness Test: SAI Khelo India Test, Brockport Physical Fitness Test (BPFT)* 6 Marks
02. Proficiency in Games and Sports
(Skill of any one IOA recognised Sport/Game of Choice)** 7 Marks
03. Yogic Practices 7 Marks
04. Record File *** 5 Marks
05. Viva Voce (Health/ Games & Sports/ Yoga) 5 Marks

* Test for CWSN (any 4 items out of 27 items. One item from each component: Aerobic Function, Body Composition, Muscular strength & Endurance, Range of Motion or Flexibility)

**CWSN (Children With Special Needs – Divyang): Bocce/Boccia , Sitting Volleyball, Wheel Chair Basketball, Unified Badminton, Unified Basketball, Unified Football, Blind Cricket, Goalball, Floorball, Wheel Chair Races and Throws, or any other Sport/Game of choice.

**Children With Special Needs can also opt any one Sport/Game from the list as alternative to Yogic Practices. However, the Sport/Game must be different from Test - 'Proficiency in Games and Sports'

*****Record File shall include:**

- ❖ Practical-1: Fitness tests administration.
- ❖ Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.
- ❖ Practical-3: Anyone one IOA recognised Sport/Game of choice. Labelled diagram of Field & Equipment. Also mention its Rules, Terminologies & Skills.

Note: For PE (048) Curriculum, Handbooks are already available at Board's website. However, the revised version of these Handbooks would soon be available that include following topics at Board's Academic website www.cbseacademic.nic.in

Class XI Handbook:

Unit I Changing Trends & Career in Physical Education - Concept, Aims & Objectives of Physical Education; Development of Physical Education in India – Post Independence; Changing Trends in Sports- playing surface, wearable gears and sports equipment, technological advancements; Career Options in Physical Education; Khelo-India and Fit-India Program

Unit II Olympism - Olympism – Concept and Olympics Values (Excellence, Friendship & Respect); Olympic Value Education – Joy of Effort, Fair Play, Respect for Others, Pursuit of Excellence, Balance Among Body, Will & Mind; Ancient and Modern Olympics; Olympics - Symbols, Motto, Flag, Oath, and Anthem; Olympic Movement Structure - IOC, NOC, IFS, Other members

Unit III Yoga - Meaning & Importance of Yoga; Introduction to Ashtanga Yoga; YogicKriyas (Shat Karma); Pranayama and its types; Active lifestyle and Stress Management through Yoga

Unit IV Physical Education & Sports for CWSN (Children with Special Needs - Divyang) - Concept of Disability and Disorder; Types of Disability, its causes & nature (Intellectual disability, Physical disability); Disability Etiquettes; Aim & Objective of Adaptive Physical Education; Role of various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & Special Educator)

Unit V Physical Fitness, Health and Wellness - Meaning and Importance of Wellness, Health and Physical Fitness; Components/Dimensions of Wellness, Health and Physical Fitness; Traditional Sports & Regional Games for promoting wellness; Leadership through Physical Activity and Sports; Introduction to First Aid – PRICE

Unit VI Test, Measurement & Evaluation - Concept of Test, Measurement & Evaluation in Physical Education & sports; Importance of Test, Measurement and Evaluation in Sports; Classification of Test in Physical Education and Sports; Test administration guidelines in physical education and sports; BMI, Waist-Hip Ratio, Skin fold Measures (3-site)

Unit VII Fundamentals of Anatomy, Physiology in Sports - Definition and Importance of Anatomy and Physiology in exercise and sports; Functions of Skeletal system, classification of bone and types of joints; Properties and Functions of Muscles; Function and Structure of Circulatory system and heart; Function and Structure of Respiratory system

Unit VIII Fundamentals of Kinesiology and Biomechanics in Sports - Definition and Importance of Kinesiology and Biomechanics in sports; Principles of Biomechanics; Kinetics and Kinematics in Sports; Types of Body Movements - Flexion, Extension, Abduction, Adduction, Rotation, Circumduction, Supination & Pronation; Axis and Planes – Concept and its application in body movements

Unit IX Psychology & Sports - Definition & Importance of Psychology in Physical Education & Sports; Developmental Characteristics at Different Stages of Development; Adolescent Problems & their Management; Team Cohesion and Sports; Introduction to Psychological Attributes: Attention, Resilience, Mental Toughness

Unit X Training and Doping in Sports - Concept and Principles of Sports Training; Training Load: Over Load, Adaptation, and Recovery; Warming-up & Limbering Down – Types, Method & Importance; Concept of Skill, Technique, Tactics & Strategies; Concept of Doping and its disadvantages

Class XII Handbook:

Unit I Management of Sporting Events - Functions of Sports Events Management (Planning, Organising, Staffing, Directing & Controlling); Various Committees & their Responsibilities (pre; during & post); Fixtures and its Procedures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic); Intramural & Extramural – Meaning, Objectives & Its Significance; Community Sports – Purpose and benefits

Unit II Children & Women in Sports - Exercise Guidelines of WHO for different age groups; Common Postural Deformities - Knock Knee; Bow Legs; Flat Foot; Round Shoulders; Lordosis, Kyphosis, and Scoliosis and their corrective measures; Women participation in Sports – Physical, Psychological and Social benefits; Special consideration (Menarche & Menstrual Dysfunction); Female Athletes Triad (Osteoporosis, Amenorrhea, Eating Disorders)

Unit III Yoga as Preventive measure for Lifestyle Disease - Obesity: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha – Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan pranayama; Diabetes: Procedure, Benefits & Contraindications for Katichakrasana, Pavanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Supta-vajarasana, Paschimottanasana, Ardha-Mastendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana, Kapalabhati; Asthma: Procedure, Benefits & Contraindications for Tadasana, Urdhwahastottansana, Uttan Mandukasana, Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalabhati, Gomukhasana Matsyaasana, Anuloma-Viloma; Hypertension: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Uttanpadasana, Ardha Halasana, Sarala Matyasana, Gomukhasana, Uttan Mandukasana, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadi-shodhanapranayam, Sitlipranayam; Back Pain and Arthritis: Procedure, Benefits & Contraindications of Tadasana, Urdhwahastottansana, Ardha-Chakrasana, Ushtrasana, Vakrasana, Sarala Matsyendrasana, Bhujangasana, Gomukhasana, Bhadrasana, Makarasana, Nadi-Shodhana Pranayam;

Unit IV Physical Education & Sports for CWSN (Children with Special Needs - *Divyang*) – Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics); Concept of Classification and Divisioning in Sports; Concept of Inclusion in sports, its need, and Implementation; Advantages of Physical Activities for children with special needs; Strategies to make Physical Activities assessable for children with special needs

Unit V Sports & Nutrition - Concept of balance diet and nutrition; Macro and Micro Nutrients: Food sources & functions; Nutritive & Non-Nutritive Components of Diet; Eating For Weight Control – A Healthy Weight, The Pit falls of Dieting, Food Intolerance & Food Myths; Importance of Diet in Sports and Pre, During and Post requirement

Unit VI Test & Measurement in Sports - Fitness Test – SAI Khelo India Fitness Test in school [Age group 5-8 yrs/ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test; Age group 9-18yrs/ class 4-12: BMI, 50mt Speed test, 600mt Run/Walk, Sit & Reach flexibility test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls)]; Measurement of Cardio-Vascular Fitness – Harvard Step Test – Duration of the Exercise in Seconds x100/5.5 X Pulse count of 1-1.5 Min after Exercise; Computing Basal Metabolic Rate (BMR); Rikli & Jones - Senior Citizen Fitness Test - Chair Stand Test for lower body strength, Arm Curl Test for upper body strength, Chair Sit & Reach Test for lower body flexibility, Back Scratch Test for upper body flexibility, Eight Foot Up & Go Test for agility, Six Minute Walk Test for Aerobic Endurance; Johnsen – Methney Test of Motor Educability (Front Roll, Roll, Jumping Half-Turn, Jumping full-turn)

Unit VII Physiology & Injuries in Sports - Physiological factors determining components of physical fitness; Effect of exercise on Muscular System; Effect of exercise on Cardio-Respiratory System; Physiological changes due to aging; Sports injuries: Classification (Soft Tissue Injuries – Abrasion, Contusion, Laceration, Incision, Sprain & Strain; Bone & Joint Injuries - Dislocation, Fractures - Green Stick, Comminuted, Transverse Oblique & Impacted)

Unit VIII Biomechanics & Sports - Newton's Law of Motion & its application in sports; Types of Lever and its application in Sports; Equilibrium – Dynamic & Static and Centre of Gravity and its application in sports; Friction & Sports; Projectile in Sports

Unit IX Psychology & Sports - Personality; its definition & types (Jung Classification & Big Five Theory); Motivation, its type & techniques; Exercise Adherence: Reasons, Benefits & Strategies for Enhancing it; Meaning, Concept & Types of Aggressions in Sports; Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting

Unit X Training in Sports - Concept of Talent Identification and Talent Development in Sports; Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle; Types & Method to Develop – Strength, Endurance and Speed; Types & Method to Develop – Flexibility and Coordinative Ability; Circuit Training - Introduction & its importance