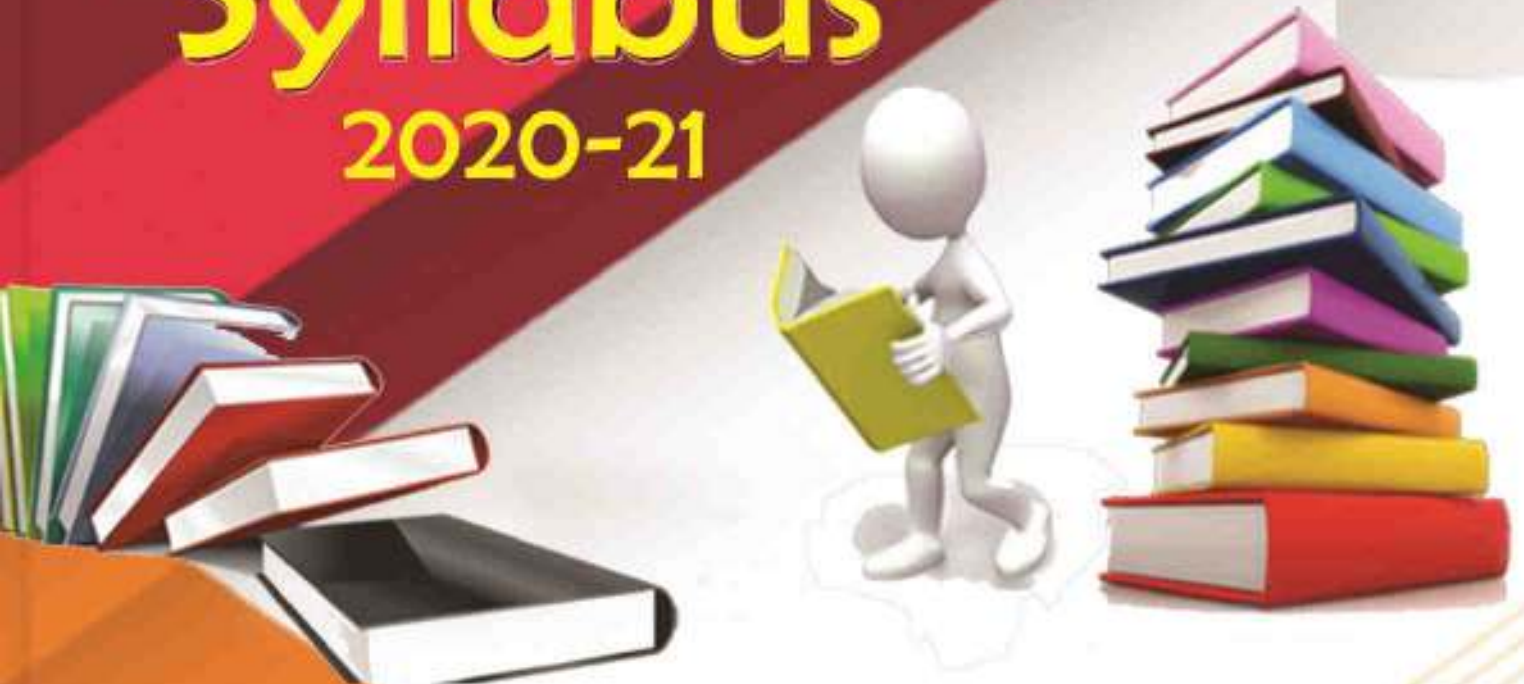


# Syllabus

2020-21



**DAV PUBLIC SCHOOLS**

**ODISHA ZONE-II**

Managed by : DAV College Managing Committee, New Delhi

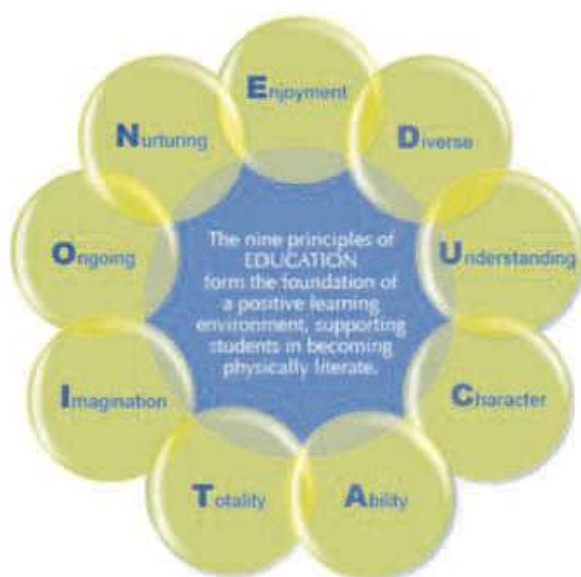
## **FORWARD**

A syllabus helps every teacher and student to know clearly the topics to be taught and the concepts to be learnt. And a Split-up of Syllabus helps everyone to plan ahead and to work systematically. This split up of syllabus is presented to all the stakeholders (students, teachers & parents) to help them to accomplish their goals. Each school is at the liberty to bring changes in it according to their requirement sticking to the suggested guidelines.

Hope this will help the teachers in designing and planning lessons for transacting syllabus and assessing students effectively during the current Academic Session.



**DAV PUBLIC SCHOOLS**  
**ODISHA ZONE II**  
**SYLLABUS FOR THE SESSION - 2020-21**  
**CLASS - XII**



**Managed By:**  
**DAV College Managing Committee, New Delhi**



**SYLLABUS 2020-21**  
**DAV PUBLIC SCHOOLS, ODISHA ZONE - II**  
**CLASS - XII**  
**AN OVERVIEW**

- The syllabus aims at providing a stress free environment and a joyful learning experience to the students focusing on the set *Learning Outcomes*.
- The school aims at developing inner abilities within a student through *Competence Mapping* activities.
- Minimum 75 % attendance is required to appear *Boar Examination*.
- *Examination Scheme*
  - One Unit Test (Before Half Yearly)
  - Half Yearly
  - Pre-Board I & II
  - Board (CBSE)
- All Saturdays (including second Saturday) will be *Full Working Days*.
- *Parent-Teacher Meeting* will be conducted on any working day (as per the suitability of the school) at 4.00 pm, once in a month.

## SPLIT UP SYLLABUS 2020-21

**CLASS: XII (Theory)- COMPUTER SC. (PYTHON)**

SUB: Computer Science (083) ,Maximum Marks: 70

Books Prescribed: 01. Computer Science with Python by Sumita Arora, Dhanpat Rai & Co  
02. Computer Science with Python Published by DAV CAE

Unit Test	Months	Chapters / Topics to be Taught		Chapter Wise Weightage		
				Half Yearly	Pre Board	Annual
	April To July	Unit- I	<ul style="list-style-type: none"> <li>• 1. Revision of basic Python of XI</li> <li>• 3. Working with Function</li> </ul>	24	20	40
				10	10	
			<ul style="list-style-type: none"> <li>• 4. Using Python Libraries</li> </ul>	03	02	
			<ul style="list-style-type: none"> <li>• 5. File Handling</li> <li>• 5. File Handling</li> <li>• 7. Idea of Algorithmic Efficiency</li> <li>• 6. Recursion</li> </ul>	07	04	
UNIT TEST-I	August		<ul style="list-style-type: none"> <li>• 6. Recursion</li> <li>• 9. Data Structure</li> </ul>	06	04	
	September	Unit- III	Database Management System <ul style="list-style-type: none"> <li>• 13. Database Concept &amp; SQL</li> </ul> <b>Revision for Half Yearly Examination</b>	20	20	20
	October		<b>HALF YEARLY EXAMINATION</b>	<b>Total: 70</b>		
	November	Unit -II	<ul style="list-style-type: none"> <li>• 11. Computer Networks</li> </ul>	--	10	10
	December		<b>Revision for Pre-Board - I</b>			
	January		<b>Revision for Pre-Board - II</b>			
	February		<b>Revision</b>			
				<b>Total:</b>		<b>70</b>

### Question Pattern-Half Yearly

Q. NO.	NO. OF QUESTIONS				TOTAL
	1 MARK	2MARK	3 MARK	4 MARK	
1	3	3	1	-	12
2	6	-	-	-	06
3	3	3	3	-	18
4	1	3	1	1	14
5	5	4	1	1	20
TOTAL	1X18=18	2X13=26	3X6=18	4X2=08	70

## COMPUTER SCIENCE PRACTICAL (30 Marks) Session 2020-21

Sl. No.	Particulars	Marks
1	Lab Test: 1. Python program (60% logic + 20% documentation + 20% code quality) 2. Small Python program that sends a SQL query to a database and displays the result. A stub program can be provided	07 05
	Report file: Minimum 20 Python programs. Out of this at least 4 programs should send SQL commands to a database and retrieve the result	07
3	Project (that uses the concepts that have been learnt in Class 11 and 12)	08
4	Viva voce	03
	Total:	30

### 5. Suggested Practical List:

#### Python Programming

- Read a text file line by line and display each word separated by a #.
- Read a text file and display the number of vowels/ consonants/ uppercase/ lowercase characters in the file.
- Create a binary file with name and roll number. Search for a given roll number and display the name, if not found display appropriate message.
- Create a binary file with roll number, name and marks. Input a roll number and update the marks.
- Remove all the lines that contain the character `a` in a file and write it to another file.
- Write a random number generator that generates random numbers between 1 and 6 (simulates a dice).
- Write a Python program to implement a stack and queue using a list data-structure.
- Take a sample of ten phishing e-mails (or any text file) and find most commonly occurring word(s)

#### Database Management

- Create a student table and insert data. Implement the following SQL commands on the student table:  
ALTER table to add new attributes / modify data type / drop attribute  
UPDATE table to modify data  
ORDER By to display data in ascending / descending order  
DELETE to remove tuple(s)  
**GROUP BY and find the min, max, sum, count and average**
- Similar exercise may be framed for other cases.
- Integrate SQL with Python by importing the MySQL module.

### 6. Project

The aim of the class project is to create something that is tangible and useful using Python / Python and SQL connectivity. This should be done in groups of two to three students and should be started by students at least 6 months before the submission deadline. The aim here is to find a real world problem that is worthwhile to solve. Students are encouraged to visit local businesses and ask them about the problems that they are facing. For example, if a business is finding it hard to create invoices for filing GST claims, then students can do a project that takes the raw data (list of transactions), groups the transactions by category, accounts for the GST tax rates, and creates invoices in the appropriate format. Students can be extremely creative here. They can use a wide variety of Python libraries to create user friendly applications such as games, software for their school, software for their disabled fellow students, and mobile applications, Of course to do some of these projects, some additional learning is required; this should be encouraged. Students should know how to teach themselves. The students should be sensitized to avoid plagiarism and violations of copyright issues while working on projects. Teachers should take necessary measures for this.

## Deleted Portion

<p>Unit I: Computational Thinking and Programming - 2</p> <ul style="list-style-type: none"><li>● Recursion – simple algorithms with recursion : print a message forever, sum of first n natural numbers, factorial, Fibonacci numbers, recursion on arrays : binary search</li><li>● Idea of efficiency : performance measurement in terms of the number of operations.</li><li>● Data-structures: Lists as covered in Class XI, Stacks – Push, Pop using a list, Queues – Insert, Delete using a list. (One of the data structure Stack or Queue. Note : While setting the question paper a students will have an option between Stack and Queue.)</li></ul>
<p>Unit II: Computer Networks</p> <ul style="list-style-type: none"><li>● Web Scripting Client side (VB Script, Java Script, PHP) and Server side (ASP, JSP, PHP), Web 2.0 (for social networking)</li><li>● E-commerce payment transactions using online banking, mobile banking, payment apps and services.</li></ul>
<p>Unit III: Database Management</p> <p>CREATE TABLE, DROP TABLE, ALTER TABLE, UPDATE ....SET, INSERT, DELETE</p>
<p>1. Suggested Practical List: Python Programming</p> <ul style="list-style-type: none"><li>● Recursively find the factorial of a natural number</li><li>● Write a recursive code to find the sum of all elements of a list.</li><li>● Write a recursive code to compute the nth Fibonacci number</li></ul>

### LEARNING OUTCOMES CLASS-XII, COMPUTER SCIENCE

- Apply the concept of functions and recursion.
- Ability to create and use Python libraries.
- Apply the concept of file handling.
- Make use of the concept of efficiency in algorithms and computing in general.
- Ability to use basic data structures: Stacks and Queues
- Explain the basics of computer networks.
- Ability to use connectivity between Python and SOL.

**SPLIT-UP OF SYLLABUS 2020-21**  
**CLASS: XII SUB: Accountancy (055)**

**BOOKS PRESCRIBED: 1. Accounting for Partnership Firm & Companies (NCERT)**  
**2. Financial Statement Analysis (NCERT)**

	MONTH	CHAPTERS/TOPICS TO BE TAUGHT	CHAPTER WISE WEIGHTAGE	
			HALF YEARLY	PRE BOARD/ ANNUAL
	<b>APRIL TO JULY</b>	Part A: <b>Accounting for non- profit organizations Partnership Firm and companies.</b> Ch.1 Accounting for NPOs Ch. 2 Accounting for partnership firm (Fundamentals)	12 12	10 10
		Goodwill: Nature and valuation Ch. 3 Accounting for partnership firm – • Reconstitution and Dissolution • Change in profit sharing ratio among the existing partners • Admission of a partner	28	20
		• Retirement and death of a partner Ch. 4 Accounting for partnership firm – Reconstitution and Dissolution		
		• Dissolution of partnership firm Ch. 5 Accounting for Share Capital • Share and share capital • Accounting for share capital	18	
<b>UNIT TEST-I</b>	<b>AUGUST</b>	• Forfeiture and re-issue of share Ch. 6 Accounting for Debentures • Debentures- issue of debentures • Redemption of debentures ( <b>Except conversion and purchase from open market</b> )	10	20
	<b>SEPTEMBER</b>	Part B: <b>Financial Statement Analysis</b> Ch 7 financial statements of a company Ch 8 Analysis of financial statements(theory) • Tools for financial analysis(comparative & common size statements) • Ratio analysis		12
	<b>OCTOBER</b>	<b>REVISION AND HALF YEARLY EXAMINATION</b>	<b>Total: 80</b>	
	<b>NOVEMBER</b>	Ch. 8 Analysis of Financial Statements • Cash Flow Statement • Project work/Practical (Specified one) Unit – 1 : Project file 4 marks Unit – 2 : Written Test 12 marks Unit – 3 : Viva Voice 4 marks		08 20
	<b>DECEMBER</b>	<b>REVISION &amp; PRE-BOARD-I EXAMINATION</b>		
	<b>JANUARY</b>	<b>REVISION &amp; PRE-BOARD II EXAMINATION</b>		
	<b>FEBRUARY</b>	<b>REVISION</b>		
		<b>Total:</b>		<b>100</b>



### QUESTION PATTERN (HALF-YEARLY)

TYPE OF QUESTION(S)	MARK(S) PER QUESTION	TOTAL NO. OF QUESTIONS	TOTAL MARKS
VSA	1	20	20
SA - I	3	2	06
SA - II	4	5	20
LA - I	6	3	18
LA - II	8	2	16
	<b>Total:</b>	<b>32</b>	<b>80</b>

#### Deleted Portion

**Part A: Accounting for Not-for-Profit Organizations, Partnership Firms and Companies**

**Unit 2: Accounting for Partnership Firms**

Units/Topics
<b>Accounting for Partnership firms - Reconstitution and Dissolution.</b> <ul style="list-style-type: none"><li>● Admission of a partner - adjustment of capital accounts and preparation of balance sheet.</li><li>● Retirement and death of a partner; adjustment of capital accounts. Preparation of loan account of the retiring partner.</li><li>● Preparation of deceased partner's capital account and his executor's account.</li></ul>

**Unit - 3 Accounting for Companies**

Units/ Topics
<b>Accounting for Debentures</b> <ul style="list-style-type: none"><li>● Redemption of debentures-Methods: Lump sum, draw of lots.</li></ul>

**Project Work:**

From session 2020-21 onwards, there would be only ONE project (specific) to be prepared.

**Note:** Kindly refer to the related Guidelines published by the CBSE.

- Since there is only one project instead of three hence 10 Lectures were reduced in the same.

**BLUE PRINT (HALF-YEARLY)**

SL NO	CONTENTS UNIT/FORMS OF QUESTIONS	VSA (1)	SA-1 (3)	SA-2 (4)	LA-1 (6)	LA-2 (8)	TOTAL MARKS
1	Part –A Accounting for partnership firm Accounting for NPOs	2	-	1	1	-	12
2	Accounting for Partnership firm- (Fundamental)	5	1	1	-	-	12
3	Accounting for Partnership firm- Reconstitution & Dissolution	4	-	1	2	1	28
3	Accounting for share Capital	6	-	1		1	18
4	Accounting for Debentures	3	1	1	-	-	10
	<b>Total:</b>	<b>1(20)</b>	<b>3(2)</b>	<b>4(5)</b>	<b>6(3)</b>	<b>8(2)</b>	<b>80</b>

**QUESTION PATTERN (PRE-BOARD EXAMINATION)**

TYPE OF QUESTION(S)	MARK(S) PER QUESTION	TOTAL NO. OF QUESTIONS		TOTAL MARKS
		PART-A	PART-B	
VSA	1	13	7	20
SA – I	3	1	1	06
SA – II	4	4	1	20
LA – I	6	2	1	18
LA - II	8	2	-	16
	<b>Total:</b>	<b>22</b>	<b>10</b>	<b>80</b>

- N.B.:
- ❖ Blue print of question paper for Pre Board/Annual examination will be as per CBSE guidelines.
  - ❖ All questions carrying 8 marks will have a mandatory internal choice.
  - ❖ There will be internal choices in questions of 3 marks / 4 marks / 6 marks.

## LEARNING OUTCOMES

### SUBJECT: ACCOUNTANCY

SL.No.	Class	Name of the Text Book	Chapter/ Lesson	Learning Outcomes	
1	XII	ACCOUNTANCY –I	Financial Statements of NPO	1.states the meaning of a NPO and its distinction from a profit making entity .	
		ACCOUNTANCY –II		2.explains the accounting treatment of items of NPO	
		(NCERT)		3.understands fund based accounting	
		4.develop skill to prepare the financial statements of NPO			
2				Accounting for Partnership Firm(Fundamentals)	1.states the meaning of partnership and partnership firm.
					2.understands the provisions of Indian Partnership Act
					3.able to prepare P/L Appropriation Account and do necessary past adjustments
					4.develops the understanding and skill of valuation of goodwill.
3				Accounting for Partnership Firm (Reconstitution )	1.states the meaning of sacrificing and gaining ratio.
					2.understands the provisions of admission and retirement.
					3.explains the effect of retirement of a partner on change in profit sharing ratio
					4.develop skill to do the required adjustments on admission and retirement of a partner
4				Accounting for Partnership Firm(Dissolution )	1.differentiates between dissolution of firm and partnership.
					2.understands the cases of dissolution
					3.develop skill to prepare dissolution and other related accounts
5			Accounting for share capital	1.states the meaning of share and share capital	
				2.distinguish between equity shares and preference shares.	
				3.understands the provisions of issue and forfeiture	
				4.develops the understanding of accounting treatment of issue, forfeiture and reissue of shares	
				5.describes the presentation of share capital in the balance sheet of the company	

6			Accounting for Debenture	1.understands the rules of issue and redemption.
				2.understands the concept of collateral security and its presentation in the balance sheet.
				3.explains the accounting treatment of issue of debentures
				4.develop the understanding of interest on debentures.
7			Financial Statements of a Company	1.states the meaning ,objectives and limitations of financial statement .
				2.explains the procedure of presentation.
				3.develop the skill to prepare the statement of P/L and Balance Sheet.
8			Analysis of Financial Statements	1.states the meaning ,objectives and limitations of financial statement analysis
				2.understands the benefit of financial analysis.
				3.explains the uses for different interested groups.
				4.develop the skill to analyze the financial statements by using different tools..

**CLASS: XII**  
**SUB: Business Studies (054)**

**BOOKS PRESCRIBED: 1. Business studies Part-I (NCERT)      2. Business studies Part-II (NCERT)**

	MONTH	CHAPTERS/TOPICS TO BE TOUGHT	CHAPTER WISE WEIGHTAGE	
			HALF YEARLY	PRE BOARD/ ANNUAL
	APRIL TO JULY	Ch-1: Nature and significance of management Ch-2: Principles of management.	27	16
		Ch-3: Business Environment		
		Ch-4: Planning	20	14
		Ch_5: Organizing		
		Ch-6: Staffing		
UNIT TEST -I	AUGUST	Ch-7: Directing Ch-8: Controlling	33	20
	SEPTEMBER	Ch-9 Financial management Ch-10Financial market		15
HALF YEARLY EXAMINATION	OCTOBER	REVISION FOR HALF YEARLY EXAMINATION	80	
	NOVEMBER	Ch-11 Marketing management Ch-12 Consumer protection	20	15
		PROJECT WORK		20
	DECEMBER	REVISION & PRE BOARD-I		
	JANUARY	REVISION & PRE BOARD-II		
	FEBRUARY	REVISION		
		<b>Total:</b>	<b>100</b>	<b>100</b>



**QUESTION PATTERN (HALF YEARLY/PRE-BOARD/ANNUAL)**

TYPE OF QUESTION(S)	MARK(S) PER QUESTION	TOTAL NO. OF QUESTIONS	TOTAL MARKS
VSA	1	20	20
SA - I	3	5	15
SA - II	4	3	12
LA - I	5	3	15
LA - II	6	3	18
	TOTAL(THEORY)	34	80
	PROJECT WORK		20
	<b>TOTAL</b>		<b>100</b>

**Deleted Portion**

**Part A: Principles and Functions of Management**

Unit	Topic deleted
Unit 3: Business Environment	Demonetization - concept Impact of Government policy changes on business with special reference to liberalization, privatization and globalization in India
Unit 4: Planning	Single use and standing plans, Objectives, Strategy, Policy, Procedure, method Rule, budget and Programme
Unit 5: Organising	Topics Deleted Formal and informal organisation- concept
Unit 6: Staffing	Staffing as a part of Human Resource Management concept
Unit 7: Directing	barriers to effective communication, how to overcome the barriers
Unit 8: Controlling	Relationship between planning and controlling

**Part B: Business Finance and Marketing**

Unit	Topic deleted
Unit 11: Marketing	Physical Distribution – components and channels of distribution
Unit 12: Consumer Protection	Consumer Protection: importance Consumer awareness – Role of consumer organizations and Non-Governmental Organizations (NGOs)

**BLUE PRINT (HALF-YEARLY)**

SL. NO	CONTENTS UNIT / FORMS OF QUESTIONS	VSA (1)	SA-1 (3)	SA-2 (4)	LA-1 (5)	LA-2 (6)	TOTAL MARKS
1	Nature and significance of management	3	1		1	-	11
2	Principles of management	3	1	1	-	-	10
3	Business environment	2	-	1	-	-	06
4	Planning	2	-	-	1	-	07
5	Organizing	2	-	-	1	1	13
6	Staffing	3	-	1		1	13
7	Directing	2	2	-	-	1	14
8	controlling	3	1	-	-		06
<b>Total:</b>		<b>1(20)</b>	<b>3(5)</b>	<b>4(3)</b>	<b>5(3)</b>	<b>6(3)</b>	<b>80</b>

- N.B.: ❖ There will be internal choice in questions of 3 marks, (1 choice), 4 marks (1 choice), 5 marks (2 choices) and 6 marks (2 choices), in all, total 6 internal choices.
- ❖ Blue print of question papers for Pre-board & Annual examination will be as per CBSE Guidelines

**LEARNING OUTCOMES**  
**SUBJECT: BUSINESS STUDIES**

SL No.	CLASS	NAME OF THE TEXT BOOK	CHAPTER/ LESSON	LEARNING OUTCOMES
1.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH-1 : Nature and Significance of Management	<p><b>The learners :</b></p> <p>i. <b>Understand</b> the Concept of Management, Importance of management in Business Organizations.</p> <p>ii. <b>State</b> the nature of management as Science , art and Profession.</p> <p>iv. <b>Explain</b> the role of different levels of management in the Organisation.</p> <p>v. <b>Analysis</b> the usefulness of Co-ordination function in the organization.</p>
2.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH-2 : Principles of Management	<p><b>The learners :</b></p> <p>i. <b>Analyse</b> the concept of Principles of Management, Significance of Management Principles in Business units.</p> <p>ii. <b>Application</b> of Henry Fayol's general principles of Management act as guidelines to the Top level Managers and F.W.Taylor's Scientific principles and techniques of Management useful for lower level Managers.</p>
3.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH-3 : Business Environment	<p><b>The learners :</b></p> <p>i. <b>Understand</b> the Concept and importance of Business Environment</p> <p>ii. <b>Analyse</b> the various dimensions of Business Environment</p> <p>iii. <b>State</b> the impact of government policy changes on business in India with reference to Liberalization, Privatization and Globalization since 1991 and Managerial response to Changes in Business Environment</p> <p>iv. <b>Understand</b> the concept of demonetization.</p>
4.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH-4 : Planning	<p><b>The learners :</b></p> <p>i. <b>Understand</b> the Concept, features and usefulness of Planning in the organization.</p> <p>ii. <b>State</b> the limitations of Planning function.</p> <p>iii. <b>Describe</b> the steps involved in the process of planning.</p> <p>iv. Develop an understanding of Single use and Standing plans i.e Objectives, Policies, Strategy, Procedure , Method, Rule, Budget and Programme</p>

5.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH-5 : Organizing	<p><b>The learners :</b></p> <p>i. <b>Analyse</b></p> <ul style="list-style-type: none"> <li>• the concept of organizing as a structure and as a process.</li> <li>• Significance of Organising function in Business Units</li> </ul> <p>ii. <b>Explain</b> the steps involved in the process of Organising.</p> <p>iii. <b>Develop an understanding</b> of Functional and divisional structures of organization, formal and informal organization and its suitability.</p> <p>iv. <b>Understand</b> the concept and elements of delegation in the organization .</p> <p>v. <b>Describe</b> the concept of decentralization and its importance in the organization.</p>
6.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH-6 : Staffing	<p><b>The learners :</b></p> <p>i. <b>Understand</b> the Concept and benefits of Staffing function in Management.</p> <p>ii. <b>Analyse</b> the specialized duties and activities performed by Human Resources Management.</p> <p>iii. <b>Describe</b> the steps in the process of Staffing.</p> <p>iv. <b>Acquaint knowledge</b> on elements/components of staffing</p> <p>(a) Recruitment</p> <p>(b) Selection</p> <p>(c) Training</p>
7.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH – 7: Directing	<p><b>The learners :</b></p> <p>i. <b>Aware about</b> the Concept and usefulness of directing function in organization.</p> <p>ii. <b>Analyse</b> the various elements of directing function of Management i.e.</p> <ul style="list-style-type: none"> <li>• Motivation and its benefits in the organization.</li> <li>• Concept of leadership and various styles of leadership.</li> <li>• Concept and elements of communication process</li> <li>• Barriers to effective communication and measures to overcome barriers to communication</li> </ul>
8.	XII	BUSINESS STUDIES (PART – I) (NCERT Text Book)	CH – 8 : Controlling	<p><b>The learners :</b></p> <p>i. <b>Analyse</b> the Concept of controlling function of management and its significance in the organization.</p> <p>ii. <b>Examine</b> the relationship between planning and controlling.</p> <p>iii. <b>Describe</b> the steps involved in the process of controlling.</p>

9.	XII	BUSINESS STUDIES (PART – II) (NCERT Text Book)	CH – 9 : Financial Management	<p><b>The learners :</b></p> <p>i. <b>Understand</b> the concepts, role and objectives of financial management .</p> <p>ii. <b>Apply</b> the learned skills, while taking financial decisions in the organization in different situations by considering various parameters</p> <p>iii. <b>Define</b> the concept of financial planning and its importance in the organization.</p> <p>iv. <b>Analyse</b> the concept of capital structure and the factors determining the choice of an appropriate capital structure of a company form of organization.</p> <p>v. <b>Understand</b> the concept of fixed and working capital and determining the requirement of fixed and working capital in the organization.</p>
10.		BUSINESS STUDIES (PART – II) (NCERT Text Book)	CH – 10 : Financial Market	<p><b>The learners :</b></p> <p>i. <b>Understand</b> the concept and functions of financial market, Capital market and money market and types of financial markets</p> <p>ii. <b>Describe</b> the concept of money market and about various money market instruments.</p> <p>iii. <b>Analyse</b> the capital market in different ways like</p> <ul style="list-style-type: none"> <li>• primary and secondary market.</li> <li>• Capital and Money market.</li> <li>• Methods of Floating new issues in the primary market.</li> </ul> <p>iv. <b>Understand</b> the concept of stock exchange , Functions of stock exchange , trading procedure in stock exchange and meaning of depository services and demat account as used in the trading procedure of securities.</p> <p>v. <b>Describe</b> the objectives and functions of SEBI</p>
11.	XII	BUSINESS STUDIES (PART – II) NCERT Text Book)	CH – 11 : Marketing Management	<p><b>The learners :</b></p> <p>i. <b>Define</b> the concept of market, marketing and marketing management</p> <p>ii. <b>Analyse</b> the Characteristics, functions and philosophies of marketing .</p> <p>iii. <b>Understand the concept</b> of marketing mix and elements of marketing mix i.e product, price , physical distribution and promotion.</p> <p>iv. <b>Explain</b> the concept of</p> <ul style="list-style-type: none"> <li>• Product mix , like branding , labelling and packaging.</li> <li>• Price mix and the factors determining price of a product.</li> <li>• Physical distribution , components of physical distribution and about various channels of distribution.</li> <li>• Promotion mix , elements of promotion mix</li> </ul> <p>v. <b>Understand</b> the concept of advertising , sales promotion and tools of sales promotion.</p>



12.	XII	BUSINESS STUDIES (PART – II) NCERT Text Book)	CH – 12 : Consumer Protection	<p><b>The learners :</b></p> <p>i. <b>Analyse</b> the concept of consumer protection, importance of consumer protection and the scope of consumer protection Act,1986</p> <p>ii. <b>Describe</b> the concept of a consumer according to the Consumer Protection</p> <p>iii. <b>Identify and apply</b> the consumer rights while buying goods and availing services.</p> <p>iv. <b>Understand</b> the responsibilities of consumers, who can file a complaint and against whom ?</p> <p>v. <b>Discuss</b> the legal redressal machinery under Consumer Protection Act,1986.</p> <p>vi. <b>Examine</b> the remedies available to the consumer under Consumer Protection Act,1986, Role of consumer organizations and NGOs in protecting consumers interest.</p>
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**SPLIT-UP OF SYLLABUS 2020-21**  
**CLASS: XII, SUB: BIOLOGY (044)**  
**TEXT BOOK PRESCRIBED: TEXT BOOK FOR CLASS XII, BIOLOGY, NCERT**

	MONTH	CHAPTERS/TOPIC TO BE TAUGHT	CHAPTER WISE HALF YEARLY	WEITAGE ANNUAL
UNIT TEST-I	APRIL TO JULY	UNIT-VI: REPRODUCTION CH-1: Reproduction in organisms CH-2: Sexual reproduction in flowering plant CH:3 Human Reproduction CH: 4 Reproductive Health	16	14
		UNIT: VII GENETICS AND EVOLUTION CH: 5 Principles of Inheritance and Variation	17	18
	AUGUST	CH:6 Molecular Basis of Inheritance CH: 7 Evolution UNIT: VIII BIOLOGY IN HUMAN WELFARE CH: 8 Human Health and Diseases	20	14
	SEPTEMBER	CH:9 Strategies for Enhancement in Food Production CH:10 Microbes in Human Welfare UNIT: IX BIOTECHNOLOGY CH:11 Biotechnology: Principles and Processes CH:12 Biotechnology and its Application	17	10
	OCTOBER	<b>REVISION &amp; HALF-YEARLY EXAMINATION</b>		
	NOVEMBER	UNIT: X: ECOLOGY AND ENVIRONMENT CH:13 Organisms and Population CH:14 Ecosystem CH: 15 Biodiversity and Conservation CH:16 Environmental issues		14
	DECEMBER	<b>REVISION &amp; PRE-BOARD-I</b>		
	JANUARY	<b>REVISION &amp; PRE-BOARD-II</b>		
	FEBRUARY	<b>REVISION</b>		
		<b>TOTAL</b>	<b>70</b>	<b>70</b>

### QUESTION PATTERN

TYPE OF QUESTIONS	MARK(S)PER QUESTION	TOTAL NO OF QUESTIONS	TOTAL MARKS
MCQ	01	05	05
SA-I	02	07	14
SA-II	03	09	27
CASE-BASED SA	03	03	09
LA	05	03	15
	<b>TOTAL</b>	<b>27</b>	<b>70</b>

**SCHEME OF OPTIONS:** There is no overall choice in the paper. However, there is an internal choice in two questions of one mark, one question of 2 marks weightage, two questions of 3 marks and all the three questions of 5 marks weightage.

### DELETED PORTION CLASS XII

<ul style="list-style-type: none"><li>• Under Unit-VI Reproduction<ul style="list-style-type: none"><li>○ Chapter-1: Reproduction in Organism<ul style="list-style-type: none"><li>• Reproduction, a characteristic feature of all organisms for continuation of species; modes of reproduction - asexual and sexual reproduction; asexual reproduction - binary fission, sporulation, budding, gemmule formation, fragmentation; vegetative propagation in plants.</li></ul></li></ul></li></ul>
<ul style="list-style-type: none"><li>• Under Unit-VII Genetics and Evolution<ul style="list-style-type: none"><li>○ Chapter-7: Evolution<ul style="list-style-type: none"><li>• Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy – Weinberg's principle; adaptive radiation; human evolution.</li></ul></li></ul></li></ul>

- **Under Unit-VIII Biology and Human Welfare**

- **Chapter 9: Strategies for Enhancement in Food Production**

- Animal husbandry, Plant breeding, tissue culture, single cell protein.

- **Under Unit-X Ecology and Environment**

- **Chapter-14: Ecosystem**

- Ecosystems: Patterns, components, productivity and decomposition, energy flow; pyramids of number, biomass, energy; nutrient cycles (carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).

- **Chapter 16: Environmental Issues**

- Air pollution and its control; water pollution and its control; agrochemicals and their effects; solid waste management; radioactive waste management; greenhouse effect and climate change impact and mitigation; ozone layer depletion; deforestation; exemplifying case study as success story addressing environmental issue(s).

**DELETED PORTIONS CLASS XII: PRACTICAL**

**A: List of Experiments**

1. Study the presence of suspended particulate matter in air at two widely different sites.
2. Study the plant population density by quadrat method.
3. Study the plant population frequency by quadrat method.

**B. Study/Observer of the following (spotting)**

1. Pollen germination on stigma through a permanent slide or scanning electron micrograph.
2. Mendelian inheritance using seeds of different colour/sizes of any plant.
3. Controlled pollination - emasculation, tagging and bagging.

### BLUEPRINT (HALF-YEARLY)

SL NO	CONTENTS UNIT/forms of questions	VSA(1)	SA(2)	LA-I(3)	CASE- BASED SA (3)	LA-II(5)	TOTAL MARKS
1	Unit VI Reproduction	1X2=2 CH-2	2X1=2 CH-2	3X3=9 CH-2,3,4	3X1=3 CH-4	-	16
2	Unit VII Genetics and evolution	1X1=1 CH-6	2x1=2 CH-5	3X2=6 CH-5,6	3X1=3 CH-6	1X5=5 CH-6	17
3	Unit VII Biology in human welfare	1X2=2 CH-8	2X2=4 CH-8,10	3X2=6 CH-8,10	3X1=3 CH-8	1X5=5 CH-8	20
4	Unit IX Biotechnology	-	2X3=6 CH-11,12	3X2=6 CH-11,12		1X5=5 CH-12	17
	<b>TOTAL</b>	<b>1X5=5</b>	<b>2X7=14</b>	<b>3X9=27</b>	<b>3X3=9</b>	<b>5X3=15</b>	<b>70</b>

#### WEIGTAGE TO CONTENT /SUBJECT UNITS

UNIT	TITLE	MARKS
VI	REPRODUCTION	14
VII	GENETICS AND EVOLUTION	18
VIII	BIOLOGY IN HUMAN WELFARE	14
IX	BIOTECHNOLOGY AND ITS APPLICATION	12
X	ECOLOGY AND ENVIRONMENT	12
	<b>TOTAL</b>	<b>70</b>

#### PRACTICAL SYLLABUS

SUBJECT-BIOLOGY PRACTICAL

CLASS-XII

SECTION	EXPERIMENT	MARK
A	One major experiment	5
	One minor expt.	4
B	Slide preparation	5
C	Spotting	7
D	Practical record + viva voce	4
E	Project + viva voce	5
	<b>TOTAL</b>	<b>30</b>



## BIOLOGY PRACTICAL (CLASS-XII)

MAX. MARKS: - 30

TIME: 3 HRS

S L	MO NTH	DETAILS OF THE EXPERIMENTS TO BE PERFORMED	DETAILS OF THE SPOTTINGS TO BE PERFORMED
1	June	1. Study pollen germination on a slide.	1. Flowers adapted to pollination by different agencies (wind, insect) 2. Pollen germination on stigma through a permanent slide.
2	July	2. Collect and study soil from at least two different soils and study them for texture, moisture content, PH and water holding capacity of soil. Correlate with the kinds of plants found in them. 3. Collect water from two different water bodies around you and study them for PH, clarity and presence of any living organism.	3. Identification of stages of gamete development i.e. T.S of Testis and T.S of ovary through permanent slides (from any mammal) 4. Meiosis in omen bud cell grasshopper testes through permanent slides.
3	Aug.	4. Study the presence of suspended particulate matter in an at two widely different sites 5. Study of plant population density by quadrat method. 6. Study of plant population frequency by quadrat method.	5. T.S of blastula through permanent slides 6. Mendelian Inheritance using seeds of different colours/ sizes of any plant. .
4	Sep.	7. Prepare a temporary mount of onion root tip to study mitosis. 8. Study the effect of different temperatures and three different PH on the activity of salivary amylase on starch.	7. Study prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, earlobes, widow's peak and colourblindness. 8. Exercise on controlled pollination - emasculation tagging and bagging. ..
5	Oct.		9. Identification of common disease-causing organisms like Ascaris, Entamoeba, Plasmodium, ringworm through permanent slides or specimens. Comment on symptoms of disease that they cause.
6	Nov	9. Isolation of DNA from plant materials such as Spinach, Green Pea seed, Papaya etc	10. Two plants and two animals found in Xeric conditions. Comment upon the morphological adaptations. 11. Plants and animals are found in aquatic condition upon their morphological adaptations

## LEARNING OUTCOMES

### SUBJECT: BIOLOGY

Sl. No	Class	Name of the Text Book	Chapter/ Lesson	Learning Outcomes
1	XII	Biology Textbook for Class 12	ch-1. Reproduction in Organisms	<b>Learner will be able to :</b>
				i) Analyse the concept of lifespan of an organism and its sustenance by the process of reproduction.
				ii) Comprehend and explain the processes of asexual and sexual reproduction.
				iii) Describe the various strategies adapted by different organisms for a sexual reproduction.
				iv) Define the process of gametogenesis and embryogenesis.
				v) Enumerate the pre and post Fertilisation events of Flowering plants.
				vi) Create an idea about a oviparity and viviparity among the animals.
2	XII		Ch.2. Sexual Reproduction in Flowering Plants.	<b>Learner will be able to :</b>
				i) Identify the different parts of a flower and their functions.
				ii) Explain the different parts of stamen and carpel and their functions.
				iii) Define Triple fusion, Double fertilisation, Monosporic development .
				iv) Analyse the significance of apomixis in the field of plant breeding.
				v) Enlist different mechanism of Pollination and their advantages and disadvantages.
				vi) Describe Microsporogenesis and Megasporogenesis.
3	XII		Ch.3. Human reproduction	<b>Learner will be able to :</b>
				i) Define the term spermatogenesis ,oogenesis menstrual cycle , implantation and fertilization.
				ii) Discuss the changes in women's body during and after fertilization.
				iii) Differentiate between follicular phase and luteal phase , blastula and gastrula , spermatogenesis and oogenesis.
				iv) Describe the characteristics of each trimester.
				v) Explain the process of Human fertilization.
				vi) Describe the development of Placenta and the events in pregnancy.

<b>4</b>	<b>XII</b>		<b>Ch.4. Reproductive Health</b>	<b>Learner will be able to :</b>
				i) Define the term amniocentesis ,MTP ,invitro fertilization ,population explosion.
				ii) Explain the different methods of birth control.
				iii) Differentiate between ZIFT and GIFT.
				iv) Design some methods to assist infertile couples to have children.
				v) State the availability of corrective measures for male and female infertility.
				vi) Describe Amniocentesis , its usefulness ,misuse and the reasons for its statutory ban.
<b>5</b>	<b>XII</b>		<b>Ch.5. Principles of Inheritance and Variation.</b>	<b>Learner will be able to :</b>
				i) Define the term Alleles, phenotype ,genotype , dominant recessive , monohybrid cross and dihybrid cross etc.
				ii) Explain the deviations from Mendelian ratios due to Incomplete dominance , Co-dominance and Multiple Allelism.
				iii) Compare pleiotropy , polygenic inheritance and differentiate each of them from Mendelian Inheritance of traits.
				iv) Analyse the Pedigree analysis and construct Pedigree charts.
				v) Explain genetic disorders and mendelian disorders and distinguish between them.
				vi) Explain the different mechanisms of sex determination in animals.
<b>6</b>	<b>XII</b>		<b>Ch.6. Molecular basis of Inheritance</b>	<b>Learner will be able to :</b>
				i) Analyse the mechanism of DNA replication.
				ii) Describe the structure of nucleosides ,nucleotides ,DNA and RNA.
				iii) Enlist the silent features of genetic code.
				iv) Explain DNA fingerprinting and its applications.
				v) Describe the Human Genome Project (HGP)and the salient features of Human genome.
				vi) Explain the regulation of gene expression and operon concept.

<b>7</b>	<b>XII</b>		<b>Ch7. Evolution</b>	<b>Learner will be able to :</b>
				i) Compare Divergent evolution and convergent evolution with examples.
				ii) Describe the evidences for evolution from paleontology , embryology ,biogeography and comparative anatomy.
				iii) Give a brief account of evolution of plants and animals through the geological time scale.
				iv) Explain Hardy Weinberg's principle and the factors affecting the genetic equilibrium.
				v)State and explain Darwin's theory of Evolution.
				vi) Enlist the different stages of evolution of man.
<b>8</b>	<b>XII</b>		<b>Ch8. Human Health and Diseases.</b>	<b>Learner will be able to :</b>
				i) Understand the different barriers of innate immunity.
				ii) Explain the different characteristics ,causes , detection and treatment of cancer.
				iii) Construct a mind map on immunity and its classification.
				iv) Draw a well labelled diagram of an antibody molecule.
				v) Classify the infectious diseases on the basis of the type of causative organism and the mode of transmission.
				vi)Describe the components of our immune system.
<b>9</b>	<b>XII</b>		<b>Ch9. Strategies for Enhancement in Food Production.</b>	<b>Learner will be able to :</b>
				i) Describe the different methods of animal breeding , advantages and disadvantages of each of them.
				ii) Enlist the factors leading to green revolution.
				iii) Explain single cell protein , its advantages with examples.
				iv) Define explant , totipotency of cells , tissue culture , micropropagation and somatic hybridization.
				v)State the advantages of Tissue culture,meristem culture and Biofortification.
				vi) Create an idea about various steps in plant breeding for disease resistance and Mutation breeding

<b>10</b>	<b>XII</b>		<b>Ch 10. Microbes in Human welfare</b>	<b>Learner will be able to :</b>
				i) Describe how the Microbes are involved in food products.
				ii) Mention the sources and uses of Bioactive molecules in medical field.
				iii) Explain the role of Baculoviruses as biocontrol agents.
				iv) Differentiate between primary and secondary treatment of sewage.
				v) Classify the different microbes based on their use in human welfare.
				vi) Give a brief account of discovery of Antibiotics and their uses in medicinal field.
<b>11</b>	<b>XII</b>		<b>Ch.11. Biotechnology : Principles and Processes</b>	<b>Learner will be able to :</b>
				i) Explain the process of Gel Electrophoresis.
				ii) Mention the basic techniques in creation of recombinant DNA.
				iii) Describe in details about the naming and functioning of restriction Endonucleases.
				iv) Enlist the different steps of r DNA technology.
				v) Enumerate the tools of recombinant DNA technology.
				vi) Describe the structure and functioning of Bioreactors and their use in producing desired gene products.
<b>12</b>	<b>XII</b>		<b>Ch.12. Biotechnology and its Applications.</b>	<b>Learner will be able to :</b>
				i) Define the term GMO , gene therapy , ELISA and biopiracy.
				ii ) Differentiate between gene therapy and gene cloning.
				iii ) Analyse the role of PCR for early diagnosis of an infectious disease.
				iv) Explain how <i>Bacillus thuringiensis</i> contributed in developing resistance to cotton bollworms.
				v) Describe the steps in the production of genetically engineered insulin.
				vi) State the importance of Gene Therapy and its use in ADA deficiency.



<b>13</b>	<b>XII</b>		<b>Ch.13. Organisms and populations</b>	<b>Learner will be able to :</b>
				i )Define the various types of population interactions such as the competition , parasitism , commensalism , mutualism and amensalism along with suitable examples.
				ii ) Describe the population growth models and their growth curves along with the equations describing them.
				iii ) Create an idea about Ecology and the basic levels of organisation in ecology.
				iv)Describe the influence of major abiotic factors on organisms and the adaptations the organisms have to live and reproduce in a given habitat.
				v) Enlist the four basic processes which cause increase or decrease in population density in a given period of time.
				vi)Give a brief idea about Attributes of population.
<b>14</b>	<b>XII</b>		<b>Ch.14. Ecosystem</b>	<b>Learner will be able to :</b>
				i) Define the terms : Ecosystem ,GDP and NPP , decomposition , food chain and food Web ,energy flow ecological pyramid and ecological succession.
				ii) Outline salient features of Carbon cycling in an ecosystem.
				iii) Justify the importance of Decomposers in an ecosystem .
				iv) Draw a simplified model of Phosphorus cycle.
				v) Construct a grazing food chain and detritus food chain using different examples.
				vi)Describe different types of Ecological Successions and differentiate them.
<b>15</b>	<b>XII</b>		<b>Ch.15. Biodiversity and Conservation</b>	<b>Learner will be able to :</b>
				i) Describe the patterns of biodiversity.
				ii) Explain the species area richness.
				iii ) Enumerate the causes and effect of biodiversity loss.
				iv) Create an idea about two major approaches of in situ and ex situ conservation of biodiversity with examples.

				v) Define Endemism , Hotspot ,Sacred grove , Cryopreservation.
				vi)Describe the conventions on Biological Diversity.
<b>16</b>	<b>XII</b>		<b>Ch.16. Environmental Issues</b>	<b>Learner will be able to :</b>
				i) Describe the major pollutants in sewage water and their effects on aquatic organisms.
				ii)Enumerate the causes and ill effects of deforestation and methods to conserve forest along with examples of human participation .
				iii) Make a difference between good and bad ozone.
				iv) Construct a flowchart to exhibit the events of eutrophication.
				v ) Explain the causes of algal bloom in a water body and how does it affect an ecosystem.
				vi) Draw a graph showing the relationship between Dissolved Oxygen and Biochemical Oxygen Demand.

### SPLIT-UP OF SYLLABUS 2020-21

**CLASS: XII                      SUB: Chemistry (043)**

**Text Book Prescribed: Text Book for class-XII Chemistry (Part-I, II) (NCERT)**

	MONTH	CHAPTER/TOPIC TO TAUGHT	HALF YEARLY	CHAPTER WISE WEIGHTAGE	
				PRE BOARD/ANNUAL	
	APRIL TO JULY	Unit-I: Solid State Unit-II Solution Unit-III: Electrochemistry	20	Unit-I Unit-II Unit-III Unit-IV Unit-V	23
		Unit-IV: Chemical Kinetics	07		
		Unit-V: Surface Chemistry Unit-X: Haloalkanes & Haloarenes Unit-XI: Alcohols, Phenols & Ethers	06 08 08		
UNIT TEST-I	AUGUST	Unit-XII: Aldehydes, Ketones & Carboxylic acid Unit-XIII: Amines	08 07		
	SEPT	Unit-XIV: Biomolecule Unit-XV: Polymers Unit-VI :General principles & processes of isolation of elements	06		
		Unit-VIII: d & f-Block elements	Total: 70		
	Oct	<b>REVISION &amp; HALF YEARLY EXAMINATION</b>		Unit-X Unit-XI Unit-XII Unit-XIII Unit-XIV	28
	NOV	Unit-VII: P-Block elements Unit-IX: Co-ordination compounds Unit-XVI: Chemistry in Everyday Life Unit-VIII: d & f Block element			
	Dec	<b>REVISION &amp; 1<sup>ST</sup> PRE-BOARD EXAMINATION</b>			Total: 70
	JAN	<b>REVISION &amp; 2<sup>ND</sup> PRE BOARD EXAMINATION</b>			
	FEB	<b>REVISION</b>			

#### **PART-A : Objective Type Paper**

Type	Marks For Each Question	No. of Questions	Total Marks	Percentage
<b>Objective</b>	<b>1</b>	<b>19</b>	<b>19</b>	<b>54.29</b>
	<b>2</b>	<b>5</b>	<b>10</b>	<b>28.57</b>
<b>Case based</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>17.14</b>
<b>Total</b>		<b>26</b>	<b>35</b>	<b>100</b>

## PART-B : Descriptive Paper

Type	Marks For Each Question	No. of Questions	Total Marks	Percentage
Short Answer-I	2	4	8	22.86
Short Answer-II	3	4	12	34.28
Long Answer	5	3	15	42.86
<b>TOTAL</b>		<b>11</b>	<b>35</b>	<b>100</b>

**NB:** No chapterwise weightage. There will be no overall choice in the question paper. However, 33% internal choices will be given in both the section separately. Suitable internal variations may be made for generating various templates. Question for Pre-Board/Annual Exam will be as per CBSE Guide Line.

### CHEMISTRY (PRACTICAL)

**MAX MARKS : 30**

**60 PERIODS**

**TIMES : 3 HOURS**

SL,NO,	MONTH	DETAILS OF THE EXPERIMENTS TO BE PERFORMED
1	April-July	❖ QUALITATIVE ANALYSIS: Determination of one cation one anion in the given salt ❖ Determination of concentration / molarity of $\text{KMnO}_4$ solution by titrating it against a standard solution of (a) oxalic acid b) Ferrous ammonium sulphate
2	Aug	❖ Chromatography ❖ Preparations of Inorganic compounds ❖ Surface Chemistry
3	Sep.	❖ Preparation of Organic compounds ❖ Test for the functional groups present in the organic compounds ❖ Test for carbohydrates, fats and proteins in pure samples and detection in given food stuffs
4	Oct.	<b>HALF YEARLY EXAMINATION</b>
5	Nov.	❖ Chemical kinetics ❖ Thermo chemistry ❖ Electrochemistry
6	Dec.	<b>1<sup>ST</sup> PRE-BOARD EXAMINATION</b>
7	JAN	<b>2<sup>ND</sup> PRE-BOARD EXAMINATION</b>

### EVALUATION SCHEME FOR PRACTICAL EXAMINATION

SL NO.	EVALUATION SCHEME FOR PRACTICAL EXAMINATION	MARKS
1	Volumetric Analysis	08
2	Salt Analysis	08
3	Content Based Experiment	06
4	Project Work	04
5	Class record and viva	04
	Total:	30

**N.B.:** Project (Scientific Investigation involving laboratory testing and collecting information from other sources.) Any investigatory project, which involves about 10 periods of work, can be chosen with the approval of the teacher.

## DELETED PORTION

### CLASS -XII

S No	Unit	Portion to be Reduced
1	Solid State	Electrical and magnetic properties. Band theory of metals, conductors, semiconductors and insulators and n and p type semi conductors.
2	Solutions	Abnormal molecular mass, Van't Hoff factor
3	Electrochemistry	Lead accumulator, fuel cells, corrosion, law of electrolysis (elementary idea), dry cell- electrolytic cells and Galvanic cells,
4	Chemical Kinetics	Concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation.
5	Surface Chemistry	emulsion - types of emulsions, catalysis: homogenous and heterogeneous, activity and selectivity of solid catalysts; enzyme catalysis.
6	General Principles and Processes of Isolation of Elements	Entire unit
7	p-Block Elements	Preparation and properties of Phosphine, Sulphuric Acid: industrial process of manufacture, Oxides of Nitrogen (Structure only); Phosphorus - allotropic forms, compounds of Phosphorus: Preparation and properties of Halides and Oxo acids (elementary idea only).
8	d and f Block Elements	Chemical reactivity of lanthanoids, Actinoids -Electronic configuration, oxidation states and comparison with lanthanoids. Preparation and properties of $\text{KMnO}_4$ and $\text{K}_2\text{Cr}_2\text{O}_7$
9	Coordination Compounds	Structure and stereoisomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).
10	Haloalkanes and Haloarenes	Uses and environmental effects of -dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.
11	Alcohols, Phenols and Ethers	uses with special reference to methanol and ethanol.
12	Aldehydes, Ketones and Carboxylic Acid	---
13	Amines	Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

14	Biomolecules	Oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen), importance of carbohydrates. Vitamins– classification and functions. Enzymes. Hormones - Elementary Idea excluding structure.
15	Polymers	entire chapter
16	Chemistry in Everydaylife	entire chapter

### Practical

Following portions should be considered deleted.

#### A. Surface Chemistry

- Preparation of one lyophilic and one lyophobic sol Lyophilic sol - starch, egg albumin and gum Lyophobic sol - aluminium hydroxide, ferric hydroxide, arsenous sulphide.
- Dialysis of sol-prepared in (a) above.
- Study of the role of emulsifying agents in stabilizing the emulsion of different oils.

#### B. Chemical Kinetics

- Effect of concentration and temperature on the rate of reaction between Sodium Thiosulphate and Hydrochloric acid.
- Study of reaction rates of any one of the following:
  - Reaction of Iodide ion with Hydrogen Peroxide at room temperature using different concentration of Iodide ions.
  - Reaction between Potassium Iodate, (KIO<sub>3</sub>) and Sodium Sulphite: (Na<sub>2</sub>SO<sub>3</sub>) using starch solution as indicator (clock reaction).

#### C. Thermo chemistry Any one of the following experiments

- Enthalpy of dissolution of Copper Sulphate or Potassium Nitrate.
- Enthalpy of neutralization of strong acid (HCl) and strong base (NaOH).
- Determination of enthalpy change during interaction (Hydrogen bond formation) between Acetone and Chloroform.

#### D. Electrochemistry Variation of cell potential in Zn/Zn<sup>2+</sup> || Cu<sup>2+</sup>/Cu with change in concentration of electrolytes (CuSO<sub>4</sub> or ZnSO<sub>4</sub>) at room temperature.

#### G. Preparation of Organic Compounds Preparation of any one of the following compounds

- Acetanilide
- Di-benzal Acetone
- p-Nitroacetanilide

Aniline yellow or 2 - Naphthol Anilinedye

## LEARNING OUTCOMES SUBJECT: CHEMISTRY

Sl.No	Class	Name of the Text Book	Chapter/ Lesson	Learning Outcomes
1	XII	NCERT CHEMISTRY	Solid State	<b>The learner will be able to:</b>
				Describe importance of solid state in daily life
				Distinguish between amorphous and crystalline solids
				Classifies crystalline solids on the basis of nature of binding force
				Distinguish between unit cells of different type of crystal lattice
				Calculate packing efficiency of different types of cubic unit cell
				Correlates density of substance with its unit cell
				Describe the imperfection in solids & their effects
				Identify nature of substance based on magnetic properties
2	XII		Solutions	<b>The learner will be able to :</b>
				Define Mass Percentage, volume percentage, mass by volume percentage, ppm, mole fraction, molarity and molality of solution in different units and solve numericals based on it
				Correlate Henry's law and Raoult's law
				Compare between ideal and non ideal solution
				Demonstrate formula for all colligative properties, relative lowering of vapour pressure and solve numericals
				Solve numericals using Vant's Hoff factor and calculate degree of dissociation and association
				Compare isotonic, hypertonic, hypotonic Solutions and their importance
3	XII		Electrochemistry	<b>The learner will be able to :</b>
				Compare between galvanic cell and electrolytic cell, know the role of salt bridge
				Represent cell, write half cell reactions and calculate emf of the cell ( $E^\circ_{\text{cell}}$ ).
				Apply Nernst equation of calculating the emf of galvanic cell and differentiate between emf of the cell and potential difference and describe standard potential of cell and working of standard hydrogen electrode



				Explain the variation of conductivity and molar conductivity with concentration
				Define Kohlrausch law & apply it to calculate $\Lambda^m$ of weak electrolyte
				Apply Faraday's law of electrolysis (First and second law) and to solve numericals based on them
				Enlist construction of dry cell, mercury cell (primary cell), secondary cell like nickel-cadmium cell, lead storage battery and fuel cell
				Apply knowledge on corrosion of metals in day to day life
<b>4</b>	<b>XII</b>		<b>Chemical kinetics</b>	<b>The learner will be able to :</b>
				Define rate of reaction and compare between average & instantaneous reaction
				Know the rate of reaction in terms of disappearance of reactant & appearance of product
				Compare between simple and complex reaction, order and Molecularity of reaction
				Enlist the factors affecting the rate of reaction
				Demonstrate integrated rate equation for zero and first order reaction and solve numericals based on these & plot graph
				Enlist activation energy, collision theory, Arrhenius equation and apply it in numericals and plot graph
<b>5</b>	<b>XII</b>		<b>Surface chemistry</b>	<b>The learner will be able to :</b>
				Compare between adsorption and absorption, physisorption & chemisorption
				Enlist factors affecting adsorption
				Explain Freundlich adsorption isotherm and derive its expression & its application
				Compare between homogeneous and heterogeneous catalyst, activity and selectivity of catalyst, shape selective catalysis, true Solutions, colloid and suspension
				Classify colloids on the basis of physical states, interaction with dispersion medium and based on the types of particles
				Enlist preparation and properties of Colloids & emulsion
				Enlist the application of colloids in our everyday life

6	XII		<b>General principles &amp; processes of isolation of elements</b>	<b>The learner will be able to :</b>
				Compare between ores and minerals
				Enlist the method of concentration of ores
				Know the thermodynamic principle & ellingham diagram
				know the principles of extraction of Al,Cu,Zn&Fe
				Enlist the method of refining & write some metals refined under these methods
				apply knowledge on use ofalloys in our daily life
7	XII		<b>Some p block elements</b>	<b>The learner will be able to :</b>
				Enlist electronic configuration, oxidation state, atomic and ionic size, ionisation enthalpy, electronegativity, melting point and boiling point ,electron gain enthalpy in group15, 16,17,18
				Know the various methods of preparation and properties of different compounds
				Draw the structure of oxides ofoxoacids of Nitrogen , phosphorous ,sulphur & chlorine
				Explain the anomalous behaviour of Oxygen and Flourine
				Know about compounds of xenon & the uses of noble gases
8	XII		<b>The d &amp; f bolck elements</b>	<b>The learner will be able to</b>
				Write electronic configuration of d&f bolck elements
				Analyse the variation of atomic size,I.E, electrode potential, melting and boiling point,high enthalpy of atomisation, formation of coloured ions,paramagnetism,alloy &interistial compound ,complex formation , catalytic properties ,oxides and halides of transition metals
				Know the preparation , properties , structure and uses of pottasium dichromate , potassium permanganate
				Compare the oxidation state , electronic configuration , chemical behaviour of lanthanoids and actinoids

9	XII		Co -Ordination compounds	The learner will be able to
				Enlist the postulates of Werner's coordination theory
				Identify the types of ligand
				Know the rules of nomenclature & apply them in naming of complex compound
				Identify types of isomers from their structure
				Apply valence bond theory & crystal field theory in different complex compounds
				Analyse the stability of complex compounds & colour of complex
				Enlist the application of complex compounds in day to day life
10	XII		<b>Haloalkanes &amp; Haloarenes</b>	<b>The learner will be able to:</b>
				Classify haloalkanes and haloarenes as primary, secondary or tertiary and also alkyl halides, allylic halides, benzylic halides, vinylic halides and aryl halides with example.
				Draw the structure and identify the name Haloalkanes and haloarenes according to the IUPAC system.
				Know the various methods involved in the preparation of Haloalkanes and haloarenes.
				Correlate the structures of haloalkanes and haloarenes with various types of reactions.
				Describe the various types of name reactions such as Frankenstein Reaction, Swart reaction, Sandmeyer's reaction, wurtz reaction, Fittig reaction.
				Use of stereochemistry as a tool for understanding the SN1 and SN2 reaction mechanism.
				Enlist the application of organo-metallic compounds.
11	XII		<b>Alcohols Phenols &amp; Ethers</b>	<b>The learner will be able to:</b>
				Enlist the different types of alcohols such as primary, secondary and tertiary alcohols.
				Demonstrate how alcohol is prepared from alkenes, aldehydes, ketones and carboxylic acids.
				Know the reactions involved in the preparation of phenols from haloarenes, benzene sulphonic acids, diazonium salts and cumene.
				Compare the physical properties of alcohols, phenols and ethers with their structures.
				Demonstrate and differentiate between alcohol and phenol on the basis of suitable chemical test.

<b>12</b>	<b>XII</b>		<b>Aldehydes, ketones &amp; Carboxylic acids</b>	<b>The learner will be able to:</b>
				Know the basic ideas about how to write the common and IUPAC names of aldehydes, ketones and carboxylic acids.
				Draw and identify the structures of the compounds containing functional groups namely carbonyl and carboxyl groups.
				Know about various methods of preparation of aldehydes, ketones and carboxylic acids.
				Enlist the various physical properties and chemical reactions of aldehydes, ketones and carboxylic acids, with their structures.
				Describe the mechanism of a few selected reactions of aldehydes and ketones.
				Explain the acidic character of carboxylic acids.
				Enlist the uses of aldehydes, ketones and carboxylic acids.
<b>13</b>	<b>XII</b>		<b>Amines</b>	<b>The learner will be able to:</b>
				Classify amines as primary, secondary and tertiary with examples.
				Analyse the basic ideas about how to write the common and IUPAC names of amines.
				Know about various methods of preparation of amines
				Compare the properties of different types of amines.
				Differentiate between primary, secondary and tertiary amines by Hinsberg's test.
				Enlist the importance of diazonium salts and their importance in the synthesis of a series of aromatic compounds including azo dyes by coupling reactions.
<b>14</b>	<b>XII</b>		<b>Biomolecules</b>	<b>The learner will be able to:</b>
				Classify carbohydrates, proteins, nucleic acids and vitamins on the basis of their structures.
				Compare the structural difference between DNA and RNA.
				Describe the role of biomolecules in biosystem.
				Know the characteristics of biomolecules like carbohydrates, proteins and nucleic acids and hormones.
				Differentiate between primary, secondary and tertiary structure of proteins.
				Define nucleotide ,nucleoside.

<b>15</b>	<b>XII</b>		<b>Polymers</b>	<b>The learner will be able to:</b>
				Define the terms - monomer, polymer and polymerisation and appreciate their importance.
				Distinguish between addition polymers and condensation polymer with suitable example.
				Classify the polymers on the basis of polymerisation processes.
				Know about various methods of some important synthetic polymers and their properties.
				Enlist the uses of polymers in daily life.
<b>16</b>	<b>XII</b>		<b>Chemistry in everyday life</b>	<b>The learner will be able to:</b>
				Enlist the importance of Chemistry in daily life.
				Define the term 'chemotherapy'.
				Classify the drugs on the basis of its use.
				Describe the mechanism of drug-target interaction of enzymes and receptors.
				Compare how various types of drugs function in the body;
				Know about artificial sweetening agents and food preservatives;
				Compare the chemistry of cleansing actions of soap and detergent in hard water and soft water.

**SPLIT UP SYLLABUS FOR THE SESSION 2020-21**

**CLASS-XII, SUBJECT-ECONOMICS (030)**

- BOOK PRESCRIBED:**
- 1. PART A: INTRODUCTORY MACRO ECONOMICS (NCERT)**
  - 2. PART- B: INDIAN ECONOMIC DEVELOPMENT (NCERT)**
  - 3. SUPPLEMENTARY READING MATERIAL IN ECONOMICS (CBSE)**

	MONTH	CHAPTER/ TOPICS TO BE TOUGHT5	UNIT WISE WEIGHTAGE	
			HALF YEARLY	PRE BOARD
	APRIL to JULY	<b>MACRO ECONOMICS</b> UNIT I- National Income and Related Aggregates	15	10
		<b>INDIAN ECONOMIC DEVELOPMENT</b> UNIT VI- Chpt. 1- Indian Economy on the eve of independence.	Unit-VI-18	12
		UNIT II- Money and Banking <b>INDIAN ECONOMIC DEVELOPMENT</b> UNIT VI- Chpt 2- Indian economy 1950 to 1990.	10	6
		<b>INDIAN ECONOMIC DEVELOPMENT</b> UNIT VI- Economic reforms since 1991. Chpt 3- Liberalisation, privatisation and Globalisation: An Appraisal.GST and Demonetisation UNIT-VII Current challenges-Chpt 4- Poverty, Chpt.5- Human capital formation of India Chpt.6-Rural Development	Unit-VII-22	22
UNIT TEST-I	AUGUST	<b>INDIAN ECONOMIC DEVELOPMENT</b> Chpt.7- Employment: Growth, In formalisation, and other issues Chpt.8- Infrastructure Chpt.9-Environment and Sustainable Development.		
	SEPTEMBER	UNIT III- Determination of Income and Employment	15	12
	OCTOBER	<b>REVISION &amp; HALF YEARLY EXAMINATION</b>	TOTAL-80	
	NOVEMBER	UNIT IV : Govt Budget and the Economy UNIT: V- Balance of Payment <u>UNIT VIII-</u> Chpt.10- Comparative Development Experiences of India and its neighbours		06 06 06
	DECEMBER	<b>REVISION &amp; 1<sup>ST</sup> PRE-BOARD</b>		<b>TOTAL-80</b>
	JANUARY	<b>REVISION &amp; 2<sup>ND</sup> PRE-BOARD</b>		
	FEBRUARY	<b>REVISION</b>		

## QUESTION PAPER DESIGN

Theory: 80 Marks+ project: 20 Marks

Sl. No	Typology of questions	Very short answer/MCQ 1 Marks	Short Answer (I) 3 marks	Short Answer (II) 4 Marks	Long Answer 6 Marks	Marks
1	Remembering	5	1	2	1	22
2	Understanding	5	1	2	1	22
3	Application based	5	1	1	1	18
4	Analysing and Evaluating	5	1	1	1	18
		20 X1 =20	4 X 3 =12	6X4=24	4X6=24	THEORY 80+ 20 PROJECT = 100 34 Questions

NOTE- There will be internal choices in questions of 1 mark, 3marks, 4 marks and 6 marks in both sections (A & B). In all, total 8 internal choices.

PROJECT WORK- Each student will prepare one project work using concepts from both part A and part B.

### MARKING SCHEME FOR PROJECT WORKS

SL. NO.	HEADING	MARKS ALLOTTED
1	RELEVANCE OF THE TOPICS	3
2	KNOWLEDGE CONTENT/ RESEARCH WORKS	6
3	PRESENTATION TECHNIQUE	3
4	VIVA	8
	<b>TOTAL</b>	<b>20</b>

## Deleted Portion

### Part A: Introductory Macroeconomics

Unit	Topics Deleted
Unit 2: Money and Banking	Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.
Unit 5: Balance of Payments	Balance of payments deficit-meaning. Determination of exchange rate in a free market.

### Part B: Indian Economic Development

Unit	Topics Deleted
Unit 7: Current challenges facing Indian Economy	Growth of Education Sector in India alternative farming - organic farming  Infrastructure: Energy



## LEARNING OUTCOMES

### SUBJECT: ECONOMICS

S.L. NO	CLASS	Name of the Text Book	Chapter/ Lesson	Learning Outcomes
1	XII	IED	INDIAN ECONOMY ON THE EVE OF INDEPENDENCE	Understand about the Indian Economy's position before & after independence.
				Understand different sectoral performances.
				Understand the positive & negative contributions of British rule.
2	XII		INDIAN ECONOMY 1950-1990	Understand the Indian Economy between 1950-1990 with central problem, economic planning with critical appraisal.
				Understand the targeted & actual growth rates of different FYPs.
				Understand the concept of Green Revolution, Industrial Licensing & foreign trade with critical appraisal.
3	XII		LIBERATION, PRIVATISATION & GLOBALISATION: AN APPRAISAL	Understand the concept of LPG and reasons for economic reform.
				Understand about the domestic market and foreign market, the role of WTO.
				Understand various merits and demerits of LPG.
4	XII		POVERTY	Understand the meaning and types of poverty it includes absolute and relative poverty between developing and developed countries.
				To know the differences between APL and BPL through poverty line.
				Understand various causes of poverty with respect to its solution through govt approach
				Understand various PAPs.
5	XII		HUMAN CAPITAL FORMATION	Understand the role of physical capital and human capital formation.
				Understand human capital with economic growth, sources and importance.
				To know the educational sector, future prospects of HCF.
6	XII		RURAL DEVELOPMENT	Understand a deeper and broader process and perspective of rural development.
				Understand various sources of rural credit and agricultural marketing system.
				Understand diversification, non-farm areas of employment and sustainable development.
				Understand organic farming its benefits and challenges.

7	XII		EMPLOYMENT:GROWTH,INFORMALISATION AND OTHER ISSUES	Understand the concepts and peoples participation in employment
				Understand the growth and changing structure of employment.
				To understand the various issues of informalisation,unemployment,types and remedial measures.
				Understand the role of govt policies.
8	XII		INFRASTRUCTURE	Understand the infrastucture in social and economic type in economics.
				Understand the power and health infrastucture with data analysis.
				understand the role of public and private sector in infrastucture.
				Infrastucture:Essential for economic development.
9	XII		ENVIRONMENT AND SUSTAIN-ABLE DEVELOPMENT	Understand the environment for sustainability.
				Understand the reasons for enviromental crisis.
				Understand the various challenges to India's environment.
				Understand :''sustainable development a need of hour'' and its stratasies to a chieves.
10	XII		COMPARATIVE DEVELOPMENT- EXPERIENCES OF INDIA AND - ITS NEIGHBOURS	Understand the comparative development experiences of India and neighbours.
				Understand the trends in various economic and human development indicators of India,China and Pakistan.
				Understand the appraisal of development stategies of three countries.
1	XII	MACRO ECONOMICS	CIRCURAL FLOW OF INCOME	Understand the various phases of circular flow of income.
				Understand the concept of stock,flow,real flow and money flow.
				Understand the circular flow in a simple economy.
2	XII		BASIC CONCEPTS OF MACRO-ECONOMICS: AN	Understand the various concepts of macro-economics like domestic territory,normal residents,factor income,transfer -
				income,final goods,intermediate goods,consumption goods,capital goods,gross investment,net investment and depreciation,NII and NFIA.

3	XII		NATIONAL INCOME AND RELATED AGGREGATES	Understand various national income aggregates.
				Understand the relationship between domestic and national concepts.
				To solve small conceptual numericals.
4	XII		MEASUREMENT OF NATIONAL INCOME	Understand the measurement of NY i.e. product method, income method and expenditure method.
				Understand the various precautions of different methods.
				To calculate various types of numericals.
				Treatment of different items in NY i.e. items included in NY or not.
				Understand the GDP and welfare concept.
5	XII		MONEY	Understand the meaning of money and barter system.
				Understand the money supply in India.
				Understand the concept of money and high powered money.
6	XII		BANKING: COMMERCIAL BANK AND THE CENTRAL BANK	Understand the meaning of functions of commercial banks and central bank.
				Understand the role of credit creation of commercial banks.
				Understand the various quantitative and qualitative instrument of RBI.
7	XII		AGGREGATE DEMAND AND RELATED CONCEPTS	Understand the meaning and components of AD in a two sector model.
				Understand the meaning and components of AS and various consumption function i.e. APC, MPC, APS and MPS.
				Understand the investment function.
8	XII		INCOME DETERMINATION AND MULTIPLIER	Understand the AD-AS and S-I approach and calculation of multiplier.
				Determination of equilibrium output under fixed price model.
				Understand the concept of investment multiplier.
9	XII		EXCESS DEMAND AND DEFICIENT DEMAND	Understand the concept of excess demand and deficient demand.
				Understand the concept of inflationary and deflationary gap.
				Understand to measure excess and deficit demand.

10	XII		GOVERNMENT BUDGET AND THE ECONOMY	Understand the master plan govt role i.e. budget and its objectives.
				Understand the various components of budget.
				Understand the various measures of govt budget i.e. revenue deficit, fiscal deficit and primary deficit with implications.
11	XII		FOREIGN EXCHANGE RATE	Understand easily the currencies of different countries.
				Understand the various types of foreign exchange rate i.e. fixed, flexible and managed floating rate.
				Understand gold standard and bretton woods standard.
				Understand the demand, supply and determination of exchange rate.
12	XII		BALANCE OF PAYMENTS	Understand the record of transactions that take place between the country and Row.
				Understand the differences between BOP and BOT, credit items and debit items.
				Understand the equilibrium and disequilibrium of BOP and also autonomous and accommodating items.

### CLASS-XII, SUB-ENGLISH CORE (301)

BOOKS PRESCRIBED: 1- Flamingo English Reader (NCERT)

2- Vistas- Supplementary Reader (NCERT)

MONTH	CHAPTERS/TOPIC TO BE TAUGHT	MARKS DISTRIBUTION FOR HALF YEARLY, PRE -BOARD & BOARD EXAMINATION
APRIL TO JULY	Reading Unseen Passage for comprehension Note making & summarizing <b>Writing</b> Notice , Advertisement , Report Writing <b>Flamingo</b> My Mother At Sixty-Six The Last Lesson Lost Spring An Elementary School Classroom in a Slum Deep Water The Rattrap <b>Vistas</b> The Third Level The Tiger King The Journey to the End of the Earth The Enemy	<b>PART - A 40 Marks</b> <b>Reading comprehension- 20 Marks</b> Literature - 20 Marks <b>PART -B ( Subjective Questions)- 40 Marks</b> Writing skills - 16 Marks Literature - 24 Marks <b>Assessment of Listening and Speaking- 20 Marks</b>
		<b>QUESTION PATTERN FOR HYL /PBs /BOARD</b> <b>PART- A - 40 Marks</b> Reading comprehension- 20 Marks 1. Unseen passage [ MCQs] = 10x1= 10 Marks 2. Unseen passage [ MCQs] = 10x1= 10 Marks

		<p><b>Writing</b> Poster Designing</p> <p><b>Literature</b> <b>Flamingo</b> Keeping Quiet Poets and Pancakes</p>	<p><b>Literature- 20 Marks</b></p> <p>3. Two prose extracts [ RTC] = 8x1= 8 Marks (Flamingo and Vistas)</p> <p>4. One poetry extract [ MCQs] = 4x1= 4 Marks (Flamingo)</p> <p>5. Text based questions [SA type] =8x1=8 Marks (Flamingo and Vistas)</p> <p><b><u>PART - B ( Subjective Questions) - 40 Marks</u></b></p> <p><b>Writing Section - 16 Marks</b></p> <p>1. Short writing task- Notice / Adv.= 3x1= 3 Marks</p> <p>2. Short writing task- Formal/ Informal Invitation and Reply.= 3x1= 3 Marks</p> <p>3. Letters - Application for a job/ Letter to editor = 5Marks</p> <p>4. Article / Report writing = 5x1 = 5 Marks</p>
		<p><b>WRITING</b> Article writing, Official Letters Literature</p> <p><b>Flamingo</b> The Interview A Thing of Beauty A Roadside Stand</p>	
<b>UNIT TEST - I</b>	AUG.	<p><b>Writing</b> Letter to Editor, Speech Writing, Business Letters</p> <p><b>Literature</b> <b>Flamingo</b> Aunt Jennifer's Tigers</p> <p><b>Vistas</b> Should Wizard Hit Mommy</p>	
	SEPT.	<p><b>Reading</b> Note making &amp; Summarizing</p> <p><b>Writing</b> Formal &amp; Informal Invitation &amp; Replies</p> <p><b>Flamingo</b> Going Places</p> <p><b>Vistas</b> On the Face of it</p>	<p><b>Literature Section - 24 Marks</b></p> <p>5. FIVE SA type questions from prose &amp; poetry from the text book FLAMINGO = 5x2 = 10 Marks</p> <p>6. TWO SA type questions from prose from the text book VISTAS = 2x2 = 4 Marks</p> <p>7. ONE LA type question from prose/ poetry from the text book FLAMINGO =1x5 = 5 Marks</p> <p>8. ONE LA type question from prose from the text book FLAMINGO =1x5 = 5 Marks</p>
	OCT.	<p><b>Writing</b> Job Application, Literature</p> <p><b>Revision</b> <b>HALF YEARLY EXAMINATION</b></p>	
	NOV.	<p>Revision of all writing skills</p> <p><b>Vistas</b> Evans Tries An O-Level Memories of Childhood</p>	
	DEC.	<b>Revision &amp; PRE-BOARD-I</b>	
	JAN.	<b>Revision &amp; PRE-BOARD-II</b>	
	FEB.	<b>REVISION</b>	

**Deleted Topics – Class - XII – English Core**

**Reading**

Note Making & Summarizing

**Literature**

**FLAMINGO**

- |                       |                     |
|-----------------------|---------------------|
| 1. Poets and Pancakes | 1. A Roadside Stand |
| 2. The Interview      |                     |
| 3. Going Places       |                     |

**VISTAS**

1. The Tiger King
2. Journey to the end of the Earth
3. Memories of Childhood

**Writing**

- Poster making
- Business or official letters for making enquiries, registering complaints, asking for and giving in orders and sending replies.
- Speech, Debate

**BLUE PRINT**

**THEORY= 80 Marks PRACTICAL (ASL) = 20 Marks**

SI. NO	TYPE	NO OF Qs / MARK(S)	TOTAL
1	MCQ	24 x 01M	24 Marks
2	VSA	16 x 01M	16 Marks
3	SHORT WRITING TASK	2 x 03M	06 Marks
4	LETTER(LWT)	1 x 05M	05 Marks
5	ARTICLE, REPORT(LWT)	1 x 05M	05 Marks
6	SA	7 x 02 M	14 Marks
7	LITERATURE ( LA )	2 x 05 M	10 Marks
			80 Marks

## LEARNING OUTCOMES

### SUBJECT: ENGLISH

SL.NO	NAME OF THE BOOK	LESSON / CHAPTER	LEARNING OUTCOMES
1.	<b>FLAMINGO</b>	The Last Lesson By- Alphonse Daudet	<p><b><i>The learners will be able to:</i></b></p> <ul style="list-style-type: none"> <li>• Differentiate between old and modern system of schooling.</li> <li>• Exhibit values like patriotism and love for mother tongue.</li> <li>• Interpret and discuss linguistic chauvinism</li> </ul>
2.		Lost Spring By- Anees Jung	<ul style="list-style-type: none"> <li>• Analyse and reflect upon causes of child labour.</li> <li>• Discuss the miserable living conditions in the slums and suggest methods how to improve the condition.</li> <li>• Present views on how to develop the condition of bangle makers and rag pickers.</li> </ul>
3.		Deep Water By-William Douglas	<ul style="list-style-type: none"> <li>• Discuss the techniques of different swimming strokes and breathing techniques.</li> <li>• Compare different types of swimming pools.</li> <li>• Compare and find out rules of different water sports.</li> <li>• Write a short note on the importance of adventure sports in young adults' lives.</li> </ul>
4.		The Rattrap By- Selma Lagerlof	<ul style="list-style-type: none"> <li>• Reflect on the basic and unnecessary human wants.</li> <li>• Draw a simple rat trap.</li> <li>• Explain the technique of catching a rat with the help of a rat trap orally.</li> <li>• Practice values like sympathy and kindness in real life.</li> </ul>
5.		Indigo By- Louis Fischer	<ul style="list-style-type: none"> <li>• Appreciate and practice in real life, the value of fighting for his/ her rights.</li> <li>• Reflect upon the inhuman atrocities of the British and deliver a speech on it.</li> <li>• Discuss the poor educational scenario in British India.</li> <li>• Reflect upon human rights and how they are challenged in every field..</li> </ul>

6.		My Mother at Sixty-six By- Kamala Das	<ul style="list-style-type: none"> <li>• Discuss the problems of old age.</li> <li>• Reflect on the concept of loss through death.</li> <li>• Identify literary devices like simile and metaphor and use them correctly in answers.</li> <li>• Use new vocabulary [wan, corpse and sprint] correctly in speech and writing.</li> </ul>
7.	<b>FLAMINGO</b>	An Elementary School Classroom in a Slum By- Stephen Spender	<ul style="list-style-type: none"> <li>• Discuss the vast gap between the rich and the poor and suggest corrective measures.</li> <li>• Reflect on slum schools and the apathy of the government.</li> <li>• Find out videos or pictures on the beauty of Tyrolese valley using ICT</li> <li>• Locate Tyrolese valley on world map.</li> </ul>
8		Keeping Quiet By- Pablo Neruda	<ul style="list-style-type: none"> <li>• Explain the futility of wars.</li> <li>• Discuss the benefits of universal brotherhood</li> <li>• Identify and use 'pun' in speech and writing. [arms]</li> </ul>
9		A Thing of Beauty By- John Keats	<ul style="list-style-type: none"> <li>• Define beauty as presented in the poem in his/her own words</li> <li>• Identify things of beauty in real life situations.</li> <li>• Discuss varieties of despondence in human life among peer group.</li> </ul>
10		A Roadside Stand By- Robert Frost	<ul style="list-style-type: none"> <li>• Discuss the reasons of the poor condition of farmers.</li> <li>• Write on the attitude of the rich towards the poor farmers.</li> <li>• Debate on the role of winning political parties in making the condition of the farmers/ poor more miserable</li> </ul>
11		Aunt Jennifer's Tigers By-Adrienne Rich	<ul style="list-style-type: none"> <li>• Discuss the idea/ concept of woman empowerment among peer group.</li> <li>• Find out why woman empowerment is not completely successful in India using ICT.</li> <li>• Identify and use 'pun' in speech and writing. [ringed]</li> <li>• Identify and use 'metaphor' in speech and writing.</li> </ul>



12	VISTAS	The Third Level By-Jack Finney	<ul style="list-style-type: none"> <li>• Reflect upon the worries and uncertainties of the modern world and the desire to escape from it.</li> <li>• Compare the fashion of clothing and atmosphere of 19<sup>th</sup> century with that of 20<sup>th</sup> century.</li> <li>• Discuss anachronism and splits in time.</li> </ul>
16		The Enemy By- Pearl S. Buck	<ul style="list-style-type: none"> <li>• Learn the value of respect and obedience to his / her father.</li> <li>• Learn the value of achieving competency in any work or study or field.</li> <li>• Reflect among peer group the futility of wars and the attitude of soldiers towards each other and the mother land.</li> </ul>
17	VISTAS	Should Wizard Hit Mommy? By- John Updike	<ul style="list-style-type: none"> <li>• Discuss on theme of parental pressure while taking decisions.</li> <li>• Prepare and deliver a speech on the importance of the identity of an individual.</li> <li>• Write a short note on the importance of friends in a person's life.</li> </ul>
18		On the Face of It By- Susan Hill	<ul style="list-style-type: none"> <li>• Discuss the alienating effect of a disability on the mind of an adolescent or person.</li> <li>• Write a speech on how to make the disabled children more confident and perform better in different fields.</li> <li>• Identify the speaker and explain the dialogue in own words in a given question.</li> </ul>
19		Evans Tries an O - Level By- Colin Dexter	<ul style="list-style-type: none"> <li>• Discuss the facilities and conditions given in prisons to inmates.</li> <li>• Suggest better methods of security in prisons.</li> <li>• Enact with peer group, a short scene from the text.</li> <li>• Write a short note on the lapses of the prison authority that helped Evans to escape.</li> </ul>
20		Memories of Childhood By- Zitkala Sa and Bama	<ul style="list-style-type: none"> <li>• Write and deliver a speech in the class on the atrocities inflicted on the people of marginalized societies.</li> <li>• Discuss among peer group, different cultures and their practices and beliefs.</li> <li>• Write a paragraph on the feeling of helplessness when one's parents are not around.</li> <li>• Discuss the attitude and behaviour of upper-class people towards untouchables.</li> <li>• Discuss on the negative effect of regimentation on students in a school atmosphere.</li> </ul>

REVISED

**SPLIT-UP SYLLABUS 2020-21  
CLASS: XII : SUB: GEOGRAPHY(029)**

**Text Book Prescribed: Book-I Fundamentals of Human Geography(NCERT)  
Book-II India People and Economy(NCERT)  
Book-III Practical Work in Geography Part -II(NCERT)**

	MONTHS	CHAPTERS/TOPIC TO BE TAUGHT	CHAPTER WISE WEIGHTAGE	
			HALF-YEARLY	PRE-BOARD
	APRIL TO JULY	<b>BOOK-I( FUNDAMENTALS OF HUMAN GEOGRAPHY )</b> CH-1-Human Geog-Nature & Scope CH-2-World Population-Distribution, Density &Growth CH-3-Poplation Composition CH-4-Hman Development	20	30
		CH:5-Primary Activities CH-6-Secondary Activities* CH-7-Tertiary & Quaternary Activities CH-8.Transport and Communication* CH-9.International Trade* CH-10-Human Settlements	20	
		*World Map Activities[Identification]	5	5
UNIT TEST-I	AUGUST	<b>BOOK-II (INDIA PEOPLE &amp; ECONOMY)</b> CH-1-India Population-Distribution, Density,Growth& Composition. CH-2-Migration CH-3-Human Development	25	30
	SEPTEMBER	CH-4-Human Settlements CH-5Land Resources and Agriculture* CH-6-Water Resources CH-7-Mineral & Energy Resources		
	OCTOBER	<b>REVISION HALF-YEARLY EXAMINATION</b>		
	NOVEMBER	CH-8.Manufacturing Industries* CH-9-Planning & Sustainable Development in Indian Context CH-10Transport and Communication * CH-11.International Trade* CH-12-Geographical Perspective on selected Issues & Problems -**India Map Activities		
	DECEMBER	<b>REVISION &amp; PRE-BOARD-I</b>		
	JANUARY	<b>PRE-BOARD-II</b>	<b>Total=70</b>	<b>Total=70</b>

**QUESTION PATTERN  
[GEOGRAPHY THEORY]**

TYPE OF QUESTIONS	MARK(S)PER QUESTION	TOTAL NO OF QUESTIONS	TOTAL MARKS
VSA	01	18	18
SA-I	03	04	12
LA	05	06	30
MAP(World & India)	05	02	10
	<b>TOTAL =</b>	<b>22</b>	<b>70</b>

**GEOGRAPHY PRACTICAL SYLLABUSCLASS-XII**

UNITS	TOPICS	MARKS
I	Processing of Data,Diagrams & Thematic Mapping	25
	Practical Record Book &Viva	05
		<b>Total=30</b>

**MM-30 GEOGRAPHY PRACTICAL (CLASS-XII) TIME-3 HRS**

MONTHS	CONTENTS TO BE COMPLETED
April to July	1-Sources of data-Processing of data-tabulation of data,measures of central tendency-mean,mode median 2- Construction of Statistical Diagrams-Line Graph,Bar Graph,Multiple Bar Diagram
August	3-Construction of Wheel Diagram,Histogram &Polygon,Histogram& Curve, Traffic Flow Diagram,Wind Rose & Star Diagram.
September	4-Thematic Mapping-Isopleth,Dot Method &Choropleth Method 5-Use of computer in data analysis and diagrams

**DELETED PORTIONS,CLASS-XII GEOGRAPHY FOR THE SESSION-2020-21**

<b>Book-I Fundamentals of Human Geography(NCERT)</b>
CH-6-Secondary Activities*
CH-8.Transport and Communication*
CH-9.International Trade*
<b>Book-II India People and Economy(NCERT)</b>
CH-5.Land Resources and Agriculture*
CH-8.Manufacturing Industries*
CH-10.Transport and Communication*
CH-11.International Trade*
<b>Practical Work in Geography Part -II(NCERT)</b>
Unit-II Field Study OR Spatial Information Technology*

**Class XII**

<b><u>Book I – Fundamentals of Human Geography</u></b>
Unit III - Chapter 6 – Secondary activities
Chapter 8 – Transport and Communication
Chapter 9 – International Trade
<b><u>Book II – India People and Economy</u></b>
Unit III - Chapter 5 – Land Resources and Agriculture
Chapter 8 – Manufacturing Industries
Unit IV - Chapter 10 – Transport and Communication
Chapter 11 – International Trade
<b><u>Practical Geography Part II</u></b>
Unit II - Field Study or Spatial Information Technology

All other chapters barring above mentioned would be included in the Syllabus for the year 2020-21.

## LEARNING OUTCOMES

### SUBJECT: GEOGRAPHY

1	XII	NCERT- FUNDAMENTALS OF HUMAN GEOGRAPHY	Ch 1.Human Geography Nature and Scope	<p><b>The learner will be able to know :</b></p> <p>The students will Familiarise with the term, key word, concept, and basic principles of geography.</p> <p>Explain nature of human geography and it's relationship with other disciplines.</p> <p>Understand and Analyze the interrelationship between physical and human environment and their impact .</p>
2	XII		Ch. 2 and Ch 3.The World Population, Distribution, Density and growth and composition	<p><b>The learner will be able to know :</b></p> <p>Students will understand population growth, distribution in India and world.</p> <p>Understand about factors affecting growth of pop., causes and migration and composition.</p> <p>Identification the factors for uneven distribution of pop. India and world.</p> <p>Explain trends of pop growth since 1951.</p> <p>Describe Rural, Urban pop. composition and analyses map showing density and distribution of pop and choropleth map.</p> <p>students will understand sex composition and structure age sex pyramid rural-urban composition literacy rate and occupational structure</p>
3	XII		Ch 4 .Human Development	<p><b>The learner will be able to :</b></p> <p>Student will know the concept selected indicator International comparison of Human Development.</p> <p>Student will differentiate between growth and development.</p> <p>Student will know key areas of Human Development and importance of economic growth.</p> <p>they will understand the factors prevent people to lead a long and healthy life</p>

4	XII		<b>ch. 5,6,7. Primary, Secondary, Tertiary and Quaternary Activities.</b>	<b>The learner will be able to :</b>
				student will understand the changing Trends of gathering to modern agricultural activities in the world and India
				student will understand the importance concept of manufacturing industry their types and people engage in different activities
				they will know about the concept of trade transport tourism and Communication And Services with selected examples
				student will know the concept of knowledge based industries and case study from selected countries.
5	XII		<b>Ch. 8.Transport and communication ( World and India)</b>	<b>The learner will be able to :</b>
				Compare different modes of transport and communication in world and India.
				develops sensitivity towards the role of transport and communication integrating National global economy.
				relate transparent communication and their role in enhancing trade and Commerce and also Tourism Development
				students will understand the difference between Traditional and modern means of transport and communication and help their lives.
6	XII		<b>Ch. 9 International Trade</b>	<b>The learner will be able to :</b>
				understand the ancient methods of exchange of goods and services .(Barter system)
				Apprehend history of international trade ,slave trade.
				Know about reason for existence of International Trade and basis of international trade
				understand the changing pattern of India's foreign trade. Sea port and Hinterland.
7	XII		<b>Ch. 10 . Human settlement (World and India)</b>	<b>The learner will be able to :</b>
				explain about settlement types and morphology ,Function.
				know about classification of rural and urban settlement in the world and India.
				perceive about the problems faced by rural and urban settlement in developing countries of the world

7	XII	NCERT - INDIA PEOPLE AND ECONOMY	ch-1. Population: Distribution, Density, growth and composition	<b>The learner will be able to :</b>
				Understand distribution of population density and e growth in India.
				what are the factors for uneven distribution of population in India
				explanation of trend of population growth after independence till 21st century.
				describes rural Urban population composition and analyse map showing density and distribution of population in choropleth map
8	XII		<b>Ch. 2 Migration Types , Causes, and Consequences</b>	students will be able to know migration and distinguish between immigration and emigration.
				classification of streams of migration causes of Migration on and consequence of migration
9	XII		<b>Ch. 3. Human Development.</b>	students will be know the concept of selected indicators International comparison of Human Development
				difference in growth and development
				key areas of Human Development, Importance of economic growth.
				factors prevents people to lead a long healthy life.
				Indicators of human development.
10	XII		<b>Ch. 4. Human settlements.</b>	The students will be able to explain about supplement types and morphology
				problems of rural and urban settlement in developing countries
				function of rural and urban settlement in India
11	XII		<b>Ch. 5.Land Resources and Agriculture</b>	<b>The learner will be able to :</b>
				Understand the land use pattern and Agriculture land use Geography cal condition and distribution of major crops in India.
				agricultural development in India problems and solution in India
				cultivation method of different crops and their production and geography kal condition and distribution in India
12	XII		<b>Ch 6. Water Resources.</b>	<b>The learner will be able to :</b>
				Water Resources in India. Emerging problems. in India.
				Availability and utilisation of irrigation in domestic and other uses
				Causes of scarcity of water and their solution
				Methods of rainwater harvesting and watershed Management in India

13	XII		<b>Ch 7 Minerals and Energy Resources</b>	<b>The learner will be able to :</b>
				know the different minerals and their importance distribution and occurrence.
				Difference between conventional and nonconventional Minerals sources of energy and conservation of mineral and energy resources
14	XII		<b>Ch 8 . Manufacturing Industries</b>	They will understand the importance of mineral in their day-to-day life and their use
				<b>The learner will be able to :</b>
				Access the importance of industries in national economy
				Different factors affecting location of industries
				Types of Industries, Distribution, Major Industries in India
				Industrial policy, Changing pattern of industrial of selected industries.
15	XII		<b>ch 9. Planning and sustainable development in Indian context</b>	impact of liberalisation ,privatisation and globalisation of industrial location. Major and Minor industrial region.
				students will be able to know the planning in India macro and micro level.
				they will understand development and sustainable development
				importance of Indira Gandhi Canal in Rajasthan and stages of command area development and their use
				positive effects of Indira Gandhi Canal project and stages to promote sustainable development
16	XII		<b>Ch. 10 Transport and communication</b>	<b>The learner will be able to :</b>
				compare different modes of transport and communication in India
				develop sensitivity towards the role of transport and communication indicating National global economy
				relate the role in enhancing trade and Commerce and also tourism in India
				importance of modern means of communication and use of Technology like satellite communication.
				students will be able to understand the ancient methods of exchange of goods and services .(Barter system)
				History of international trade ,slave trade.



				Reason for existence of International Trade and basis of international trade
				changing pattern of India's foreign trade. Sea port and Hinterland.
<b>18</b>	<b>XII</b>		<b>Ch 12 Geographical prospective on selected issues and problems in India</b>	<b>The learner will be able to :</b>
				Understand environmental pollution urban waste disposal in India
				main source of water air land and noise pollution India and causes UP Pollution
				step to Tekken check pollution and land degradation in India
				what is Slum?their problems and case study of (Dharavi in Mumbai) and their solution.

**SPLIT-UP OF SYLLABUS 2020-21**

**Class - XII, SUB:MATHEMATICS (041)**

- BOOKS PRESCRIBED: 1. MATHEMATICS TEXT BOOK FOR CLASS-XII (PART-I & II)(NCERT)  
2. MATHEMATICS(EXAMPLAR PROBLEMS) (NCERT)  
3. MATHS LAB MANUAL PUBLISHED BY NCERT**

	MONTH	CHAPTERS/TOPICS TO BE TAUGHT	CHAPTER WISE WEIGHTAGE	
			Half Yearly	Pre_Board/ Annual
	APRIL to JULY	Ch-1: Relations and Functions	06	08
		Ch-2: Inverse Trigonometric Functions	04	
		Ch-3 & 4: Matrices and Determinants	13	10
		Ch-5: Continuity and differentiability	11	35
		Ch-6: Application of Derivatives	10	
		Ch-7: Integrals	10	
UNIT TEST-I	AUGUST	Ch-8: Application of Integrals	08	
		Ch-9: Differential Equations	06	
	SEPTEMBER	Ch-12: Linear Programming	05	05
		Ch_13: Probability	07	08
	OCTOBER	<b>REVISION &amp; HALF YEARLY EXAMINATION</b>	<b>Total :80</b>	
	NOVEMBER	Ch-10: Vector Algebra		14
		Ch-11: Three- Dimensional Geometry		
	DECEMBER	<b>REVISION &amp; PRE BOARD-I</b>		
	JANUARY	<b>REVISION &amp; PRE BOARD-II</b>	<b>Total :</b>	<b>80</b>
	FEBRUARY	<b>REVISION</b>		

### QUESTION PATTERN

TYPE OF QUESTION(S)	MARK(S) PER QUESTION	TOTAL NO.OF QUESTIONS	TOTAL MARKS
MCQ,VSA	1	20	20
SA	2	6	12
LA-1	4	6	24
LA-2	6	4	24
	<b>TOTAL:</b>	<b>36</b>	<b>80</b>

### Deleted Portion

#### CLASS XII

UNIT/CHAPTER	SYLLABUS REDUCED
<b>Unit1: Relations and Functions</b>	
1. Relations and Functions	<input type="checkbox"/> composite functions, inverse of a function.
2. Inverse Trigonometric Functions	<input type="checkbox"/> Graphs of inverse trigonometric functions <input type="checkbox"/> Elementary properties of inverse trigonometric functions
<b>Unit2: Algebra</b>	
1. Matrices	<input type="checkbox"/> existence of non-zero matrices whose product is the zero matrix. <input type="checkbox"/> Concept of elementary row and column operations. <input type="checkbox"/> proof of the uniqueness of inverse, if it exists.
2. Determinants	<input type="checkbox"/> properties of determinants <input type="checkbox"/> Consistency, inconsistency and number of solutions of system of linear equations by examples,

<b>Unit-III: Calculus</b>	
1. Continuity and Differentiability	□ Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation.
2. Applications of Derivatives	□ rate of change of bodies, use of derivatives in approximation □
3. Integrals	$\int \sqrt{ax^2 + bx + c} dx$ , $\int (\alpha x + b)\sqrt{ax^2 + bx + c} dx$ □ Definite integrals as a limit of a sum
4. Applications of the Integrals	□ Area between any of the two above said curves
5. Differential Equations	□ formation of differential equation whose general solution is given. □ Solutions of linear differential equation of the type: $\frac{dx}{dy} + px = q$ , where p and q are functions of y or constants.
<b>Unit-IV: Vectors and Three-Dimensional Geometry</b>	
1. Vectors	scalar triple product of vectors.
2. Three - dimensional Geometry	□ Angle between (i) two lines, (ii) two planes, (iii) a line and a plane
<b>Unit-V: Linear Programming</b>	
1. Linear Programming	□ mathematical formulation of L.P. problems □ (unbounded)
<b>Unit-VI: Probability</b>	
1. Probability	□ mean and variance of random variable. Binomial probability distribution.

**BLUE PRINT OF QUESTION PAPER-HALF YEARLY EXAMINATION 2020**

SL. NO.	TOPIC	1MARK	2MARKS	4MARKS	6MARKS	TOTAL
1	Relation and Functions	2		1		06
2	Inverse Trigonometric Functions	2	1			04
3	Matrix & Determinants	3		1	1	13
4	Continuity & Differentiability	3	2	1		11
5	Application of Derivatives	4			1	10
6	Integrals	2	1		1	10
7	Application of Integrals		1		1	08
8	Differential Equation	2		1		06
9	LPP	1		1		05
10	PROBABILITY	1	1	1		07
	<b>TOTAL:</b>	1X20=20	2X6=12	4X6=24	6X4=24	80

There will be no overall choice in the question paper . However, 33% internal choices will be given.

**WEIGHTAGE TO LEARNING OBJECTIVES**

Sl.No	Typology of Question	VSA (1mark)	SA (2 marks)	LA-I (4 marks)	LA-II (6 marks)	Marks	Weightage
1	Remembering	4	1	1	1	16	20%
2	Understanding	6	2	3	1	28	35%
3	Application	6	2	1	1	20	25%
4	Analysing, Creating and Evaluating	4	1	1	1	16	20%
	Total	1x20=20	2x6=12	4x6=24	6x4=24	80	100%

For Internal Assessment : 20 Marks

Through out the year any ten activities shall be performed by the student from the activities given in the NCERT Laboratories Manual (XII)

- Weightage : 1. Performed by the student through the year and record keeping - 5 marks  
 2. Assessment of the activities performed during year end test - 3 marks  
 3. Viva voce-2 marks  
 4. Pen Paper test-10 marks (Average of best two out of three)

## LEARNING OUTCOMES

### SUBJECT: MATHEMATICS

SL. NO	CLASS	NAME OF THE TEXT BOOK	CHAPTER/ LESSON	LEARNING OUTCOMES
1	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-I	CH-1 – RELATION & FUNCTION	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Identify/ Classify</b> different types of relations and functions.</li> <li>*<b>Analyse</b> the conditions involved in finding composite functions and inverse of a function.</li> <li>*<b>Apply</b> the strategies required to check equivalence relation and to find the composition of two functions and inverse of a function.</li> </ul>
2	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-I	CH-2 – INVERSE TROGONOMETRIC FUNCTION	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Derive</b> different properties of invers trigonometric functions.</li> <li>*<b>Apply</b> the properties of inverse trigonometric functions to solve the problems.</li> <li>*<b>Draw</b> the graphs of inverse trigonometric functions in Geo gebra and demonstrate the properties.</li> </ul>
3	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-I	CH-3 - MATRICES	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Identify/ Classify</b> different types of matrices.</li> <li>*<b>Add, Subtract, Multiply</b> matrices.</li> <li>*<b>Find</b> the transpose of a matrix.</li> <li>*<b>Demonstrate</b> the algebraic properties of matrix</li> <li>*<b>Apply</b> the properties of matrix algebra to solve problems.</li> <li>*<b>Apply</b> the elementary operations to find inverse of a matrix.</li> </ul>
4	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-I	CH-4 – DETERMINANTS	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Evaluate</b> determinants up to 3<sup>rd</sup> order.</li> <li>*<b>Apply</b> Properties of determinants to evaluate determinants/ to prove identities or expression involving determinants.</li> <li>*<b>Find</b> the adjoint and inverse of a matrix.</li> <li>*<b>Analyse</b> the conditions required to find inverse of a matrix and the properties of adjoint and inverse of matrices.</li> <li>*<b>Solve</b> the system of linear equations using matrix method.</li> <li>*<b>Use</b> matrices to solve real life problems</li> </ul>

5	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-I	CH-5 – CONTINUITY AND DIFFERENTIAL ABILITY	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Discuss</b> continuity and differentiability of a function.</li> <li>*<b>Analyse</b> the relation between continuity and differentiability.</li> <li>*<b>Compute</b> differentiation of different functions.</li> <li>*<b>Solve</b> different problems based on differentiation.</li> <li>*<b>Verify</b> Rolle’s theorem and Mean value problem for different functions in different intervals.</li> </ul>
6	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-I	CH-6 – APPLICATION OF DERIVATIVES	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Apply</b> differentiation to <b>find</b> the rate of change.</li> <li>*<b>Check</b> increasing and decreasing function.</li> <li>*<b>Find</b> equation of tangents and normal to a curve and angle between two curves.</li> <li>*<b>Check</b> orthogonality of two curves.</li> <li>*<b>Approximate</b> functions.</li> <li>*<b>Demonstrate</b> the behaviour of a function using Geogebra</li> </ul>
7	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-II	CH-7 – INTEGRALS	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Evaluate</b> indefinite integrals, definite integrals using limit of sum and definite integrals.</li> <li>*<b>Apply</b> properties of definite integrals in evaluation</li> <li>*<b>Use</b> integrals to solve area problems.</li> </ul>
8	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-II	CH-8 – APPLICATION OF INTEGRALS	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*Area of simple curve</li> <li>*Find the area under curve</li> <li>* Find the between two curves</li> </ul>
9	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-II	CH-9 – DIFFERENTIAL EQUATION	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Form</b> differential equations for a given family of curves.</li> <li>*<b>Solve</b> differential equations of first order and first degree.</li> <li>*<b>Apply</b> differential equations to solve real life problems.</li> </ul>
10	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-II	CH-10 – VECTOR ALGEBRA	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Identify</b> different types of vectors.</li> <li>*<b>Demonstrate</b> the ideas to be used in vector algebra (addition, subtraction, scalar multiplication and multiplication of vectors)</li> <li>*<b>Establish</b> the properties of vector algebra and the ideas of direction cosines and direction ratios of a vector.</li> <li>*<b>Demonstrate</b> the conditions of collinearity of vectors, coplanarity of three vectors and coplanarity of four points..</li> </ul>

11	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-II	CH-11 – THREE DIMENSIONAL GEOMETRY	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Determine</b> direction cosines and direction ratios of a line.</li> <li>*<b>Demonstrate</b> the relation between direction cosines and direction ratios of a line, conditions of collinearity of three points and coplanarity of two lines.</li> <li>*<b>Find</b> equation of a line and a plane in different conditions, angle between two lines, shortest distance between two lines.</li> <li>*<b>Apply</b> the ideas of line and plane in 3D to solve variety of related problems.</li> </ul>
12	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-II	CH-12 – LINEAR PROGRAMMING	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*Concept of Linear Programming</li> <li>*Test of optimal</li> <li>* Solve Linear Programming problems by graphical method</li> </ul>
13	XII	MATHEMATICS TEXT BOOK FOR CLASS- XII PART-II	CH-13 – PROBABILITY	<p><b>The learners</b></p> <ul style="list-style-type: none"> <li>*<b>Solve</b> problems on probability.</li> <li>*<b>Analyse</b> a question on probability to decide the strategy to be used to solve the problem.</li> <li>*<b>Find</b> mean variance and standard deviation of a probability distribution</li> </ul>



### CLASS-XII (048), SUB : Physical Education

Books Prescribed : Health & Physical Education ( Goyal Publication )  
 Reference Book : Health and Physical Education ( Saraswati Publication)  
 Introduction to Health and Physical Education ( Avichal Publication)  
 A Text Book of Physical Education ( Candid Publication)

	MONTH	Chapters / Topics to be taught	MARK DIST-FOR HALF YEARLY EXAMINATION	MARK DIST-FOR PRE BOARD/ ANNUAL EXAMINATION
	APRIL	<b>Unit 01</b> :Planning in sports <b>Unit 02</b> : Sports & Nutrition <b>Unit 03</b> : Yoga & Life style	09 08 09	07 06 07
	TO JULY	<b>Unit 04</b> : Physical Education & Sports for CWSN (Children with special Needs - Divyang ) <b>Unit 05</b> : Children & Women in Sports <b>Unit 06</b> : Test & Measurement in sports	09 10 09	06 08 07
<b>UNIT TEST-I</b>	AUGUST	<b>Unit 07</b> : Physiology & Injuries in Sports	10	08
	SEPT	<b>Unit 08</b> : Biomechanics & Sports <b>REVISION FOR HALF YEARLY</b>	06	06
	OCT	<b>HALF YEARLY EXAMINATION</b>	<b>Total :70</b>	
	NOV	<b>Unit 09</b> : Psychology & Sports <b>Unit 10</b> : Training in sports		07 08
	DEC	<b>REVISION &amp; BOARD - I</b>		
	JAN	<b>REVISION &amp; PRE BOARD - II</b>		
	FEB	<b>REVISION</b>		
			<b>TOTAL</b>	<b>70</b>

### QUESTION PATTERN ( HALF YEARLY / PRE BOARD )

TYPE OF QUESTION	MARK(S) PER QUESTION	TOTAL NO. OF QUESTIONS	TOTAL MARKS
VSA	01	20	20
SA	03	10	30
LA	05	04	20
	<b>Total :</b>	<b>34</b>	<b>70</b>

## Deleted option

### PHYSICAL EDUCATION (048) Class XII

#### Unit I Planning in Sports

Intramural & Extramural – Meaning, Objectives & Its Significance  
Specific Sports Programme (Sports Day, Health Run, Run For Fun, Run For Specific Cause & Run For Unity)

#### Unit III Yoga & Lifestyle

Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana

#### Unit IV Physical Education & Sports for CWSN (Children With Special Needs - Divyang)

Advantage of Physical Activities for children with special needs

#### Unit V Children & Women in Sports

Special consideration (Menarch & Menstrual Dysfunction)  
Female Athletes Triad (Oestoperosis, Amenoria, Eating Disorders)

#### Unit VI Test & Measurement in Sports

- o General Motor Fitness–Barrow three item general motor ability(Standing Broad Jump, Zig Zag Run, Medicine Ball Put – For Boys: 03 Kg & For Girls: 01Kg)

#### Unit VII Physiology & Injuries in Sports

- Physiological changes due to ageing

#### Unit VIII Biomechanics & Sports

- Friction & Sports

#### Unit IX Psychology & Sports

- Exercise Adherence; Reasons to Exercise, Benefits of Exercise
- Strategies for Enhancing Adherence to Exercise

#### Unit X Training in Sports

- Circuit Training - Introduction & its importance

#### Practical

Record file shall include

Practical-3: Procedure for administering Senior Citizen Fitness Test for 5 elderly family members.

## BLUE PRINT OF QUESTION PAPER FOR HALF YEARLY EXAM

Name of the Unit	1 Mark	3 Marks	5 Marks	Total
1. Planning in sports	3	2	-	9
2. Sports and nutrition	5	1	-	8
3. Yoga and life style	1	1	1	9
4. Physical education for differently abled	1	1	1	9
5. Children & Women in sports	2	1	1	10
6. Test & Measurement in sports	3	2	-	9
7. Physiology & Injuries in sports	2	1	1	10
8. Biomechanics & Sports	3	1	-	6
				Total:70

### PHYSICAL EDUCATION (PRACTICAL)

Max. Marks :30

60 Periods

Time :3 hrs

SL NO	PRACTICALS TO BE CONDUCTED	MARK
1	Physical Fitness Test	6
2	Proficiency in Games & Sports( Skill of any one Team game of choice from the given list *)	7
3	Yogic Practices	7
4	Viva voce (Health/ Games & Sports/Yoga)	5
5	Record File	5

\*, Basketball, Football, Handball, Hockey, KHO-KHO, Kabaddi, Cricket, Bocce, Volleyball and unified Basketball [CWSN (Children With Special Needs - Divyang) ]\*\*\*

**Record File shall Include :**

**Practical - 1:** Fitness tests administration for all items..

**Practical - 2:** Procedure for Asanas, Benefits and contraindication for any two Asanas for each Lifestyle Disease.

**Practical - 3:** Procedure for administering Senior citizen Fitness Test for 5 elderly family members.

**Practical -4:** Any one game of your choice out of the listed above. Labelled diagram of field and Equipment. (Rules, Terminologies and Skills)

N.B : Unit / Weekly test will be held on Mondays.

## LEARNING OUTCOMES

### SUBJECT: PHYSICAL EDUCATION

Topic	Learning Outcomes
CH – 1- IN SPORTS                      PLANNING	<b>The Learners able ...</b>
	➤ To understand the meaning and objective of planning.
	➤ To learn to how to organise a sports programme.
	➤ To know how to draw fixture of tournaments.
CH-2 SPORTS AND NUTRITION                      -	<b>The Learners able ...</b>
	➤ To learn what is balanced diet and nutrition.
	➤ To understand nutritive and non-nutritive components.
	➤ To know the healthy weight, the pitfalls of dieting, food intolerance and myths.
<b>CH-3</b> -YOGA AND LIFESTYLE	<b>The Learners able ...</b>
	➤ To understand the meaning and benefits of asana.
	➤ To learn how asanas can act as preventive measure.
	➤ To understand obesity, diabetes, asthma, hypertension, and their preventions.
CH – 4 PHYSICAL EDUCATION AND SPORTS FOR CWSN                      -	<b>The Learners able ...</b>
	➤ To understand the concept of disability and disorder.
	➤ To learn the types of disability and disorder and their causes and nature.
	➤ To understand the disability etiquettes.
	➤ To comprehend the strategies to make physical activities accessible for children With special needs.
CH – 5 CHILDREN AND WOMEN IN SPORTS	<b>The Learners able ...</b>
	➤ To understand the motor development and factors affecting it.
	➤ To know the exercise guidelines at different stages of growth and development.
	➤ To know some common postural deformities.
CH -6 TESTS AND MEASUREMENT IN SPORTS                      -	<b>The Learners able ...</b>
	➤ To learn the measurement cardiovascular fitness Harvard Step test/ Rockport test.
	➤ To understand the computation of fitness index.
	➤ To learn the Rikli Jones: Senior citizen fitness test.
CH – 7 PHYSIOLOGY AND INJURIES IN SPORTS                      -	<b>The Learners able ...</b>
	➤ Understanding the effects of exercises on the cardio respiratory system and Muscular system.
	➤ Understanding the sports injuries classification and causes.
	➤ Understanding the management of injuries.
CH – 8 BIOMECHANICS AND SPORTS                      -	<b>The Learners able ...</b>
	➤ To Understand the Meaning and importance of Biomechanics in sports.
	➤ To learn the types of movements (Flexion, Extension, Abduction and Adduction).
	➤ To know the Newton's law of Motion and its application in sports.
CH – 9 PSYCHOLOGY AND SPORTS                      -	<b>The Learners able ...</b>
	➤ To learn about personality its types –trait.
	➤ To learn about Motivation, its types and techniques.
CH – 10 TRAINING IN SPORTS                      -	<b>The Learners able ...</b>
	➤ To understand the meaning of strength, endurance and their types and learn various methods of improving.
	➤ To understand the meaning of speed and flexibility and their types and learn various methods of improving.
	➤ To understand meaning of coordinative abilities and its types.

**SPLIT-UP OF SYLLABUS 2020-21**

**CLASS: XII, SUB: Physics (042)**

**BOOKS PRESCRIBED:** 1. Text Book of Physics, NCERT

TEST/EXAM	MONTH	CHAPTER TO BE TAUGHT	H.Y WEIGHTAGE	PRE BOARD WEIGHTAGE
	APRIL TO JULY	1: Electric Charge	20	16
		2: Electrostatic Potential and Capacitance (Partly)		
		2: Electrostatic Potential and Capacitance (Remaining Part)		
		3: Current Electricity	22	17
		4: Moving Charges and Magnetism		
		5: Magnetism and Matter		
UNIT TEST	AUGUST	6: Electromagnetic Induction	22	18
		7: Alternating Current		
		8: Electromagnetic Waves		
	SEPTEMBER	9: Ray Optics and Optical Instruments (Partly)	06	
		9: Ray Optics and Optical Instruments (Remaining)		
		10: Wave Optics		
		11: Dual Nature of Radiation and Matter		
	OCTOBER	<b>REVISION &amp; HALF YEARLY EXAM</b>		
	NOVEMBER	12: Atoms		
		13: Nuclei		
		14: Semiconductor and Electronics devices	7	
	DECEMBER	<b>REVISION &amp; 1st PRE-BOARD</b>		
JANUARY	<b>REVISION &amp; 2nd PRE BOARD</b>			
FEBRUARY	<b>REVISION</b>			
<b>TOTAL</b>			<b>70</b>	<b>70</b>

### QUESTION PATTERN

TYPE OF QUESTIONS	MARK(S) PER QUESTION	TOTAL NO OF QUESTIONS	TOTAL MARKS
VSA	01	20	20
SA-I	02	07	14
SA-II	03	07	21
LA	05	03	15
	<b>Total:</b>	<b>37</b>	<b>70</b>

### PRACTICAL SYLLABUS

The record to be submitted by the students at the time of annual examination has to include  
Record of at least 8 experiment (4 from each section )to be performed by student .  
Record of at least 6 activities ( 3 from each section )to be demonstrated by teacher.  
The report of project to be carried out by student.

#### **Evaluation Scheme**

**Time allowed : 3hours**

**M.M=30**

Two experiments(One from each section) : 8 + 8 marks  
Practical Record(Experiments & Activities) : 7 marks  
Viva on Experiments and Project : 7 marks

Total

= 30 marks

### SECTION A

SI.NO.	MONTH	DETAILS OF THE EXPERIMENTS TO BE PERFORMED
1	June	To find the resistivity of a two /three given wire by plotting a graph between potential difference & current.
2	June	To determine resistance of a given wire/stranded resistor by using metre bridge .
3	July	To verify the laws of combination (series) of resistances using a metre bridge OR To verify the laws of combination (parallel) of resistances using a metre bridge
4	July	To compare the EMF of two given primary cells using potentiometer.
5	July	To determine the internal resistance of a given primary cell using potentiometer.
6	August	To determine the resistance of a galvanometer by half –deflection method & to find its figure of merit
7		To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same. OR . To convert the given galvanometer (of known resistance and figure of merit) into an ammeter of desired range and to verify the same.
8		To find the frequency of AC mains with a sonometer.

**N.B:** At least 4 experiment must be performed from this group

Any of experiment SI .No 1 to 6 can be replaced by SI .No 7 to 10 depending on suitability of school.

## SECTION A

Activities (For the purpose of demonstration only)

1. To measure the resistance and impedance of an inductor with or without iron core. 2. To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter.
3. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
4. To assemble the components of a given electrical circuit.
5. To study the variation in potential drop with length of a wire for a steady current.
6. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.

**N.B:** At least 3 activity must be performed by the student from this group.

## SECTION B

SI.NO.	MONTH	DETAILS OF THE EXPERIMENTS TO BE PERFORMED
1	August	To find the value of 'v' for different values of 'u' in case of a concave mirror and to find the focal length.
2	August	To find the focal length of a convex mirror using a convex lens.
3	September	To find the focal length of a convex lens by plotting graphs between u & v OR $1/u$ & $1/v$ .
4	September	To find the focal length of a concave lens, using a convex lens.
5	September	To determine the angle of minimum deviation for a given prism by plotting a graph between angle of incidence & angle of deviation.
6	November	To determine the refractive index of a glass slab using a travelling microscope.
		To find the refractive index of a liquid by using convex lens & plane mirror.
		To draw the I-V Characteristics curve of a p-n junction in forward bias & reverse bias.
		To draw the characteristic curve of a zener diode and to determine its reverse break down voltage

N.B: At least 6 experiment must be performed from this group. Any of experiment SI No 1 to 6 can be replaced by SI .No 7 to 9 depending on suitability of school

## SECTION B

Activities (For the purpose of demonstration only)

1. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
2. Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order.

3. To study effect of intensity of light (by varying distance of the source) on an LDR.
4. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
5. To observe polarization of light using two Polaroids.
6. To observe diffraction of light due to a thin slit.
7. To study the nature and size of the image formed by a (i) convex lens, (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
8. To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.

**N.B:** At least 3 activity must be demonstrated from this group

### **Suggested Investigatory project**

1. To study various factors on which the internal resistance/EMF of a cell depends.
2. To study the variations in current flowing in a circuit containing an LDR because of a variation in (a) the power of the incandescent lamp, used to 'illuminate' the LDR (keeping all the lamps at a fixed distance). (b) the distance of a incandescent lamp (of fixed power) used to 'illuminate' the LDR.
3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equi convex lens (made from a glass of known refractive index) and an adjustable object needle.
4. To design an appropriate logic gate combination for a given truth table.
5. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of a self designed transformer.
6. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.
7. To estimate the charge induced on each one of the two identical styrofoam (or pith) balls suspended in a vertical plane by making use of Coulomb's law.
8. To study the factor on which the self inductance of a coil depends by observing the effect of this coil, when put in series with a resistor/(bulb) in a circuit fed up by an A.C. source of adjustable frequency.
9. To study the earth's magnetic field using a tangent galvanometer



### Deleted Portion

Topics
Chapter-1 Electric charges and fields uniformly charged thin spherical shell (field inside and outside).
Chapter-3 Current Electricity Carbon resistors, colour code for carbon resistors, series and parallel combinations of resistors.
Chapter-4 Moving Charges and Magnetism Cyclotron.
Chapter-5 Magnetism and Matter magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis, torque on a magnetic dipole (bar magnet) in a uniform magnetic field; Para-, dia- and ferro - magnetic substances, with examples. Electromagnets and factors affecting their strengths, permanent magnets.
Chapter-7 Alternating Current power factor, wattless current.
Chapter 8 Electromagnetic Waves Basic idea of displacement current,
Chapter 9 Ray Optics and Optical Instruments Reflection of light, spherical mirrors,(recapitulation) mirror formula , Scattering of light - blue colour of sky and reddish appearance of the sun at sunrise and sunset. resolving power of microscope and astronomical telescope, polarisation, plane polarised light, Brewster's law, uses of plane polarised light and Polaroids.
Chapter-11 Dual Nature of radiation and matter Davisson-Germer experiment

<p>Chapter 13 Nuclei</p> <p>Radioactivity, alpha, beta and gamma particles/rays and their properties; radioactive decay law, half life and mean life</p> <p>binding energy per nucleon and its variation with mass number</p>
<p><b>Chapter 14</b> Semiconductor Electronics: Materials, Devices and Simple Circuits</p> <p>Zener diode and their characteristics, zener diode as a voltage regulator.</p>
<p>Practicals: No investigatory project and Activity to be demonstrated</p> <p>8 experiments ( clubbed based on skills ) in place of 12</p>

### BLUE PRINT FOR HALF YEARLY EXAMINATION 2020-21

CLASS-XII	SUB-PHYSICS	TIME-3HRS.		MAXIMUM MARKS-70		
SL. NO.	NAME OF THE TOPIC	VSA (1 mark)	SA-I (3 marks)	SA-II (2 marks)	LA (5 marks)	Total
1	Electric Charge and field	1	1	1		6
2	Electrostatic Potential and Capacitance	2		1		5
3	Current Electricity	2	1		1	9
4	Moving Charges and Magnetism	1	1		1	8
5	Magnetism and Matter	1	1			3
6	Electromagnetic Induction	1		1		4
7	Alternating Current	2	1	1		7
8	Electromagnetic Waves	2	1			4
9	Ray Optics and Optical instruments	2		1	1	10
10	Wave Optics	3	1	1		8
11	Dual Nature of Radiation and Matter	3		1		6
<b>TOTAL</b>		<b>1 x 20 = 20</b>	<b>2 x 7 = 14</b>	<b>3 x 7 = 21</b>	<b>5 x 3 = 15</b>	<b>70(37)</b>

N.B. 1.The VSA type of questions must include 10 questions of MCQ, 5 questions of fill ups & 5 questions of very short answer type. 2. Internal choices will be provided in two questions of one mark each, two questions of two marks, one question of three marks and three questions of five marks weightage.

N.B. : Question for Pre-Board / Annual Examination will be as per **CBSE Guidelines**.

## LEARNING OUTCOMES

### SUBJECT: PHYSICS

Sl.No	Class	Name of the Text Book	Chapter/ Lesson	Learning Outcomes
2	XII	NCERT	Chapter-1: Electric Charges and Fields	<ol style="list-style-type: none"> <li>1.derives formulae, equations, and laws, such as, torque on a dipole in uniform electric field,</li> <li>2.explain relationship between nature and matter on scientific basis, such as, force between charges, electric field and potential</li> <li>3. find force on charges in an electric field.</li> </ol>
			Chapter-2: Electrostatic Potential and Capacitance	<ol style="list-style-type: none"> <li>1.applies concepts of physics in daily life while decision-making and solving problems, such as, if a certain capacitance is required in a circuit across a certain potential difference then suggesting a possible arrangement using minimum number of capacitors of given capacity which can withstand a given potential difference.</li> <li>2. derive effective capacitance of combination of capacitors in series and in parallel, energy stored in a capacitor</li> <li>3. take initiate research on the possibility of static electricity charging electronic devices.</li> </ol>
			Chapter-3: Current Electricity	<ol style="list-style-type: none"> <li>1. derive the expression of drift velocity for electron and its dependence on potential and field.</li> <li>2.resistance of a stranded resistance available in market and able to find its value by using colour code.</li> <li>3. explain why 12v battery used in a car is different from 12v of 8 pencil battery of 1.5 volt connected in series,</li> <li>4 . apply the principle of potentiometer and meter bridge in Laboratory to find resistivity and compare emf of cell and internal resistance of cell</li> </ol>
			Chapter-4: Moving Charges and Magnetism	<ol style="list-style-type: none"> <li>1.Explain the phenomenon like AURORA BOREALIS and AURORA AUSTRALIS that takes place due to charge particle coming from sun.</li> <li>2.Able to convert A galvanometer to voltmeter and ammeter of desired range.</li> <li>3 interpret how a charge moves in presence of both electric and magnetic field</li> <li>4.derive formula of magnetic field of current carrying wire of different shape like straight , circular, solenoid (straight and toroidal)</li> <li>5. Explain why two current carrying wire can attract each other hence define one ampere of current.</li> <li>6 Analyse the orientation of current carrying loop in external magnetic field.</li> <li>7 find the magnetic moment of a smallest magnet</li> </ol>

			Chapter 5: Magnetism and matter	<ol style="list-style-type: none"> <li>1. Explain why magnet has always two pole</li> <li>2. Compare electromagnet with permanent magnet and their direction of magnetic field.</li> <li>3. can interpret the term magnetic intensity, magnetic induction, permeability and susptibility.</li> <li>4. Differentiate between di, para, and ferromagnetic materials.</li> <li>5. Able to find materials suitable transfer core and permanent magnet as on the basis of energy loss.</li> </ol>
			Chapter–6: Electromagnetic Induction	<ol style="list-style-type: none"> <li>1. Explain the Faradys law of electromagnetic induction and predict the direction of induced emf by using Lantz law.</li> <li>2. understand the principle of generating electricity in hydropower station /thermal power station and use it to construct a dynamo which can produce current in small scale.</li> <li>3 explain why a bulb glow slowly to take more time when a induction coil is connected across it in series</li> <li>4 Able to glow a bulb from a distance without touching to the source on the basis of mutual induction.</li> </ol>
			Chapter–7: Alternating Current	<ol style="list-style-type: none"> <li>1. explain that net charge flow in one complete cycle of A C is zero and able to find the rms value of voltage or current.</li> <li>2. analyse the behaviour of inductor and capacitor in an AC which is different from resistor .</li> <li>3. understand the importance of Phase diagram in AC and using it able to explain the LR, RC, and LCR circuit.</li> <li>4. explain the mechanism of signal receiving by TV, Radio or any other device having LCR circuit and hoe we are able to change channel by using remote control.</li> <li>5 understand the principle of Transformer and able to analyse the role of Transformer near our locality or some where else ,find lose of energy due to transportation of Electrical Energy.</li> </ol>
			Chapter–8: Electromagnetic Waves	<ol style="list-style-type: none"> <li>1. understand the mechanism of production of Electro magnetic wave and application of it components .</li> <li>2. importance of E M W in our day today life for communication , water purifier, medical field etc.</li> <li>3. differentiate between current and displacement current.</li> </ol>
			Chapter–9: Ray Optics and Optical Instruments	<ol style="list-style-type: none"> <li>1. derive relation for lens ,mirror . prism and their application in different situation.</li> <li>2. explain different phenomenon like formation of rain bow, mirage, sparkling of diamond.</li> <li>3 use the principle of refraction for making of telescope, microscope, optical fibre etc.</li> <li>4. explain the principle of dispersion ,scattering and why sun appear red at morning and evening or why sky appear blue .</li> </ol>

			Chapter–10: Wave Optics	<ol style="list-style-type: none"> <li>1. understand the propagation of wave and formation of wave front by using Huygens principle .</li> <li>2 explain the necessary condition for interference and derive the relation for same ,also explain why soap bobbles or oil layer appear colour when sun light falls on it.</li> <li>3. understand the concept of diffraction and predict why sound can bend but light do not from one room to another.</li> <li>4. know the phenomenon of polarization and its application on sun glasses</li> </ol>
			Chapter–11: Dual Nature of Radiation and Matter	<ol style="list-style-type: none"> <li>1. explain the dual nature of radiation on the basis of Einstein photo electric effect.</li> <li>2 find the wave length associated with moving particle by Using De Broglie equation and its application in Electron microscope.</li> <li>3 derive relation of wave length and energy of photons and elementary particles like electrons and protons.</li> </ol>
			Chapter–12: Atoms	<ol style="list-style-type: none"> <li>1 . find velocity ,radius and energy of electron by using Bohr atomic models.</li> <li>2. explain different spectra and predict the origin of component of radiation produced due to transition of electros in various orbit.</li> <li>3. Explain the spectra of sun rediation and composition of star on the badsis of spectra.</li> </ol>
			Chapter–13: Nuclei	<ol style="list-style-type: none"> <li>1. acquire the fact about nuclear force ,its stability and their radioactivity nature which is used for betterment of humanity.</li> <li>2. explain how energy is produced in sun ,nuclear reactor and develop curiosity to produce clear fuel in future.</li> <li>3. Know the properties of <math>\alpha</math>, <math>\beta</math> and <math>\gamma</math> radiation and their souce and use.</li> </ol>
			Chapter–14: Semiconductor Electronics: Materials, Devices and Simple Circuits	<ol style="list-style-type: none"> <li>1. aquire the knowledge of behaviour of semiconductor which is different from conductor and use it in to develop new material by doping lower and higher valance materials for our suitability.</li> <li>2. Know the working of P-N junction diode and use it to make rectifier to convert AC to DC and different types of GATES.</li> <li>3. acquire the knowledge of different type of diode and able make simple electronics circuits.</li> </ol>

## SPLIT-UP OF SYLLABUS 2019-20

**CLASS: XII, SUB: Banking (811)**

**BOOKS PRESCRIBED: Banking (NCERT)**

	MONTH	CHAPTER/TOPICS TO BE TAUGHT	CHAPTERWISE WEIGHTAGE	
			HALF YEARLY	ANNUAL
	APRIL TO JULY	<b>PART-A :Employability Skills</b>	10	10
		Unit1.Communication Skills Unit2.Self-management Skills Unit3. Information and Communication Technology Skills		
UNIT TEST-I	AUGUST	<b>PART-B :Vocational Skills</b>	15	10
		Unit1.Ancillary Services of Banks		
		Unit2. Innovation in Banking Tech.		
	SEPTEMBER	Unit3. Organization of a Bank Branch	15	10
		Unit4.Basics of Business Math.	10	10
		<b>PROJECT WORK</b>	40	
	OCTOBER	<b>REVISION AND HALF YEARLY EXAMINATION</b>	<b>Total: 100</b>	
	NOVEMBER	<b>PART-A :Employability Skills</b>		08 05 40
		Unit 4.Entrepreneurial Skills Unit5. Green Skills		
		<b>PART-B :Vocational Skills</b> Unit5.RBI Regulations on Banks Unit6.Proforma of Final Accounts <b>Project Work</b>		
	DECEMBER	<b>REVISION &amp; PRE-BOARD-I EXAMINATION</b>		
	JANUARY	<b>REVISION &amp;PRE-BOARD II EXAMINATION</b>		
	FEBRUARY	<b>REVISION</b>		
			<b>TOTAL:</b>	<b>100</b>

### QUESTION PATTERN (HALF-YEARLY)

TYPE OF QUESTION (S)	MARK(S) PER QUESTION	TOTAL NO. O QUESTIONS	TOTAL MARKS
VSA	1	14	14
SA-I	2	8	16
SA-II	3	5	15
LA-I	5	3	15
	<b>Total:</b>	<b>30</b>	<b>60</b>

NB : PROJECT WORK TOPIC -- 40 Marks

TOTAL- 100 Marks

### BLUE PRINT (HALF-YEARLY)

SL NO.	CONTENTS UNIT/FORMS OF QUESTIONS	VSA (1)	SA-1 (2)	SA-2 (3)	LA-1 (5)	TOTAL MARKS
1	<u>Part-A</u> Employability Skills	4	3			10
2	<u>Part-B</u> Unit1. Ancillary Services of Banks	5	1	1	1	15
3	Unit2. . Innovation in Banking Tech.	2	1	2		10
4	Unit3. Organization of a Bank Branch	3	2	1	1	15
5	Unit4. Basics of Business Math		1	1	1	10
	Total :	1(14)=14	2(8)=16	3(5)=15	5(3)=15	60

### QUESTION PATTERN (ANNUAL)

TYPE OF QUESTION (S)	MARKS(S) PER QUESTION	TOTAL NO. OF QUESTIONS	TOTAL MARKS
VSA	1	14	14
SA-I	2	8	16
SA-II	3	5	15
LA-I	5	3	15
	TOTAL:	30	60

NB : PROJECT WORK TOPIC -- 40 Marks  
TOTAL- 100 Marks

N.B: Blue print of question paper for annual examination will be as per CBSE guidelines.

**DAV PUBLIC SCHOOLS, ODISHA ZONE-II  
SPLIT-UP OF SYLLABUS 2020-21**

**CLASS: XII:SUB:HISTORY(027)**

**TEXTBOOK PRESCRIBED: TEXTBOOK FOR CLASS XII, HISTORY, NCERT**

	MONTH	CHAPTERS/TOPIC TO BE TAUGHT	CHAPTER WISE WEIGHTAGE	
			HALF YEARLY	ANNUAL
	APRIL TO JULY	Ch-1-Bricks, Beads, and Bones Ch-2-Kings, Farmers and towns Ch-3-Kinship, class and class Ch-4-Thinkers, beliefs and buildings	19	18
		Ch-5-Through the eyes of travellers Ch-6-Bhakti-sufi traditions Ch-7-An imperial capital: Vijaynagar Ch-8-Peasants, zamindars and the state	19	18
UNIT TEST-I	AUGUST	Ch-9-Kings and Chronicles Ch-10-Colonialism and the countryside: Exploring Official Archives Ch-11-Rebels and the Raj	18	14
	SEPTEMBER	Ch-12-Colonial cities Ch-13-Mahatma Gandhi and the Nationalist movement <b>Map Work</b>	18 06	12 06
		OCTOBER	<b>REVISION AND HALF-YEARLY EXAMINATION Total=80</b>	
	NOVEMBER	Ch-14-Understanding Partition Ch -15- Framing the constitution		12
UNIT TEST-II	DECEMBER	REVISION AND PRE-BOARD-I		
	JANUARY	PRE-BOARD-II		
		<b>TOTAL</b>	<b>80</b>	<b>80</b>
<b>QUESTION PATTERN FOR HYE &amp; ANNUAL EXAM</b>		OTQ	1x20	20
		SA	3x4	12
		LA	8X3	24
		EXTRACT	6X3	18
		MAP	06	06
		<b>TOTAL</b>		



## PROJECT WORK

### Allocation of Marks (20)

The marks will be allocated under the following heads:

1	Project Synopsis	2 Marks
2	Data/Statistical analysis/Map work	3 Marks
3	Visual/overall presentation	5 Marks
4	Analysis/explanation and interpretation	5 Marks
5	Bibliography	1 Marks
6	Viva	4 Marks
<b>TOTAL</b>		<b>20 Marks</b>

### FEW SUGGESTIVE TOPICS FOR PROJECTS

1. The mysteries behind the mound of dead Mohenjo-Daro
2. An In-depth study to understand Spiritual Archaeology in the Sub-Continent
3. Buddha's Path to Enlightenment
4. Insight and Reflection of Bernier's notions of The Mughal Empire
5. An exploratory study to know the women who created history
6. "Mahatma Gandhi" A legendary soul
7. To reconstruct the History of Vijayanagar through the Archaeology of Hampi
8. The emerald city of Colonial Era BOMBAY
9. Vision of unity behind the first war of Independence
10. Divine Apostle of Guru Nanak Dev
11. Help, Humanity and Sacrifices during Partition
12. Glimpses inside Mughals Imperials Household
13. The process behind the framing of the Indian Constitution
14. The 'Brahm Nirupam' of Kabir A journey to Ultimate Reality

## DELETED PORTION

SL.NO	TOPICS	THEME	DELETED PORTION
1	Through the eyes of traveller	Theme-5 Part-II	Complete chapter
2	Peasants,Zamindars and the state	Theme-8 Part-II	Complete chapter
3	Colonialism and the countryside	Theme-10 Part-III	A Revolt in the countryside-The Bombay Deccan(unit-3).The Deccan riots commission (unit-4) From Page No-275-285-Deleted
4	Colonial cities	Theme-12 Part-III	Complete chapter
5	Understanding partition	Theme-14 Part-III	Complete chapter
	No change in map work		

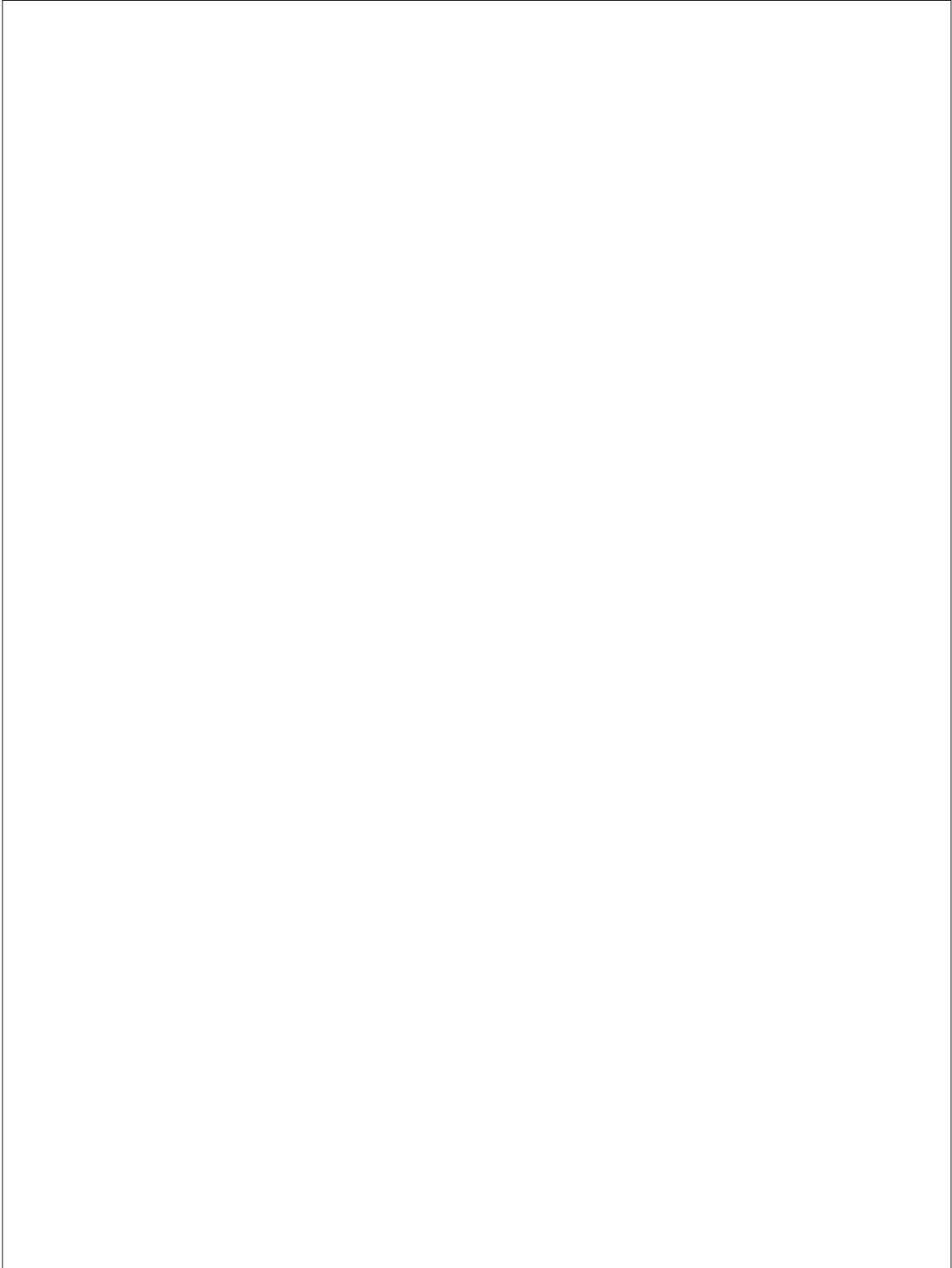
## LEARNING OUTCOMES SUBJECT-HISTORY(027)

SL.NO	CLASS	NAME OF THE TEXT BOOK	CHAPTER	LEARNING OUTCOMES
1	XII	NCERT	Bricks, beads and bones	1. Familiarize the learner with early urban centres as economic and social institutions. 2. Illustrate how archaeological reports.
2			Kings, Farmers and towns	1. Introduce inscriptional analysis. 2. Understanding of political and economic processes. 3. Major trends in the political and economic history of subcontinent.
3			Kinship, caste and class	1. Learners familiarise the social history. 2.Introduce strategies of textual analysis. 3. To know about the reconstructing of social strategies.
4			Thinkers, beliefs and buildings	1. Learners will know about the religious developments in the early india. 2. Introduce strategies of visual analysis. 3.Use of reconstructing histories of religion.
5			Bhakti-Sufi traditions	1.Familiarize the learner with religious development. 2.Analyse devotional literature. 3.To know about 2 important religion
6			An imperial capital: Vijayanagar	1.Learners will know about the new buildings. 2. Relationship between architecture and political system. 3. Analyse the important structures of temple
7			Kings and chronicles	1.Students will know about the Mughal dynasty. 2. Familiarise about the different art and architecture of 16 <sup>th</sup> century.
8			Colonialism and countryside: Exploring Official Archives	1.To know about how colonialism affected Zamindars, Peasants and artisans. 2. Familiarise about the lives of people. 3. To know about how the events of 1857 are being reinterpreted.
9			Rebels and Raj	1.Familiarize the learner with the history of modern urban centres. 2.Different types of sources. 3.To know about the First War of independence
10			Mahatma Gandhi and nationalist movement	1.Discuss the last decade of the national movement. 2.To know about the growth of nationalism. 3.Possibilities and limits of oral sources.
11			Framing the constitution	1.Familiarize students with the history of after independence. 2.New nation state were debated and formulated. 3.To know about the constituent assembly.

**SPLIT- UP OF SYLLABUS 2020-21**  
**SUB- MASS MEDIA STUDIES (835)**  
**CLASS: XII**

**BOOK PRESCRIBED: Mass Media Studies [CBSE]**

	MONTH	CHAPTERS/LESSONS TO BE TAUGHT	DISTRIBUTION OF MARKS FOR HALF YEARLY, PRE-BOARD AND BOARD EXAMINATIONS
	APRIL to JULY	<b>Part-A Skills</b> Unit-1: Communication Skills Unit-2: Self-management Skills <b>Part-B Skills</b> Unit-1: Selling/Marketing/ Exhibiting A Product through Advertising Unit 2: Introduction to the Production Process	Theory 70marks Practical 30 marks <b>Total Marks 100 marks</b>  <b>Part C Practical Work</b> Practical Examination 15 marks  Viva Voce 05marks <b>Total 20marks</b>
UT-I	AUG	<b>Part-A Skills</b> Unit 3: Information and Communication Technology Skills	<b>Part D Project Work/Field Visit</b> Practical File/Student Portfolio 10 marks <b>Total 10 marks</b>
	SEPT.	<b>Part-A Skills</b> Unit 4: Entrepreneurial Skills – IV <b>Part-B Skills</b> Unit 3: New Media	<b>Part A Employability Skills= 10 marks</b> <b>Part B Skills</b> <b>Unit 1 -20 marks</b> <b>Unit 2 -20 marks</b> <b>Unit 3 -10 marks</b> <b>Unit 4 -10marks</b> <b>Total -70 marks</b>
	OCT.	<b>Part-A Skills</b> Unit 5: Green Skills <b>Revision</b> <b>Half Yearly Examination</b>	
	NOV.	<b>Part-B Skills</b> Unit 4: Creative Contributions of the Key People	
	DEC.	<b>Revision</b> <b>Pre-Board-I</b>	
	JAN.	<b>Revision</b> <b>Pre-Board-II</b>	
	FEB.	<b>REVISION</b>	



## **10 Principles of ARYA SAMAJ**

### **With Eternal Truths**

1. God is the primary source of all true knowledge and of all that can be known through it.
2. God is Existent, Intelligent and Blissful. He is Formless, Almighty, Just Merciful, Unborn, Infinite, Unchangeable, Beginningless, Incomparable, Immortal, Fearless, Eternal, Holy and the Maker of the Universe. To Him alone worship is due.
3. The Vedas are the scriptures of true knowledge. It is the duty of all Aryas to read them, hear them being read and recite them to others.
4. We should always be ready to accept truth and give up untruth.
5. All actions should be performed in conformity with Dharma, that is, after due consideration of right and wrong.
6. The primary aim of the Arya Samaj is to do good for all, that is, promote their physical, spiritual and social well being.
7. We should treat all people with love, fairness and due regards for their merit.
8. We should aim at dispelling ignorance and promoting knowledge.
9. One should not only be content with one's own welfare, but should look for it in the welfare of others also.
10. One should regard oneself under restrictions to follow altruistic rulings of the society, while all should be free in following the rules of individual welfare.

