

CBSE | DEPARTMENT OF SKILL EDUCATION

CURRICULUM FOR SESSION 2026-2027

INFORMATION TECHNOLOGY (SUB. CODE – 402)

JOB ROLE: DOMESTIC DATA ENTRY OPERATOR

CLASS X

COURSE TITLE: DOMESTIC DATA ENTRY OPERATOR

Domestic Data Entry Operator in the IT-ITeS Industry is also known as Data Entry Operator. Individuals are responsible to provide daily work reports and work on a daily hour basis. The individual is responsible for electronic entry of data from the client side to the office site or vice-versa. Individual tasks vary depending on the size and structure of the organization. This job requires the individual to have a thorough knowledge of various technology trends and processes as well as have updated knowledge about database management systems and IT initiatives. The individual should have fast and accurate typing/data encoding. This job involves working in a personal computer, and appropriate software to enter accurate data regarding different issues like retrieving data from a computer or to a computer

COURSE OBJECTIVES:

In this course, students will be introduced to advanced concepts of digital documentation, spreadsheets, database management, and workplace safety, enhancing both technical and soft skills. The course aims to develop effective communication skills, including active listening, speaking, and presentation abilities, while fostering self-management through time management, goal setting, and stress management techniques. Students will gain proficiency in Information and Communication Technology (ICT), ensuring safe and ethical use of digital tools. The course also focuses on nurturing an entrepreneurial mindset, critical thinking, and innovation skills, along with a strong understanding of sustainable practices and environmental conservation. Learners will master advanced document creation, data analysis, and automation techniques using LibreOffice tools and develop competency in designing and managing databases. Emphasis is placed on maintaining a safe and secure work environment by understanding health, safety, and emergency protocols, thus preparing students for professional and personal growth in diverse environments.

LEARNING OUTCOMES:

In this course, the students will be introduced to the advanced concepts of digital documentation, digital spreadsheet, database management and internet security. The objectives of this course are to :

- Develop effective verbal and non-verbal communication skills, active listening, speaking, and presentation skills. Understand the importance of feedback and improve interpersonal communication.
- Enhance self-awareness, self-regulation, and self-motivation. Learn time management, goal setting, and stress management techniques. Cultivate personal and professional growth mindsets.
- Understand the basics of Information and Communication Technology (ICT). Gain

proficiency in using digital tools and platforms for communication and productivity. Learn safe, responsible, and ethical use of ICT resources.

- Develop an entrepreneurial mindset and understanding of business fundamentals. Learn problem-solving, critical thinking, and innovation techniques. Understand financial literacy and risk management in business.
- Understand the importance of sustainable practices and environmental conservation. Learn about the green economy and green jobs. Promote sustainable development and eco-friendly initiatives.
- Master advanced document creation, formatting, and management skills. Learn to use templates, styles, tables, and images effectively. Understand document collaboration and review features.
- Learn advanced data analysis using Scenarios and Goal Seek, automate tasks with macros, and manage linked data across spreadsheets. Gain skills in securely sharing and reviewing spreadsheets for effective collaboration and feedback.
- Learn to design, create, and manage databases. Understand data querying, reporting, and relational database concepts. Develop skills in creating forms, reports, and managing data integrity.
- Understand workplace safety, health, and security protocols. Learn hazard identification, risk assessment, and emergency response planning. Promote a culture of health, safety, and well-being at the workplace.

These objectives are designed to provide comprehensive skills that enhance employability, personal development, and workplace readiness.

SALIENT FEATURES:

This course equips students with essential skills for a Data Entry Operator role by focusing on advanced digital documentation, spreadsheet management, and database handling using LibreOffice tools. It enhances accuracy, speed, and data management capabilities while improving communication and ICT skills for efficient workplace interaction. The course promotes responsible digital practices, problem-solving, and critical thinking, ensuring readiness for data-centric tasks. Additionally, it emphasizes workplace safety, teaching health, safety, and emergency management protocols, essential for maintaining a secure and productive work environment.

SCHEME OF UNITS

Total Marks: 100 (Theory-50+Practical-50)

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class X opting for skill subject along with other subjects.

The unit-wise distribution of hours and marks for class X is as follows:

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CLASS – X (SESSION 2026-2027)

	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical	
PART A	Employability Skills				
	Unit 1: Communication Skills-II	10		2	
	Unit 2: Self-Management Skills-II	10		3	
	Unit 3: ICT Skills-II	10		1	
	Unit 4: Entrepreneurial Skills-II	15		3	
	Unit 5: Green Skills-II	05		1	
	Total	50		10	
PART B	SUBJECT SPECIFIC SKILLS		Theory	Practical	Marks
	Unit 1: Digital Documentation (Advanced) using LibreOffice Writer	12	18		8
	Unit 2: Electronic Spreadsheet (Advanced) using LibreOffice Calc	15	23		10
	Unit 3: Database Management System using LibreOffice Base	18	27		12
	Unit 4: Maintain Healthy, Safe and Secure Working Environment	15	22		10
	Total	60	90		40
	PART C	PRACTICAL WORK			
Practical Examination					
• Digital Documentation (Advanced) using LibreOffice Writer		5 Marks			20
• Electronic Spreadsheet (Advanced) using LibreOffice Calc		5 Marks			
• Database Management System using LibreOffice Base		10 Marks			
• Viva Voce		10 Marks			
Total					30
PART D	PROJECT WORK/FIELD VISIT: Any Interdisciplinary Real World Case Study to be taken. Summarized data reports of same can be presented in base. Input should be taken using forms and output should be done using reports using base. Documentation of the case study should be presented using writer.				10
	PORTFOLIO/PRACTICAL FILE: (Portfolio should contain printouts of the practical done using Writer, Calc and Base with minimum 5 problems of each)				10
	Total				20
	GRAND TOTAL		200		

DETAILED CURRICULUM/ TOPICS:

Part-A: EMPLOYABILITY SKILLS

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-II	10
2.	Unit 2: Self-management Skills-II	10
3.	Unit 3: Information and Communication Technology Skills-I	10
4.	Unit 4: Entrepreneurial Skills-II	15
5.	Unit 5: Green Skills-II	05
	TOTA	50

Note: The detailed curriculum/ topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

Part-B – SUBJECT SPECIFIC SKILLS

- Unit 1: Digital Documentation (Advanced)
- Unit 2: Electronic Spreadsheet (Advanced)
- Unit 3: Database Management System
- Unit 4: Web Applications and Security

Unit 1: Digital Documentation (Advanced) using LibreOffice Writer

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
Chapter 1: Introduction To Styles	Learn to create, update, and apply various styles in Libre Office Writer for effective and consistent document formatting.	<ul style="list-style-type: none">• Styles/ categories in Writer<ul style="list-style-type: none">➤ Page➤ Paragraph➤ Character➤ Frame➤ List➤ Table• Styles and Formatting• Fill Format• Creating a new style<ul style="list-style-type: none">➤ From Selection method➤ Drag and Drop method• Updating a new style• Load style from template or document.• Applying styles.	<ul style="list-style-type: none">• List Style Categories: Open the Styles and Formatting window, list available style categories, and select one style from each.• Use Fill Format: Apply a style to multiple areas of your document quickly using the Fill Format tool.• Create and Update a New Style: Create a new style from selected text and update it by modifying its attributes.• Load a Style from a Template or Document: Import and apply a style from a template or another document to your current work.• Create a New Style Using Drag-and-Drop:

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
<p>Chapter 2: Working with Images</p>	<p>Able to insert, modify, and position images and drawing objects in a document, using various methods and options for effective document layout and formatting.</p>	<ul style="list-style-type: none"> • Inserting an Image in a Document <ul style="list-style-type: none"> ➤ Insert Image Option ➤ Drag and Drop option ➤ Copy and Paste method ➤ Inserting an image by linking • Options to modify image using image toolbar, resize, crop and delete an image. • Drawing Objects • Creating drawing objects • Setting or changing its properties. • Resizing and grouping drawing objects. • Positioning image in the text. • Arrangement • Anchoring • Alignment • Text Wrapping 	<p>Create a new style by dragging and dropping formatted text into the Styles and Formatting panel.</p> <ul style="list-style-type: none"> • Insert an Image: Insert an image into a document using options such as Insert Image, Drag and Drop, Copy and Paste, and linking. • Modify an Image: Use the image toolbar to modify an image by resizing, cropping, and deleting it. • Create Drawing Objects: Create various drawing objects within your document. • Set or Change Drawing Object Properties: Adjust the properties of drawing objects, including color, line style, and fill. • Resize and Group Drawing Objects: Resize individual drawing objects and group multiple objects together for better document organization. • Position the Image in the Text: Adjust the image's position in the text using arrangement, anchoring, alignment, and text wrapping options.
<p>Chapter 3: Advanced Features of Writer</p>	<p>Acquire skills in creating, customizing, and managing a Table of Contents, using and editing templates, and tracking and reviewing changes in</p>	<ul style="list-style-type: none"> • Table of contents • Hierarchy of headings • Creating a Table of Content (ToC) • Customization of Table Contents(ToC) • Maintaining a Table of Contents(ToC) 	<ul style="list-style-type: none"> • Create a Table of Contents (ToC): Generate and customize a Table of Contents in a document. • Maintain a Table of Contents: Update or delete the Table of Contents • Use Templates: Create,

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
	documents effectively.	<ul style="list-style-type: none"> • Updating ToC • Deleting ToC • Using templates • Creating a Template • Using In-built/Saved Templates • Using Online Templates • Importing a Template • Editing a Template • Moving a Template • Exporting a Template • Applying Templates to a Blank Document • Track Changes Feature • Preparing a Document for Review • Recording Changes • Accepting and Rejecting Changes • Adding Comments • Deleting Comments • Comparing Documents 	<p>import, and apply templates to a blank document, using in-built, saved, or online templates.</p> <ul style="list-style-type: none"> • Edit a Template: Modify, move, and export an existing template. • Track Changes: Prepare a document for review by recording, accepting, or rejecting changes, and manage comments by adding or deleting them. • Compare Documents: Compare two versions of a document to identify and review differences.

Unit 2: Electronic Spreadsheet (Advanced) using LibreOffice Calc

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
Chapter 4: Analyse data using scenarios and goal seek	Learn skills in consolidating data, using groups and subtotals, performing what-if analysis and scenarios, and utilizing the Goal Seek tool for decision-making.	<ul style="list-style-type: none"> • Consolidating Data • Groups and Subtotals • What-if Scenarios • What-if Analysis Tool • Goal Seek 	<ul style="list-style-type: none"> • Use Consolidating Data: Aggregate data from multiple sources into a single summary. • Create Subtotals: Apply subtotals to data groups to summarize and analyze information. • Use “What-If” Scenarios: Create and analyze different scenarios to forecast outcomes based on varying inputs. • Use “What-If” Tools: Use tools like Scenario Manager for detailed what-if analyses. • Use Goal Seek and Solver: Use Goal Seek to find specific input values needed to achieve a

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
<p>Chapter 5: Using Macros in Spreadsheet</p>	<p>Develop skills in recording, running, creating, and organizing macros, and using them as functions for document automation.</p>	<ul style="list-style-type: none"> • Recording a Macro • Running a Macro • Creating and Organising a Simple Macro • Macro as a Function 	<p>desired result, and apply Solver for more complex problems.</p> <ul style="list-style-type: none"> • Demonstrate the Use of a Macro Recorder: Record a macro to automate repetitive tasks. • Create a Simple Macro: Develop a basic macro to perform a specific function. • Use a Macro: Execute an existing macro to automate tasks in a document. • Pass Arguments to a Macro: Provide arguments to a macro to customize its behavior. • Pass the Arguments as Values: Supply values as arguments to a macro for dynamic operation. • Write Macros as Built-in Functions: Create macros that function similarly to built-in functions for enhanced functionality. • Access Cells Directly: Write macros to directly manipulate cell data in spreadsheets. • Sort Columns Using a Macro: Develop and use a macro to sort columns in a spreadsheet.
<p>Chapter 6: Linking Spreadsheet Data</p>	<p>Learn to set up multiple sheets, create references and hyperlinks within and across documents, and link to external and registered data sources.</p>	<ul style="list-style-type: none"> • Setting up multiple sheets. • Creating reference to other sheets by using keyboard and mouse. • Creating reference to another document by using keyboard and mouse. • Hyperlinks to the Sheet • Relative and Absolute Hyperlinks • Creating Hyperlinks 	<ul style="list-style-type: none"> • Setup Multiple Sheets: Insert and organize new sheets within a workbook. • Create References to Other Sheets: Use keyboard and mouse to create references between different sheets in a workbook. • Create References to Other Documents: Use keyboard and mouse to link data from one document to another. • Create, Edit, and Remove Hyperlinks: Add, modify, and delete hyperlinks to sheets within a workbook. • Link to External Data: Connect and import data from external sources into your document. • Link to Registered Data Sources: Establish links to registered data sources for data integration.

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> • Editing a Hyperlink • Linking to External Data • Linking to Registered Data Sources 	
<p>Chapter 7: Share and Review a Spreadsheet</p>	<p>Develop the ability to share, open, and save shared spreadsheets, track and review changes, and handle comments and merging for effective collaboration.</p>	<ul style="list-style-type: none"> • Sharing Spreadsheet • Opening and saving a shared spreadsheet. • Recording changes. • Add, Edit and Format the comments. • Reviewing Changes – View, Accept or Reject Changes • Merging and comparing. 	<ul style="list-style-type: none"> • Set Up a Spreadsheet for Sharing: Configure a spreadsheet to enable sharing with others. • Open and Save a Shared Spreadsheet: Access and save changes to a spreadsheet that has been shared with you. • Record Changes: Track modifications made to the spreadsheet. • Add, Edit, and Format Comments: Insert, modify, and format comments within the spreadsheet. • Review Changes: View, accept, or reject changes made by others in the shared spreadsheet. • Merge and Compare Sheets: Combine and compare different sheets to integrate data effectively.

Unit 3: Database Management System using LibreOffice Base

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
<p>Chapter 8: Introduction to Database Management System</p>	<p>Understand data and information concepts, the advantages of databases, various data models and key terminology and objects of relational database systems.</p>	<ul style="list-style-type: none"> • Data and Information • Databases and DBMS • Advantages of database, • Data Models <ul style="list-style-type: none"> ➤ Hierarchical Data Model ➤ Network Data Model ➤ Relational Data Model • Relational database Model <ul style="list-style-type: none"> ➤ RDBS Terminology ➤ Objects of an RDBMS 	<ul style="list-style-type: none"> • Identify Data and Information: Distinguish between data and information within a database context. • Identify Fields, Records, and Tables: Recognize and describe fields, records, and tables in a database. • Prepare a Sample Table: Create a sample table with standard fields to illustrate database structure. • Identify Different Types of Data Models: Identify and describe various data models such as hierarchical, network, and relational. • Different Types of Keys: Recognize and explain different types of keys used in databases, such as primary and foreign keys. • Identify Different Objects of RDBMS: Identify and describe different objects in a relational database management system (RDBMS), including tables, queries, and forms.
<p>Chapter 9: Starting with LibreOffice Base</p>	<p>Learn to navigate LibreOffice Base, manage data types, create and save tables using various methods, set primary keys, and perform data entry, editing, sorting, and record deletion.</p>	<ul style="list-style-type: none"> • Introduction to LibreOffice Base • Data types • Starting with LibreOffice • User Interface Of LibreOffice Base • Opening a Database • Creating a Table <ul style="list-style-type: none"> ➤ Using a Wizard ➤ Using design view, • Setting primary key • Saving a Table 	<ul style="list-style-type: none"> • Start LibreOffice Base and Observe the Main Window: Launch LibreOffice Base and familiarize yourself with the main window's components. • Create a Sample Table Using Wizard: Use the wizard to create a sample table in any category. • Create Different Tables from Available List: Practice creating various tables by selecting fields from the available options. • Assign Data Types and Set Primary Key: Define data types for fields and set a primary key for the table. • Edit the Table in Design View: Modify the table structure using the design view. • Enter Data in the Fields: Input

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> • Entering data into table • Navigating through the table • Editing Data • Deleting Records from Table • Sorting Data in the Table 	<p>data into the fields of your table.</p> <ul style="list-style-type: none"> • Delete Records from Table: Remove records from the table as needed. • Arrange Data in Ascending or Descending Order: Sort the table data in ascending or descending order
<p>Chapter 10: Working with Multiple Tables</p>	<p>Develop skills in editing and deleting tables, creating and managing table relationships, and ensuring referential integrity.</p>	<ul style="list-style-type: none"> • Editing and Deleting tables, • Relationships between tables • Types of Relationships—one to one, one to many, many to many • Advantages of Relating Tables in a Database • Creating Relationships between Tables • Referential Integrity 	<ul style="list-style-type: none"> • Insert Data in the Table: Add new data entries to a table. • Edit Records in the Table: Modify existing records within the table. • Delete Records from Table: Remove specific records from the table. • Sort Data in the Table: Arrange data in ascending or descending order within the table. • Create and Edit Relationships: Establish and modify relationships between tables, including one-to-one, one-to-many, and many-to-many. • Enter Various Field Properties: Set and adjust different properties for fields in the table.
<p>Chapter 11: Queries in Base</p>	<p>Acquire skills in creating and editing queries using both wizards and design view, and working with numerical data in queries.</p>	<ul style="list-style-type: none"> • Queries • Query creation using wizard • Creation of query using design view • Editing a query, • Working with Numerical Data 	<ul style="list-style-type: none"> • Prepare a Query for Given Criteria: Create a query based on specified criteria. • Create a Query Using Wizard and Design View: Demonstrate how to generate a query using both the wizard and design view. • Edit a Query: Modify an existing query to update its criteria or structure. • Apply Various Criteria in a Query: Demonstrate applying different criteria in a query, including single field, multiple fields, and wildcard searches. • Perform Calculations Using Query in Base: Execute

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
			calculations within a query in LibreOffice Base.
Chapter 12: Forms and Reports	Able to create and modify forms and reports in LibreOffice Base, use the Form Controls Toolbar, and insert additional controls, titles, headings, and date/time elements in reports.	<ul style="list-style-type: none"> Forms in BASE. Creating form using wizard, Modifying a Form Form Controls Toolbar Report in Base Inserting other controls in report Inserting Titles & Headings Inserting Date & Time 	<ul style="list-style-type: none"> Create a Form Using Form Wizard: Generate a form by following the steps in the Form Wizard. Enter or Remove Data from Forms: Input new data or delete existing data using forms. Modify Forms: Demonstrate how to adjust and customize forms. Change Label and Background: Modify the label text and background color or design of a form. Search Records Using a Form: Use the form to find specific records based on search criteria. Insert and Delete Records Using Form View: Add new records or remove existing ones through the Form View. Create a Report Using Report Wizard: Illustrate the steps to generate a report using the Report Wizard. Demonstrate Various Report Examples: Provide examples of different types of reports created using the Report Wizard.

Unit 4: Maintain Healthy, Safe and Secure Working Environment

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
Chapter 13. Health, Safety and Security at Workplace	Understand workplace health, safety, and security policies, identify various hazards, and learn how to manage risks and maintain a safe working environment.	<ul style="list-style-type: none"> Introduction to Health, Safety, and Security At Workplace Policies and Procedures for Healthy, Safety and Security Reasons for Health, Safety, and Security Programs or Policies in the Workplace Workplace Safety Hazards Physical Hazards Falling Off Heights, Slipping and Tripping Electrical Hazards Fire Hazards Health Hazards 	<ul style="list-style-type: none"> Practice Basic Safety Rules: Implement fire safety measures, prevent falls and slips, ensure electrical safety, and apply first aid procedures to protect workers and prevent accidents.

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> • Potential Sources of Hazards in an Organisation • Hazards using Computers • Handling Office Equipment • Handling Objects • Stress at Work • Working Environment • Hazard Control • Safety Guidelines Checklist 	
<p>Chapter 14. Workplace Quality Measures</p>	<p>Learn about air and water quality monitoring, office ergonomics, health and safety guidelines for computer use, and methods to reduce risks associated with musculoskeletal problems and other work-related issues.</p>	<ul style="list-style-type: none"> • Introduction • Air and Water Quality Monitoring Process • Guidelines for Clean Air and Clean Water • Importance of Cleanliness at Workplace • Office Ergonomics • Computer Health and Safety Tips • Musculoskeletal Problems: Occupational Overuse Syndrome, Strain in Legs and Feet, Eye Strain, • To reduce the risks of visual problems: Headaches, Obesity, Stress Disorders, Injuries from Laptop Use, Sleeping Problems • Health and Safety Requirements for Computer Workplace • Cautions while Working on the Computer 	<ul style="list-style-type: none"> • Illustrate Handling Accidents at Workplace: Demonstrate the steps to manage and respond to accidents in the workplace. • Demonstrate Following Evacuation Plan: Show how to effectively follow the evacuation plan and procedures during an emergency.
<p>Chapter 15. Prevent Accidents and Emergencies</p>	<p>Able to identify and handle accidents and emergencies, follow company policies, manage different types of accidents and emergencies, and apply fire safety and first aid procedures effectively.</p>	<ul style="list-style-type: none"> • Accident and Emergencies: <ul style="list-style-type: none"> ➤ Notice and Correctly Identify Accidents and Emergencies ➤ Get help Promptly and in the Most Suitable Way ➤ Follow Company Policies and Procedures for Preventing Further Injury While Waiting for Help to Arrive ➤ Act within the Limits of your Responsibility and Authority when Accidents and Emergencies Arise, ➤ Promptly Follow Instructions given by Senior Staff and the Emergency Services 	<ul style="list-style-type: none"> • Identify Hazards and Sources of Hazards: Recognize potential hazards and their sources in the workplace. • Identify Problems at Workplace: Assess workplace issues that could lead to accidents. • Practice General Evacuation Procedures: Execute evacuation

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> • Types of Accidents <ul style="list-style-type: none"> ➤ Trip and Fall ➤ Slip and Fall ➤ Injuries caused due to Escalators or Elevators (or lifts) ➤ Accidents due to Falling of Goods ➤ Accidents due to Moving Objects • Handling Accidents: <ul style="list-style-type: none"> ➤ Attend to the Injured Person Immediately, ➤ Inform your Supervisor ➤ Assist your Supervisor • Types of Emergencies <ul style="list-style-type: none"> ➤ First Aid, ➤ Electrical Safety ➤ Evacuation • General Evacuation Procedures • Fire Hazards in the Workplace • Fire Prevention • Identification of Material and Ignition Sources • First Aid for Electrical Emergencies • Electrical Rescue Techniques 	<p>procedures in simulated emergency situations.</p>

ORGANISATION OF FIELD VISITS:

In a year, at least 3 field visits/educational tours should be organised for the students to expose them to the activities in the workplace.

Visit a data entry centre and observe the following: Location, Site, Office building, Computer Systems, Tools and Equipment, Printer, Scanner. During the visit, students should obtain the following information from the owner or the supervisor of the Data Centre:

1. Data Entry Centre.
2. Computer Infrastructure.
3. Sitting Posture of data entry operators.
4. Assistive technology.
5. Man power engaged.
6. Total expenditure of Data Entry Centre.
7. Total annual income.
8. Profit/Loss (Annual).
9. Any other information.

LIST OF EQUIPMENT/ MATERIALS:

The list given below is suggestive and an exhaustive list should be compiled from the feedback given by various by the teachers teaching the subject. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

S. No.	ITEM NAME, DESCRIPTION & SPECIFICATION	QUANTITY
A	HARDWARE	
1.	Computer with latest configuration or minimum Pentium Processor with minimum 2GB RAM, 512 GB HDD, 17" LED Monitor, NIC Card 3 button Mouse, 105 keys key board and built-in speakers and mic.	15
2.	Laser Printer - Black	01
3.	Inkjet Printers (Colour and Black & White)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 Port Switches	01
7.	Air Conditioner 1.5 tonne	02
8.	Telephone line (For Internet)	01
9.	Fire extinguisher	01
B	SOFTWARE	
1.	Operating System Linux and Windows	
2.	Anti-Virus Latest version	
3.	Productivity Suite, Example – Open Office, etc.	
C	FURNITURE	
1.	Class room chairs and desks	25
2.	Computer Tables	15
3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer Tables	02
5.	Trainers Table	01
6.	Trainers Chair	01
7.	Steel cupboards drawer type	02
8.	Cabinet with drawer	01
9.	Steel Almira - big size	01
10.	Steel Almira- small size	01

TEACHER'S/ TRAINER'S QUALIFICATIONS:

Qualification and other requirements for appointment of teachers/trainers for teaching this subject, on contractual basis should be decided by the State/ UT. The suggestive qualifications and minimum competencies for the teacher should be as follows:

Qualification	Minimum Competencies	Age Limit
Diploma in Computer Science/ Information Technology OR Bachelor Degree in Computer Application/ Science/ Information Technology (BCA, B. Sc. Computer Science/ Information Technology) OR Graduate with PGDCA OR DOEACC A Level Certificate. The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.	<ul style="list-style-type: none">• The candidate should have a minimum of 1 year of work experience in the same job role.• S/He should be able to communicate in English and local language.• S/He should have knowledge of equipment, tools, material, Safety, Health & Hygiene.	<ul style="list-style-type: none">• 18-37 years (as on Jan. 01 (year))• Age relaxation to be provided as per Govt. rules

Teachers/Trainers form the backbone of Skill (Vocational) Education being imparted as an integral part of Rashtriya Madhyamik Shiksha *Abhiyan* (RMSA). They are directly involved in teaching of Skill (vocational) subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Teachers/Trainers, Educational Qualifications, Industry Experience and Certification/ Accreditation.

The State may engage Teachers/Trainers in schools approved under the component of scheme of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

- (i) Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC).

OR

- (ii) Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

** The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organizations involved in education and training must meet in order to be accredited by competent bodies to provide government- funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.*

The educational qualifications required for being a Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers/ trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which S/he will be teaching. Copies of relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Teachers/Trainers, the State should ensure that a standardized procedure for selection of (Vocational) Teachers/Trainers is followed. The selection procedure should consist of the following:

- (i) Written test for the technical/domain specific knowledge related to the sector;
- (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and
- (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Head Master/Principal of the school where the scheme is being implemented should facilitate and ensure that the (Vocational) Teachers/Trainers:

- Prepare session plans and deliver sessions which have a clear and relevant purpose and which engage the students;
- Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
- Make effective use of learning aids and ICT tools during the classroom sessions;
- Engage students in learning activities, which include a mix of different methodologies, such as project based work, team work, practical and simulation based learning experiences;
- Work with the institution's management to organise skill demonstrations, site visits, on job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
- Identify the weaknesses of students and assist them in up-gradation of competency;
- Cater to different learning styles and level of ability of students;
- Assess the learning needs and abilities, when working with students with different abilities
- Identify any additional support the student may need and help to make special arrangements for that support;
- Provide placement assistance

Assessment and evaluation of (Vocational) Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the (Vocational) Teachers/Trainers is appraised annually. Performance

based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the (Vocational) Teachers/Trainers.

Following parameters may be considered during the appraisal process:

- Participation in guidance and counseling activities conducted at Institutional, District and State level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National and International level;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organisation of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services.

CAREER OPPORTUNITIES:

The job of a data entry operator/ analyst is to work for a wide variety of public and private organisations. A data entry operator/analyst is responsible to input data in a quick and efficient manner, create data storage and should possess knowledge about the methods for recovering useful data when needed, organizing and analyzing data in a clear and effective way, navigating computer and database systems proficiently, editing and preparing reports based on the information they have put into the system. They also help the organisations to keep up with recording and analyzing the abundance of information received on a daily basis.

Some of the top sectors that require a data entry operator/analyst are listed below:

- Banks and Public Sector
- Marketing Companies
- Accounting Companies
- Human Resources
- Corporate Businesses
- MNCs
- Study Centers
- Schools and Universities
- Hospitals or Healthcare Service Providers
- Insurance Firms
- Small-scale Businesses

VERTICAL MOBILITY

- Students can pursue Polytechnic/Diploma/Certificate courses in IT fields.
- Can work as DEO
- Data Entry/Analysis work from home for different companies

ENGLISH LANGUAGE AND LITERATURE
Subject Code-184
Classes-X (2026-27)

Marks-80

Sections	Competencies	Total marks
Reading Comprehension	Conceptual understanding, decoding, analyzing, inferring, interpreting and vocabulary	20
Writing Skills and Grammar	Creative expression of an opinion, reasoning, justifying, illustrating, appropriate style and tone, using appropriate format and fluency. Applying conventions, using integrated structures with accuracy and fluency	20
Language through Literature	Recalling, reasoning, appreciating, applying literary conventions, illustrating and justifying. Extract relevant information, identifying the central theme and sub-theme, understanding the writers' message and writing fluently.	40
Total		80

For the details of Internal Assessment of 20 marks, please refer to the circular no. Acad-11/2019, dated March 06, 2019.

**ENGLISH LANGUAGE AND LITERATURE
CLASS-X (2025-26)**

SECTION - WISE WEIGHTAGE

Sections		Weightage
A	Reading Skills	20 Marks
B	Writing Skills with Grammar	20 Marks
C	Language through Literature	40 Marks

Section A

Reading Skills

- I. Reading Comprehension through Unseen Passage** **20 Marks**
1. Discursive passage of 400-450 words. **10 marks**
 2. Case-based factual passage (with visual input- statistical data, chart etc.) of 200-250 words. **10 marks**

(Total length of two passages to be 600-700 words)

Multiple Choice Questions / Objective Type Questions, and Short Answer Questions (to be answered in 30-40 words) will be asked to assess comprehension, interpretation, analysis, inference, evaluation and vocabulary.

Section B

Writing Skills and Grammar

- II Grammar** **10 Marks**

- Determiners
- Tenses
- Modals
- Subject – verb concord
- Reported speech
 - Commands and requests
 - Statements
 - Questions

3. The courses at the secondary level seek to cement high professional grasp of grammatical items and levels of accuracy. Accurate use of spelling, punctuation and grammar in context will be assessed through Gap Filling/ Editing/Transformation exercises. Ten out of 12 questions will have to be attempted.

III. Writing Skills

10 marks

4. Writing a Formal Letter based on a given situation, in 100-120 words. One out of two questions is to be answered. **5 marks**
5. Writing an Analytical Paragraph in 100-120 words on a given Map/ Chart/ Graph/Cue/s. One out of two questions is to be answered. **5 marks**

Section C

40 Marks

Language through Literature

IV. Reference to the Context

5+5=10 Marks

6. One extract out of two from Drama / Prose.
7. One extract out of two from poetry.

Multiple Choice Questions / Objective Type Questions Very Short Answer Questions (one word/One sentence), Short Answer Questions (to be answered in 30-40 words) will be asked to assess inference, analysis, interpretation, evaluation and vocabulary.

V. Short & Very Long Answer Questions

30 Marks

8. Four out of Five Short Answer Type Questions to be answered in 40-50 words from the book FIRST FLIGHT to assess interpretation, analysis, inference and evaluation. **4x3=12 marks**
9. Two out of Three Short Answer Type Questions to be answered in 40-50 words each from FOOTPRINTS WITHOUT FEET to assess interpretation, analysis, inference and evaluation. **2x3=6 marks**
10. One out of two Long Answer Type Questions from FIRST FLIGHT to be answered in about 100-120 words each to assess creativity, imagination and extrapolation beyond the text and across the text. This can be a passage-based question taken from a situation/plot from the text. **6 marks**
11. One out of two Long Answer Type Questions from FOOTPRINTS WITHOUT FEET, on theme or plot involving interpretation, extrapolation beyond the text and inference or character sketch to be answered in about 100-120 words. **6 marks**

Prescribed Books: Published by NCERT, New Delhi

1. FIRST FLIGHT

A. Prose

1. A Letter to God
2. Nelson Mandela - Long Walk to Freedom
3. Stories About Flying
4. From the Diary of Anne Frank
5. Glimpses of India
6. Mijbil the Otter
7. Madam Rides the Bus
8. The Sermon at Benares
9. The Proposal (Play)

B. Poems

1. Dust of Snow
2. Fire and Ice
3. A Tiger in the Zoo
4. How to Tell Wild Animals
5. The Ball Poem
6. Amanda!
7. The Trees
8. Fog
9. The Tale of Custard the Dragon
10. For Anne Gregory

2. FOOTPRINTS WITHOUT FEET

1. A Triumph of Surgery
2. The Thief's Story
3. The Midnight Visitor
4. A Question of Trust
5. Footprints Without Feet
6. The Making of a Scientist
7. The Necklace
8. Bholi
9. The Book that Saved the Earth

3. WORDS AND EXPRESSIONS – II (WORKBOOK FOR CLASS X) – Units 1 to 4 and Units 7 to 11

Note: Teachers are suggested to:

- (i) encourage interaction among peers, students and teachers through activities such as role play, discussions, group work etc.
- (ii) reduce teacher-talking time and keep it to the minimum,
- (iii) take up questions for discussion to encourage pupils to participate and to marshal their ideas and express and defend their views, and
- (iv) follow the Speaking and Listening activities given in the NCERT books.

Besides measuring learning outcome, texts serve the dual purpose of diagnosing mistakes and areas of non-learning. To make evaluation a true index of learners' knowledge, each language skills to be assessed through a judicious mixture of different types of questions.

INTERNAL ASSESSMENT

Listening and Speaking Competencies

Assessment of Listening and Speaking Skills will be for 05 marks.

It is recommended that listening and speaking skills should be regularly practiced. Art-integrated projects based on activities like Role Play, Skit, Dramatization etc. must be used. Please refer to the Circular no. Acad-33/2020 dated 14th May 2020 http://cbseacademic.nic.in/web_material/Circulars/2020/33_Circular_2020.pdf

Guidelines for the Assessment of Listening and Speaking Skills are given at Annexure I.

ENGLISH LANGUAGE AND LITERATURE

CLASS – X (2026-27)

Marks 80

Sections	Competencies	Total marks
Reading Comprehension	Conceptual understanding, decoding, analyzing, inferring, interpreting and vocabulary	20
Writing Skills and Grammar	Creative expression of an opinion, reasoning, justifying, illustrating, appropriate style and tone, using appropriate format and fluency. Applying conventions, using integrated structures with accuracy and fluency	20
Language through Literature	Recalling, reasoning, appreciating, applying literary conventions illustrating and justifying etc. Extract relevant information, identifying the central theme and sub-theme, understanding the writers' message and writing fluently.	40
Total		80

For the details of Internal Assessment of 20 marks, please refer to the circular no. Acad-11/2019, dated March 06, 2019.

Guidelines for Assessment of Listening and Speaking Skills (ALS)

ALS is a component of the Subject Enrichment Activity under Internal Assessment. ALS must be seen as an integrated component of all four language skills rather than a compartment of two. Suggested activities, therefore, take into consideration an integration of the four language skills but during assessment, emphasis will be given to speaking and listening, since reading and writing are already being assessed in the written exam.

Assessment of Listening and Speaking Skills: (5 Marks)

i. Activities:

- Subject teachers must refer to books prescribed in the syllabus.
- In addition to the above, teachers may plan their own activities and create their own material for assessing the listening and speaking skills.

ii. Parameters for Assessment: The listening and speaking skills are to be assessed on the following parameters:

- a. Interactive competence (Initiation & turn taking, relevance to the topic)
- b. Fluency (cohesion, coherence and speed of delivery)
- c. Pronunciation
- d. Language (grammar and vocabulary)

SUGGESTIVE RUBRIC

	1	2.	3.	4.	5.
Interaction	<ul style="list-style-type: none"> • Contributions are mainly unrelated to those of other speakers • Shows hardly any initiative in the development of conversation • Very limited interaction 	<ul style="list-style-type: none"> • Contributions are often unrelated to those of the other speaker • Generally passive in the development of conversation 	<ul style="list-style-type: none"> • Develops interaction adequately, makes however minimal effort to initiate conversation • Needs constant prompting to take turns 	<ul style="list-style-type: none"> • Interaction is adequately initiated and developed • Takes turn but needs some prompting 	<ul style="list-style-type: none"> • Initiates & logically develops simple conversation on familiar topics • Takes turns appropriately

Fluency & Coherence	<ul style="list-style-type: none"> • Noticeably/ long pauses; rate of speech is slow • Frequent repetition and/or self- correction this is all right in informal conversation • Links only basic sentences; breakdown of coherence evident. 	<ul style="list-style-type: none"> • Usually fluent; produces simple speech fluently, but loses coherence in complex communication • Often hesitates and/or resorts to slow speech • Topics partly developed; not always concluded logically 	<ul style="list-style-type: none"> • Is willing to speak at length, however repetition is noticeable • Hesitates and/or self corrects; occasionally loses coherence • Topics developed, but usually not logically concluded 	<ul style="list-style-type: none"> • Speaks without noticeable effort, with a little repetition • Demonstrates hesitation to find words or use correct grammatical structures and/or self- correction • Topics not fully developed to merit. 	<ul style="list-style-type: none"> • Speaks fluently almost with no repetition & minimal hesitation • Develops topic fully & coherently
Pronunciation	<ul style="list-style-type: none"> • Frequent inaccurate pronunciation • Communication is severely affected 	<ul style="list-style-type: none"> • Frequently unintelligible articulation • Frequent phonological errors • Major communication problems 	<ul style="list-style-type: none"> • Largely correct pronunciation & clear articulation except occasional errors 	<ul style="list-style-type: none"> • Mostly correct pronunciation & clear articulation • Is clearly understood most of the time; very few phonological errors 	<ul style="list-style-type: none"> • Pronounces correctly & articulates clearly • Is always comprehensible • uses appropriate intonation
Vocabulary & Grammar	<ul style="list-style-type: none"> • Demonstrates almost no flexibility, and mostly struggles for appropriate words • Many Grammatical errors impacting communication 	<ul style="list-style-type: none"> • Is able to communicate on some of the topics, with limited vocabulary. • Frequent errors, but self-corrects 	<ul style="list-style-type: none"> • Is able to communicate on most of the topics, with limited vocabulary. A few grammatical errors 	<ul style="list-style-type: none"> • Is able to communicate on most of the topics with appropriate vocabulary • Minor errors that do not hamper communication 	<ul style="list-style-type: none"> • Is able to communicate on most of the topics using a wide range of appropriate vocabulary, using new words and expressions • No grammatical errors

iii. **Schedule:**

- The practice of listening and speaking skills should be done throughout the academic year.
- The final assessment of the skills is to be done as per the convenience and schedule of the school.

Mathematics

Class IX (2026 – 27)

Introduction:

The Mathematics curriculum for the Secondary stage has been redesigned in alignment with the National Education Policy 2020 and the National Curriculum Framework for School Education (NCF – SE) 2023, prioritizing deep conceptual understanding and logical reasoning. The revised syllabus places strong emphasis on developing core mathematical competencies, including problem-solving, visualisation, mathematical modelling, mathematical communication, computational thinking, and data analytics. The syllabus integrate Indian Knowledge System with contemporary mathematical knowledge, highlighting the rich contributions of Indian mathematicians to foster a sense of pride and historical context. A deliberate shift from rote learning to competency-based education ensures that students build deep conceptual understanding and logical reasoning rather than mere procedural fluency. Greater emphasis has been laid on the integration of real-life applications and experiential learning, encouraging students to connect mathematical concepts with everyday situations and cross-disciplinary contexts. Greater emphasis has been laid on competency based learning outcomes encouraging students to connect mathematical concepts with everyday situations and inter-disciplinary contexts. Continuous and holistic assessment through projects, activities, and investigations forms an integral part of the learning process, moving beyond summative examinations.

At the secondary stage, the curriculum focuses on developing essential global mathematical competencies, including mathematical representation through quantities and relations, mathematical modelling and algorithm building, and effective mathematical communication. The study of the number system, algebra, geometry, mensuration, statistics and probability is designed to build a strong foundation for higher education while enhancing functional life skills. The curriculum thus aims to build rich mathematical learning frameworks not only for higher academic pursuits but also for the practical demands of life in a rapidly changing, data-driven world.

Objectives: The broad objectives of teaching Mathematics at the secondary stage are to help the learners to:

- develop logical thinking, critical reasoning, and a structured approach to problem-solving;
- build the ability to recognise, analyse, and solve diverse problems with confidence and adaptability;
- communicate mathematical ideas effectively using appropriate language, symbols, and representations;
- appreciate the beauty, history, and real-life relevance of Mathematics as a discipline;
- connect mathematical concepts to fields such as Science, Technology, Engineering, and Economics;
- engage in both collaborative and independent mathematical exploration and learning;
- develop habits of precision, accuracy, and logical consistency in mathematical work;
- build confidence to explore, experiment, and grow in mathematical understanding without fear of failure.

Curricular Goals (CGs) and Competencies (Cs) from the NCF-SE 2023

CG-1: Understands numbers (natural, whole, integer, rational, irrational, and real), ways of representing numbers, relationships amongst numbers, and number sets.

C-1.1 Develops understanding of numbers, including the set of real numbers and its properties.

CG-2: Builds deductive and inductive logic to prove theorems related to numbers and their relationships (such as '2 is an irrational number', a recursion relation for *Virahanka* numbers, a formula for the sum of the first n square numbers).

C-2.1 Understanding of powers (radical powers) and exponents.

CG-3: Discovers and proves algebraic identities and models real-life situations in the form of equations to solve them.

C-3.1 States and proves remainder theorem, factor theorem, and division algorithm.

C-3.2 Models and solves contextualised problems using equations (for example, simultaneous linear equations in two variables or single polynomial equations), and draws conclusions about a situation being modelled.

C-3.3 Learns Brahmagupta's quadratic formula (in both symbolic and poetic form) and its derivation, and uses it to solve some of the poetic puzzles of Bhaskara as well as modern-day problems.

CG-4: Analyses characteristics and properties of two-dimensional geometric shapes, and develops mathematical arguments to explain geometric relationships.

C-4.1 Describes relationships including congruence of two-dimensional geometric shapes (such as lines, angles, triangles) to make and test conjectures and solve problems.

C-4.2 Proves theorems using Euclid's axioms and postulates for triangles and quadrilaterals, and applies them to solve geometric problems.

C-4.3 Proves theorems about the geometry of a circle, including its chords, subtended angles, inscribed polygons, and area in terms of pi.

C-4.4 Understands the irrationality of pi, the best approximations to be discovered over human history, and the first exact formula (infinite series) for pi given by Madhava.

C-4.5 Specifies locations and describes spatial relationships using coordinate geometry, for example, plotting a pair of linear equations and graphically finding the solution, or finding the area of triangle with given coordinates as vertices.

C-4.6 Understands the definitions of the basic trigonometric functions, their history and motivation (including the introduction of the sin and cos functions by Aryabhata using chords), and their utility across the sciences.

CG-5: Derives and uses formulae to calculate areas of plane figures, surface area, and volumes of solid objects.

C-5.1 Visualises, represents, and calculates the area of a triangle using Heron's formula and its generalisation to cyclic quadrilaterals given by Brahmagupta's formula.

C-5.2 Visualises and uses mathematical thinking to discover formulae to calculate surface areas and volumes of solid objects (cubes, cuboids, spheres, hemispheres, right circular cylinders or cones, and their combinations).

CG-6: Analyses and interprets data using statistical concepts (such as measures of central tendency, standard deviations) and probability.

C-6.1 Applies measures of central tendencies, such as mean, median, and mode.

C-6.2 Applies concepts from probability to solve problems on the likelihood of everyday events.

CG-7: Begins to perceive and appreciate the axiomatic and deductive structure of Mathematics.

C-7.1 Proves mathematical statements and carries out geometric constructions using stated assumptions, axioms, postulates, definitions, and mathematics vocabulary.

C-7.2 Visualises and appreciates geometric proofs for algebraic identities and other 'proofs without words'.

C-7.3 Proves theorems using Euclid's axioms and postulates for angles, triangles, quadrilaterals, circles, area-related theorems for triangles, and parallelograms.

C-7.4 Constructs different geometrical shapes like bisectors of line segments, angles and their bisectors, triangles, and other polygons, satisfying given constraints.

CG-8: Builds skills, such as visualisation, optimisation, representation, and mathematical modelling along with their application in daily life.

C-8.1 Models daily-life phenomena and uses representations, such as graphs, tables, and equations to draw conclusions.

C-8.2 Uses two-dimensional representations of three-dimensional objects to visualise and solve problems, such as those involving surface area and volume.

C-8.3 Employs optimisation strategies to maximise desired quantities (such as area, volume, or other output) under given constraints.

CG-9: Develops computational thinking, i.e., deals with complex problems and is able to break them down into a series of simple problems that can then be solved by suitable procedures/algorithms.

C-9.1 Decomposes a problem into sub-problems.

C-9.2 Describes and analyses a sequence of instructions being followed.

C-9.3 Analyses similarities and differences among problems to make one solution or procedure work for multiple problems.

C-9.4 Engages in algorithmic problem-solving to design such solutions.

CG-10: Knows and appreciates important contributions of mathematicians from India and around the world.

C-10.1 Recognises the important contributions made by mathematicians (Indian and others) in the field of Mathematics (such as the evolution of numbers, geometry, and algebra).

C-10.2 Recognises modern contributions to Mathematics made in both India and abroad, and understands the next frontiers and next major open questions in the field of Mathematics.

CG-11: Explores connections of Mathematics with other subjects.

C-11.1 Applies mathematical knowledge and tools to analyse problems or situations in multiple subjects across Science, Social Science, Visual Arts, Music, Vocational Education, and Sports.

COURSE STRUCTURE CLASS – IX

Units	Unit Name	Chapter Name	Marks
I	Number System	<ul style="list-style-type: none"> Number System 	07
II	Algebra	<ul style="list-style-type: none"> Introduction to Polynomials Sequences and Progressions Exploring Algebraic Identities Linear Equations in Two Variables 	20
III	Coordinate Geometry	<ul style="list-style-type: none"> Coordinate Geometry 	04
IV	Geometry	<ul style="list-style-type: none"> Introduction to Euclid's Geometry: Axioms and Postulates Lines and Angles Triangles – Congruence Theorems 4-gons (Quadrilaterals) Circles 	25
V	Mensuration	<ul style="list-style-type: none"> Area and Perimeter Surface Area and Volume 	14
VI	Statistics and Probability	<ul style="list-style-type: none"> Statistics Introduction to Probability 	10
	Total		80

Chapter Name	Key Concepts	Relevant CGs	Competencies
	Unit 1: Number System		No. of periods : 12
Number System	<ul style="list-style-type: none"> Introduction to rational numbers Representation of rational numbers on the number line Density of rational numbers and its proof Finding rational numbers between any two rational numbers Decimal representation of rational numbers Introduction to irrational numbers Proof of irrationality of $\sqrt{2}$ and $\sqrt{3}$ The square root spiral 	CG-1, C-1.1, CG-9	The student will be able to: <ul style="list-style-type: none"> Understand the concept of a rational number. Represent rational numbers on the number line. Understand the properties of rational numbers. Explain the concept of density of rational numbers. Compute decimal representation of rational numbers. Understand the concept of irrational numbers. Prove the irrationality. Construct the square root spiral. Apply computational thinking to represent rational and irrational

			numbers through algorithms and visual models, generate decimal expansions systematically, and reason about numbers using step-by-step logical procedures.
	UNIT II: ALGEBRA		No. of periods : 66
Introduction to Polynomials	<ul style="list-style-type: none"> Algebraic expressions Definition of a polynomial. Degree of a polynomial Introduction to linear polynomials and applications Exploring linear patterns Modelling linear growth and linear decay Linear relationships Visualising linear relationships Slope and y-intercept of a line $y = ax + b$ 	CG-3, C-3.2, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> Understand the meaning of an algebraic expression. Define a polynomial. Identify the degree, terms and coefficients of terms in a polynomial. Model linear growth and decay using linear polynomials. Explain and identify patterns in linear relationships. Identify the slope and y-intercept of a linear equation in two variables. Graph a linear equation in two variables. Use computational thinking to identify patterns, construct linear expressions, and systematically represent and analyse linear relationships using equations and graphs.
Sequences and Progressions	<ul style="list-style-type: none"> Introduction to sequences Explicit or general rule of a sequence Recursive rule of a sequence Arithmetic Progressions (AP): nth term, visualising an AP, and practical contexts leading to Aps Sum of the first n natural numbers Geometric Progressions (GP): nth term, visualising a GP, and practical contexts leading to GPs Applications of GP in fractals Tower of Hanoi puzzle 	CG-11, C-8.1, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> Understand the concept of a sequence of numbers. Identify the pattern in a sequence and predict the next few terms. Determine the recursive and explicit rules for different sequences. Obtain the terms of sequence given its recursive and explicit rule. Identify Arithmetic Progressions (AP). Determine the nth term of an AP. Visualise an AP graphically. Identify Geometric Progressions (GP). Determine the nth term of a GP. Visualise a GP graphically. Analyse attributes of fractals using GP. Solve the Tower of Hanoi puzzle. Use computational thinking to identify patterns, write step-by-step rules, and model patterns in sequences and progressions.

<p>Exploring Algebraic Identities</p>	<ul style="list-style-type: none"> • Revisiting algebraic identities • Visualising identities using geometrical models • Factorisation of algebraic expressions using identities • More identities and their applications • Visualising factorisation of quadratic expressions through algebra tiles and without using algebra tiles • Finding new identities • Simplifying rational expressions 	<p>CG-7, C-7.2, CG-9</p>	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Visualise algebraic identities using geometric models. • Determine the factors of algebraic expressions using identities. • Interpret factors of quadratic expressions through geometric models. • Find simplified versions of rational expressions. • Use computational thinking strategies, such as decomposition and step-by-step procedures to visualise algebraic identities, factor expressions, and simplify rational expressions.
<p>Linear Equations in Two Variables</p>	<ul style="list-style-type: none"> • Introduction to linear equations in two variables through practical examples • Solution of linear equation in two variables: graphical representation • Slope-intercept form of linear equation in two variables • Drawing graphs of linear equations when x and y assume only certain values • Pair of linear equations in two variables • Graphical method for solving a pair of linear equations in two variables • Nature of solutions: consistency and inconsistency • Algebraic methods of solving a pair of linear equations: substitution and elimination method 	<p>CG-3, C-3.2, C-8.1, CG-9</p>	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Understand the concept of a linear equation in two variables. • Graph a pair of linear equations. • Solve a pair of linear equations graphically. • Solve a pair of linear equations through the methods of substitution and elimination. • Determine the nature of solutions of a pair of linear equations. • Model and solve contextualised problems using a pair of linear equations and draw conclusions. • Model daily-life phenomena using representations, such as graphs, tables, and equations. • Use computational thinking to systematically represent, solve, and interpret pairs of linear equations through graphs, tables, and step-by-step procedures.

		UNIT III: COORDINATE GEOMETRY	No. of periods : 6
Coordinate Geometry	<ul style="list-style-type: none"> • Brief history of coordinate geometry • The 2-D Cartesian coordinate system • Distance between two points in the 2-D plane • Midpoint of the line-segment between two points in the 2-D plane 	CG-4, C-4.5, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Specify locations and the position of one point relative to another point using coordinates. • Represent a floor plan on a grid using coordinates. • Compute the distance between two points using coordinates. • Determine whether three points lie in a straight line using coordinates. • Compute the position of the midpoint of a line segment using coordinates. • Check whether a triangle is right-angled using coordinates. • Apply computational thinking to model situations on the coordinate plane and verify geometric properties through systematic reasoning.
		UNIT IV: GEOMETRY	No. of periods : 69
Introduction to Euclid's Geometry: Axioms and Postulates	<ul style="list-style-type: none"> • History of geometry • Constructing a square with a given side as described in the Baudhayana's Sulbasutras • Discovering Euclid's definitions • Axioms: Axioms of measurement and rules for geometric objects 	CG-7, C-7.1, C-7.3	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Describe how geometry grew from the practical needs ancient civilisations. • Describe contributions of India, Egypt and Greece to the development of geometric ideas. • Understand the role of definitions, axioms, and postulates. • Explain that there are elements of plane geometry (point, line, surface) for which we have an intuitive sense. • State the 5 postulates of Euclidean geometry. • Define parallelism of straight lines. • Explain the construction of a square as given in the Sulbasutras. • Justify simple constructions using the axioms.
Lines and Angles	<ul style="list-style-type: none"> • Rays and angles • Measures of angles • Intersecting lines and angles • Pairs of angles • Theorems and examples on intersecting lines • Theorems and examples on parallel lines 	CG-7, C-7.1, C-7.3, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Explain the notion of an angle. • Explain the notion of a ray. • Explain that angles are formed between two rays with a common starting point. • State that a straight angle equals two right angles and measures 180° while a right angle measures 90°.

			<ul style="list-style-type: none"> • Classify angles as acute, right, obtuse, or reflex. • Define parallelism. • State and apply the linear pair theorem and its converse. • Follow proof by contradiction in geometry. • Prove that vertically opposite angles are equal. • Identify corresponding, alternate, and interior angles. • Explain transitivity of parallelism. • Explain why a triangle must have at least two acute angles; why it cannot have two obtuse angles, or all three angles less than 60° • Apply computational thinking to analyse geometric ideas by breaking constructions into ordered steps, using axioms and postulates as rules, and justifying geometric results through logical step-by-step reasoning.
<p>Triangles: Congruence Theorems</p>	<ul style="list-style-type: none"> • Practical applications of triangles • Proofs of conditions of congruence of triangles • Theorems on triangles • Propositions and their converse • Problems based on applications of theorems on triangles 	<p>CG-4, C 4.1, C-7.3</p>	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Explain that a triangle is rigid, unlike a quadrilateral. • Identify uses of triangle rigidity. • Explain why triangles give strength and stability to structures. • Describe what it means for two triangles to be congruent. • Identify correspondence between the vertices, sides, and angles of two congruent triangles. • Use the SAS congruence axiom. • Use the SSS congruence condition. • Use the ASA congruence condition. • Use the RHS congruence condition. • Use the AAS congruence condition. • Prove the basic properties of isosceles triangles. • Explain the notion of a proposition. • Explain the notion of converse of a proposition. • Identify the converse of a given proposition. • Explain that not all converses are true; use counter examples to show that some converses are false. • Explain why SSA is not, in general, a valid congruence condition.

			<ul style="list-style-type: none"> • Identify the situations where SSA is a valid congruence condition. • Justify the role of diagram accuracy.
4-gons (Quadrilaterals)	<ul style="list-style-type: none"> • Properties of parallelograms • Important theorems related to parallelograms and their proof • Midpoint theorem and its applications • Understanding the notion of central symmetry in the context of parallelograms 	CG-4, C-4.2, C-7.3	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Frame a precise definition of a 4-gon. • Prove various characterisations of a parallelogram. • Prove the midpoint theorem. • Prove a converse of the midpoint theorem. • Prove that the medians of a triangle are concurrent and each median is divided in the ratio 2:1 at the point of concurrence. • Prove that the 4-gon formed by joining the midpoints of a given 4-gon is a parallelogram. • Find the coordinates of the midpoint of a line segment given its end points and find the coordinates of the fourth vertex of a parallelogram given the other three. • Understand reflection and rotation symmetries of 4-gons. • Understand how any 4-gon can tile a plane. • Practice forming logical converses of statements and asking questions guided by converses of theorems. • Engage in drawing, measurement and paper manipulation activities to discover geometric patterns involving triangles and 4-gons.
Circles	<ul style="list-style-type: none"> • Practical applications and uses of circles • Definitions related to a circle — centre, diameter, and radius • Chords and the angles they subtend • Midpoints and perpendicular bisectors of chords • Distance of chords from the centre • Subtended angles by an arc • Cyclicity of points 	CG-4, C-7.3, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> • State the definition of a circle. • Explain the meanings of the terms 'chord', 'diameter', 'radius', 'arc', 'segment', and 'sector'. • Explain why there exists a unique circle through three non-collinear points. • Construct the circumcircle and circumcentre of a triangle. • Describe the location of the circumcentre for acute, obtuse, and right-angled triangles. • Explain what 'angle subtended by an arc at the centre' means. • Explain why 'equal chords subtend equal angles at the centre'.

			<ul style="list-style-type: none"> • Explain why ‘chords that subtend equal angles at the centre are equal’. • Explain why ‘the line from the centre of a circle to the midpoint of a chord is perpendicular to the chord’. • Explain why ‘a perpendicular from the centre to a chord bisects the chord’. • State the relationship between length of a chord and its distance from the centre of the circle. • Explain why ‘equal chords are equidistant from the centre (and conversely)’. • Explain why ‘among unequal chords, the longer chord is closer to the centre’. • Explain why ‘the diameter is the longest chord’. • Explain why ‘the angle subtended by an arc at the centre is double the angle subtended by the arc at any point on the remaining part of the circle’. • Explain why ‘angles in the same segment of a circle are equal’. • Explain why ‘the angle in a semicircle is a right angle’. • Determine when four given points are concyclic. • Explain why ‘a quadrilateral with supplementary opposite angles is cyclic, and conversely’. • Explain how circular wheels have influenced transport, farming, building, and technology. • Identify cultural motifs involving circles, for example, the Dharmachakra, Ashoka Chakra, Sudarshan Chakra. • Use computational thinking to break down circle-related problems, apply geometric rules step-by-step, and verify properties of figures, such as chords, angles, and cyclic quadrilaterals through systematic reasoning.
	UNIT V: MENSURATION		No. of periods : 27
Mensuration : Area and Perimeter	<ul style="list-style-type: none"> • Perimeter of shapes • Perimeter of a circle: Introduction to Pi and its irrationality • Length of an arc 	CG-5, C-5.1, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Define perimeter as the length around the boundary of any shape. • Explain that the circumference-to-diameter ratio is constant for all circles.

	<ul style="list-style-type: none"> • Area of shapes: rectangles, parallelograms, and triangles • Heron's formula • Squaring a rectangle: Proof from Baudhayana's Sulbasutras • Area of a circle: derivation • Area of the sector of a circle • Brahmagupta's formula for area of a cyclic 4-gon • Heron's formula as a special case of Brahmagupta's formula 		<ul style="list-style-type: none"> • List historical approximations to π (from Archimedes, Aryabhata, and Zu Chongzhi). • Compute the circumference of a circle and the length of an arc. • Apply ideas of circle perimeter and arc-length to real-world contexts. • Explain why a median of a triangle divides it into two triangles of equal area. • Use Heron's formula to compute the area of a triangle from its sides. • Explain the classical problem of 'squaring' a given shape. • Explain how ancient civilisations approximated the area of a circle. • Compute the area of a circle using the formula. • Explain and use the formula for area of a sector of a circle. • Solve problems on areas of sectors and segments of circles. • State Brahmagupta's formula for the area of a cyclic quadrilateral in terms of its sides. • Explain why Heron's formula is a 'special case' of Brahmagupta's formula. • Explain the notion of 'special case' and 'generalisation' in mathematics. • Use computational thinking to break down shapes, apply step-by-step methods to calculate perimeter and area, recognise patterns across formulae, and understand generalisation and special cases in geometry.
<p>Mensuration : Surface Area and Volume</p>	<ul style="list-style-type: none"> • Surface areas and volumes of spheres (including hemispheres) and right circular cones 	<p>CG-5, C-5.1, CG-9</p>	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Recognise cuboids and cubes in real-life situations. • Compute the surface area and volume of a cuboid. • Explain how a cube is a 'special case' of a cuboid. • Describe a right circular cylinder using its radius and height. • Compute the surface area and volume of a cylinder. • Recognise cones in daily life, and describe them using radius and height.

			<ul style="list-style-type: none"> • Compute the surface area and volume of a cone. • Recognise a pyramid, and identify its base and apex. • Compute the surface area and volume of a pyramid. • Recognise spheres in real-life situations. • Compute the surface area and volume of a sphere. • Use computational thinking to systematically calculate, and compare surface areas and volumes of 3-D shapes by varying dimensions and analysing patterns.
	UNIT VI: STATISTICS AND PROBABILITY		No. of periods : 24
Statistics	<ul style="list-style-type: none"> • Graphical representation of data • Measures of central tendency 	CG-6, C-6.1, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Collect, organise, visualise and interpret data to answer a statistical investigative question. • Compute and apply weighted average in different settings. • Read and interpret stacked bar graphs and 100% stacked bar graphs. • Apply computational thinking strategies to analyse real-life data, create appropriate graphical representations, and interpret mean, median and mode for decision-making.
Introduction to Probability	<ul style="list-style-type: none"> • Concept of probability and randomness • The probability scale • Empirical probability: analysing statistical data and performing experiments • Theoretical probability: sample space and events • Representing probability through tree diagrams and tables 	CG-6, C-6.2, CG-9	<p>The student will be able to:</p> <ul style="list-style-type: none"> • Understand the concept of randomness. • Describe the likelihood of an event using the probability scale. • Estimate the empirical probability of the occurrence of an event by analysing statistical data. • Define theoretical probability of an event. • Apply the definition of theoretical probability to compute the probability of an event. • Compute probability of events with the help of tree diagrams and tables. • Use computational thinking strategies, such as pattern recognition and simulation, to model random experiments and estimate probabilities.

MATHEMATICS QUESTION PAPER DESIGN
CLASS – IX (2026-27)

Time: 3 Hrs.

Max. Marks: 80

S. No.	Typology of Questions	Total Marks	% Weightage (approx.)
1	<p>Remembering: Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.</p> <p>Understanding: Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas</p>	43	54
2	<p>Applying: Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.</p>	19	24
3	<p>Analysing: Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations</p> <p>Evaluating: Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.</p> <p>Creating: Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions</p>	18	22
	Total	80	100

INTERNAL ASSESSMENT	20 MARKS
Pen Paper Test and Multiple Assessment (5+5)	10 Marks
Portfolio	05 Marks
Lab Practical (Lab activities to be done from the prescribed books)	05 Marks

Prescribed Books:

1. Mathematics - Textbook for class IX - NCERT Publication
2. Guidelines for Mathematics Laboratory in Schools, class IX - CBSE Publication
3. Laboratory Manual - Mathematics, secondary stage - NCERT Publication
4. Mathematics exemplar problems for class IX, NCERT publication

SUBJECT : PUNJABI

SUBJECT CODE : 004

CLASS – IX (2026-27)

ਲਿਖਤੀ ਪਰੀਖਿਆ - 80 ਅੰਕ

ਆਂਤਰਿਕ ਮੁਲਾਂਕਣ - 20 ਅੰਕ

ਕੁੱਲ ਅੰਕ - 100

ਲਿਖਤੀ ਪਰੀਖਿਆ ਲਈ ਸਮਾਂ 3 ਘੰਟੇ

ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸਿੱਖਣ ਦੇ ਉਦੇਸ਼

ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਕਾਰਜ-ਪ੍ਰਣਾਲੀ ਨੂੰ ਸਮਝ ਕੇ ਉਸ ਦੀ ਢੁਕਵੀਂ ਵਰਤੋਂ ਦੇ ਯੋਗ ਬਣਾਉਣਾ ਤੇ ਸਾਹਿਤ ਦੀਆਂ ਵੱਖ-ਵੱਖ ਵਿਧਾਵਾਂ-ਕਵਿਤਾ, ਇਕਾਂਗੀ, ਕਹਾਣੀ ਅਤੇ ਵਾਰਤਕ ਤੋਂ ਜਾਣੂ ਕਰਾਉਣਾ ਤਾਂ ਕਿ ਵਿਦਿਆਰਥੀ ਭਾਸ਼ਾ ਦੇ ਵੱਖ-ਵੱਖ ਕੌਸ਼ਲਾਂ ਵਿੱਚ ਨਿਪੁੰਨ ਹੋ ਕੇ ਆਪਣੀ ਬਹੁ-ਪੱਖੀ ਪ੍ਰਤਿਭਾ ਦਾ ਵਿਕਾਸ ਕਰ ਸਕਣ। ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸਿੱਖਿਆ ਦਾ ਮੂਲ ਉਦੇਸ਼ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਸਾਹਿਤਕ ਵਿਰਸੇ ਨਾਲ ਜੋੜਨਾ ਹੈ।

1. ਸਲਾਨਾ ਲਿਖਤੀ ਪਰੀਖਿਆ

(Year End Written Exam - 80)

ਇਕਾਈ /ਸਿੱਖਣ ਦਾ ਖੇਤਰ	ਅੰਕ
ਭਾਸ਼ਾ	
(ੳ) ਅਡਵਾਂਸ ਪੜ੍ਹਨ-ਕੌਸ਼ਲ	10
(ਅ) ਵਿਆਕਰਨ	12
(ੲ) ਪ੍ਰਭਾਵਸ਼ਾਲੀ ਲਿਖਣ-ਕੌਸ਼ਲ	18
ਸਾਹਿਤ (ਪਾਠ-ਪੁਸਤਕਾਂ 'ਤੇ ਆਧਾਰਿਤ)	40

2. ਆਂਤਰਿਕ ਮੁਲਾਂਕਣ

(Internal Assessment - 20)

ਕਿਰਿਆਤਮਿਕ ਕੰਮ (Activity/Assignment)	20
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ਪੰਜਾਬੀ—004

IX (ਨੌਵੀਂ)

ਸਲਾਨਾ ਪਰੀਖਿਆ ਲਈ ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਅੰਕ-ਵੰਡ

ਕੁੱਲ ਅੰਕ 80

I. ਪੜ੍ਹਨ-ਕੌਸ਼ਲ (Reading Skill)	10
1. ਅਣਡਿੱਠਾ ਪੈਰਾ (ਵਾਰਤਕ) 200-250 ਸ਼ਬਦਾਂ ਵਿੱਚ (6 ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ)	(6X1)=6
2. ਅਣਡਿੱਠੀ ਕਾਵਿ ਟੁਕੜੀ ਨਾਲ ਸੰਬੰਧਿਤ (ਚਾਰ ਪ੍ਰਸ਼ਨ)	(4X1)=4
II. ਵਿਆਕਰਨ (Grammar) (ਬਹੁ-ਵਿਕਲਪੀ ਅਤੇ ਛੋਟੇ ਪ੍ਰਸ਼ਨ)	12
3. ਵਿਰੋਧੀ ਸ਼ਬਦ (ਬਹੁ-ਵਿਕਲਪੀ ਚੋਣ ਆਧਾਰਿਤ)	2X1=2
4. ਲਿੰਗ (ਬਹੁ-ਵਿਕਲਪੀ ਚੋਣ ਆਧਾਰਿਤ)	2X1=2
5. ਵਿਸਮਿਕ (ਬਹੁ-ਵਿਕਲਪੀ ਚੋਣ ਆਧਾਰਿਤ)	2X1=2
6. ਸ਼ਬਦ ਸ਼ੁੱਧੀ (ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ ਚੋਣ ਆਧਾਰਿਤ)	2X1=2
7. ਕਿਰਿਆ (ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ ਚੋਣ ਆਧਾਰਿਤ)	2X1=2
8. ਮੁਹਾਵਰੇ (ਉ ਤੋਂ ਹ ਤੱਕ) (ਵਾਕਾਂ ਵਿੱਚ ਵਰਤ ਕੇ ਅਰਥ ਸਪਸ਼ਟ ਕਰਨਾ, ਚੋਣ ਆਧਾਰਿਤ)	2X1=2
III. ਪ੍ਰਭਾਵਸ਼ਾਲੀ ਲਿਖਣ-ਕੌਸ਼ਲ (Writing Skill)	18
9. ਲੇਖ-ਰਚਨਾ (ਵਿਚਾਰ-ਪ੍ਰਧਾਨ ਅਤੇ ਆਮ ਵਿਸ਼ੇ) 200 ਸ਼ਬਦ (ਤਿੰਨ ਲੇਖ ਚੋਣ ਆਧਾਰਿਤ—ਨੁਕਤਿਆਂ ਸਹਿਤ)	8
10. ਪੱਤਰ-ਰਚਨਾ (ਨਿੱਜੀ ਤੇ ਬਿਨੈ-ਪੱਤਰ) (ਦੋ ਪੱਤਰ ਚੋਣ ਆਧਾਰਿਤ—ਨੁਕਤਿਆਂ ਸਹਿਤ)	06
11. ਚਿੱਤਰ (ਫੋਟੋ)/ਤਸਵੀਰ (ਦ੍ਰਿਸ਼) ਦੇ ਆਧਾਰ 'ਤੇ ਵਰਨਣ (50 ਸ਼ਬਦਾਂ ਵਿੱਚ)	04
IV. ਪਾਠ-ਪੁਸਤਕਾਂ 'ਤੇ ਆਧਾਰਿਤ (Text Books)	40
ਅਤਿ ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (1 ਅੰਕ ਵਾਲੇ)	
12. ਕਹਾਣੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (ਬਹੁ-ਵਿਕਲਪੀ) ਚੋਣ ਆਧਾਰਿਤ	5X1=5
13. ਕਵਿਤਾ ਤੇ ਇਕਾਂਗੀ ਵਿੱਚੋਂ (ਬਹੁ-ਵਿਕਲਪੀ) ਚੋਣ ਆਧਾਰਿਤ	5X1=5
14. ਕਹਾਣੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (ਇੱਕ ਜਾਂ ਦੋ ਸ਼ਬਦਾਂ ਵਾਲੇ, ਚੋਣ ਆਧਾਰਿਤ)	4X1=4

ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (2 ਅੰਕ ਵਾਲੇ)

15. ਕਹਾਣੀ, ਇਕਾਂਗੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (25 ਤੋਂ 30 ਸ਼ਬਦਾਂ ਵਿੱਚ) ਚੋਣ ਆਧਾਰਿਤ (7X2)=14

ਵੱਡੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (4 ਅੰਕ ਵਾਲੇ)

16. ਕਵਿਤਾ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (50 ਤੋਂ 60 ਸ਼ਬਦਾਂ ਵਿੱਚ) (ਚੋਣ ਆਧਾਰਿਤ) (2X4)=8

17. ਇਕਾਂਗੀ 'ਚੋਂ ਵੱਡੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (50 ਤੋਂ 60 ਸ਼ਬਦਾਂ ਵਿੱਚ) (ਚੋਣ ਆਧਾਰਿਤ) (1X4)=4

ਨਿਰਧਾਰਿਤ ਪਾਠ-ਪੁਸਤਕਾਂ

1. ਸਾਹਿਤ-ਮਾਲਾ : 9 (ਪੰਜਾਬੀ ਕਵਿਤਾ ਤੇ ਵਾਰਤਕ)

(ਪ੍ਰਕਾਸ਼ਕ - ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

ਕਾਵਿ-ਰਚਨਾਵਾਂ — 1. ਸਮਾਂ (ਭਾਈ ਵੀਰ ਸਿੰਘ)

2. ਵਿਸਾਖੀ ਦਾ ਮੇਲਾ (ਧਨੀ ਰਾਮ ਚਾੜ੍ਹਕ)

3. ਮੈਂ ਪੰਜਾਬੀ (ਫੀਰੋਜ਼ਦੀਨ ਸ਼ਰਫ)

4. ਨਵੀਂ ਪੁਰਾਣੀ ਤਹਿਜ਼ੀਬ (ਵਿਧਾਤਾ ਸਿੰਘ ਤੀਰ)

5. ਮਾਤਾ ਗੁਜਰੀ ਜੀ (ਨੰਦ ਲਾਲ ਨੂਰਪੁਰੀ)

ਵਾਰਤਕ — 1. ਵਹਿਮੀ ਤਾਇਆ (ਸੂਬਾ ਸਿੰਘ)

2. ਮੁੜ ਵੇਖਿਆ ਪਿੰਡ (ਬਲਰਾਜ ਸਾਹਨੀ)

3. ਖੁਸ਼ੀਆਂ ਆਪੇ ਨਹੀਂ ਆਉਂਦੀਆਂ (ਡਾ. ਟੀ.ਆਰ. ਸ਼ਰਮਾ)

4. ਬੇਬੇ ਜੀ (ਡਾ. ਹਰਪਾਲ ਸਿੰਘ ਪੰਨੂ)

2. ਵੰਨਗੀ 9 (ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਤੇ ਇਕਾਂਗੀ)

(ਪ੍ਰਕਾਸ਼ਕ - ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

ਕਹਾਣੀਆਂ — 1. ਜਨਮ-ਦਿਨ (ਸਵਿੰਦਰ ਸਿੰਘ ਉੱਪਲ)

2. ਸਾਂਝੀ ਕੰਧ (ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ)

3. ਬੱਸ-ਕੰਡਕਟਰ (ਡਾ. ਦਲੀਪ ਕੌਰ ਟਿਵਾਣਾ)

ਇਕਾਂਗੀ — 1. ਮੌਨਧਾਰੀ (ਈਸ਼ਵਰ ਚੰਦਰ ਨੰਦਾ)

2. ਸਿਰਜਣਾ (ਪਾਲੀ ਭੁਪਿੰਦਰ ਸਿੰਘ)

ਨਿਰਧਾਰਿਤ ਪਾਠ-ਪੁਸਤਕਾਂ : 1. ਸਾਹਿਤ-ਮਾਲਾ : 9 (ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

2. ਵੰਨਗੀ 9 (ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

ਨੋਟ - 1. ਸਾਹਿਤ-ਮਾਲਾ : 9, 2. ਵੰਨਗੀ 9 ਪਾਠ-ਪੁਸਤਕਾਂ ਨੂੰ ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ, ਸਾਹਿਬਜ਼ਾਦਾ ਅਜੀਤ ਸਿੰਘ ਨਗਰ (ਮੋਹਾਲੀ) ਵੱਲੋਂ ਪ੍ਰਕਾਸ਼ਤ ਕੀਤਾ ਗਿਆ ਹੈ। ਇਹ ਪੁਸਤਕਾਂ ਬੋਰਡ ਦੀ ਵੈੱਬਸਾਈਟ : www.pseb.ac.in 'ਤੇ ਵੀ ਉਪਲਬਧ ਹਨ।

ਨੌਵੀਂ ਜਮਾਤ ਵਿੱਚ ਪੰਜਾਬੀ ਵਿਸ਼ੇ ਦੀਆਂ ਗਤੀਵਿਧੀਆਂ ਅਤੇ ਮੁਲਾਂਕਣ Guidelines for Activities and Evaluation

ਪਾਠ-ਕ੍ਰਮ ਦਾ ਉਦੇਸ਼ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਛਿਪੀ ਹੋਈ ਪ੍ਰਤਿਭਾ ਨੂੰ ਬਾਹਰ ਲਿਆਉਣਾ ਹੈ, ਇਸ ਲਈ ਬੋਰਡ ਵੱਲੋਂ ਸਲਾਨਾ ਪਰੀਖਿਆ ਦੇ ਨਾਲ-ਨਾਲ **ਆਂਤਰਿਕ ਮੁਲਾਂਕਣ** ਲਈ 20 ਅੰਕ ਰਾਖਵੇਂ ਰੱਖੇ ਗਏ ਹਨ। ਜਿਸ ਦੇ ਤਹਿਤ—

5 ਅੰਕ	ਸਭ ਤੋਂ ਚੰਗੇ ਦੋ ਨਿਯਮਤ (ਪਰਿਓਡਿਕ) ਟੈਸਟਾਂ ਦਾ ਔਸਤ
5 ਅੰਕ	ਬਹੁ-ਭਾਂਤੀ ਮੁਲਾਂਕਣ
5 ਅੰਕ	ਪੋਰਟਫੋਲੀਓ
5 ਅੰਕ	ਵਿਸ਼ਾ ਆਧਾਰਿਤ ਅਗਾਂਹਵਧੂ ਗਤੀਵਿਧੀਆਂ

ਇਹਨਾਂ ਗਤੀਵਿਧੀਆਂ ਦਾ ਮੁਲਾਂਕਣ ਵਿਸ਼ੇ ਨਾਲ ਸੰਬੰਧਿਤ ਅਧਿਆਪਕ ਤੇ ਸਕੂਲ ਮੁਖੀ ਵੱਲੋਂ ਨਿਰਧਾਰਿਤ ਨਿਗਰਾਨ ਅਧਿਆਪਕ ਦੀ ਨਿਗਰਾਨੀ ਵਿੱਚ ਪੜ੍ਹਨ-ਸੰਬੰਧੀ (Comprehension), ਲਿਖਣ ਕੌਸ਼ਲ (Writing Skill), ਬੋਲਣ ਕੌਸ਼ਲ (Speaking Skill) ਅਨੁਸਾਰ ਕੀਤਾ ਜਾਵੇਗਾ।

ਦਿਵਯਾਂਗ ਵਿਦਿਆਰਥੀਆਂ ਲਈ	
<p>ਜੇਕਰ ਵਿਦਿਆਰਥੀ ਨਾ ਬੋਲ ਸਕਦਾ ਹੈ ਤੇ ਨਾ ਹੀ ਸੁਣ ਸਕਦਾ ਹੈ। ਜਾਂ ਕੇਵਲ ਸੁਣ ਸਕਦਾ ਹੈ ਪਰ ਬੋਲ ਨਹੀਂ ਸਕਦਾ। ਜਾਂ ਕੇਵਲ ਬੋਲ ਸਕਦਾ ਹੈ ਪਰ ਸੁਣ ਨਹੀਂ ਸਕਦਾ।</p>	<p>ਵਿਦਿਆਰਥੀ ਦੇ ਬੋਲਣ ਤੇ ਸੁਣਨ ਕੌਸ਼ਲ ਲਈ ਉਹ ਆਪਣੇ ਮਨਪਸੰਦ ਵਿਸ਼ੇ 'ਤੇ ਕੋਈ ਵੀ ਕਹਾਣੀ ਲਿਖ ਸਕਦਾ ਹੈ। ਜਿਸ ਰਾਹੀਂ ਉਸ ਦੀ ਸਿਰਜਣਾਤਮਿਕ ਤੇ ਕਲਪਨਾ ਸ਼ਕਤੀ ਦਾ ਨਿਰੀਖਣ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ। ਸ਼ਬਦਾਂ ਦੀ ਸੀਮਾ ਨੌਵੀਂ ਜਮਾਤ ਲਈ 150-200 ਸ਼ਬਦ</p>

ਸੁਝਾਅ

	ਵਿਸ਼ਾ	ਮੁਲਾਂਕਣ ਵਿਧੀ
1.	ਭਾਸ਼ਾ ਨੂੰ ਪ੍ਰਫੁੱਲਤ ਕਰਨ ਲਈ ਨਿਰਧਾਰਿਤ ਰੂਪ-ਰੇਖਾ	<ol style="list-style-type: none"> 1. ਸ਼ਬਦ-ਭੰਡਾਰ 2. ਰਚਨਾਤਮਿਕ 3. ਪੇਸ਼ਕਾਰੀ
2.	ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਨੂੰ ਬੋਲਣ ਤੇ ਲਿਖਣ ਦੀ ਕਲਾ ਨੂੰ ਨਿਖਾਰਨਾ	<ol style="list-style-type: none"> 1. ਭਾਸ਼ਾ ਦੀ ਸੂਝ-ਬੂਝ 2. ਸਵੈ-ਭਰੋਸਾ 3. ਹੁਨਰ ਦੀ ਪਰਖ 4. ਪੇਸ਼ਕਾਰੀ
3.	ਵਿਦਿਆਰਥੀ ਦਾ ਆਪਣੇ ਸਹਿਪਾਠੀਆਂ ਨਾਲ ਵਰਤਾਓ। ਸਥਿਤੀ ਤੇ ਨੈਤਿਕਤਾ	<ol style="list-style-type: none"> 1. ਪੇਸ਼ਕਾਰੀ ਦਾ ਹੁਨਰ 2. ਰਚਨਾਤਮਿਕਤਾ 3. ਵਿਸ਼ੇ ਨੂੰ ਗ੍ਰਹਿਣ ਕਰਨ ਦੀ ਸੂਝ 4. ਸ਼ਬਦਾਵਲੀ 5. ਵਿਅਕਤੀਗਤ ਉੱਤਮਤਾ
4.	ਸਕੂਲ ਦੇ ਰਸਾਲੇ ਜਾਂ ਕਿਸੇ ਹੋਰ ਮਾਧਿਅਮ ਲਈ ਰਚਨਾਤਮਿਕ ਕਾਰਜ	<ol style="list-style-type: none"> 1. ਭਾਸ਼ਾ-ਗਿਆਨ 2. ਸ਼ਬਦ-ਭੰਡਾਰ 3. ਪ੍ਰਭਾਵਸ਼ਾਲੀ ਲਿਖਤ 4. ਰਚਨਾਤਮਿਕਤਾ
5.	ਵਿਦਿਆਰਥੀ ਦੇ ਗਿਆਨ ਗ੍ਰਹਿਣ ਕਰਨ ਦੇ ਸ੍ਰੋਤ। ਜਿਵੇਂ— ਪਾਠ-ਪੁਸਤਕਾਂ, ਇੰਟਰਨੈਟ ਅਤੇ ਹੋਰ ਸ੍ਰੋਤ	<ol style="list-style-type: none"> 1. ਮੌਲਿਕਤਾ 2. ਰਚਨਾਤਮਿਕ 3. ਤਰਕ ਭਰਪੂਰ ਯੋਗਤਾ

6. ਕਿਸੇ ਵੀ ਲਿਖਤੀ ਅੰਸ਼ ਨੂੰ ਕਾਰਟੂਨ/ਚਲ-ਚਿੱਤਰ (ਫਿਲਮ) ਤਸਵੀਰ ਰਾਹੀਂ	1. ਮੌਲਿਕਤਾ 2. ਨਿਰੰਤਰਤਾ 3. ਕਲਪਨਾ 4. ਪੇਸ਼ਕਾਰੀ (ਹਾਵ-ਭਾਵ ਰਾਹੀਂ)
7. ਭਾਸ਼ਾ ਉਚਾਰਨ : ਅਰਥ ਭਰਪੂਰ, ਉਚਾਰਨ ਢੰਗ, ਵਾਕ ਬਣਤਰ 1. ਵਿਅਕਤੀ 2. ਸਮੂਹ ਵਿੱਚ	1. ਠੀਕ ਸ਼ਬਦਾਵਲੀ ਦਾ ਪ੍ਰਯੋਗ ਕਰਨਾ 2. ਠੀਕ ਵਾਕ ਬਣਾਉਣਾ 3. ਸਹੀ ਸ਼ਬਦ ਚੋਣ 4. ਸਹੀ ਬੋਲਚਾਲ
8. ਤੁਰੰਤ ਦਿੱਤੇ ਵਿਸ਼ੇ 'ਤੇ ਬੋਲਣਾ (ਪਾਠ-ਕ੍ਰਮ ਜਾਂ ਆਮ ਜੀਵਨ 'ਚੋਂ)	1. ਗ੍ਰਹਿਣ ਕਰਨਾ 2. ਕਲਪਨਾ 3. ਪੇਸ਼ਕਾਰੀ 4. ਵਿਚਾਰ ਪ੍ਰਗਟਾਅ 5. ਸਵੈ-ਭਰੋਸਾ 6. ਸਮੁੱਚਾ ਪ੍ਰਭਾਵ

ਸੁਝਾਈਆਂ ਗਤੀਵਿਧੀਆਂ (Suggested Activities)

- | | |
|---------------------------------|--------------------------|
| 1. ਸੁਲੇਖ | 2. ਕਵਿਤਾ ਉਚਾਰਨ (ਜ਼ਬਾਨੀ) |
| 3. ਭਾਸ਼ਣ ਮੁਕਾਬਲਾ | 4. ਵਾਦ-ਵਿਵਾਦ |
| 5. ਕੁਇਜ਼ (ਪ੍ਰਸ਼ਨੋਤਰੀ) | 6. ਨਾਟਕ ਮੰਚਣ |
| 7. ਦਿਨ-ਤਿਉਹਾਰ ਬਾਰੇ ਜਾਣਕਾਰੀ | 8. ਲੋਕ-ਗੀਤ |
| 9. ਪੁਰਾਤਨ ਸੱਭਿਆਚਾਰ ਬਾਰੇ ਜਾਣਕਾਰੀ | 10. ਚਲੰਤ ਘਟਨਾਵਾਂ ਦਾ ਵਰਨਣ |

ਨੋਟ— 1. ਵਿਦਿਆਰਥੀ ਦਾ ਮੁਲਾਂਕਣ ਉਪਰੋਕਤ ਦਿੱਤੇ ਗਏ ਦਿਸ਼ਾ-ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਕੀਤਾ ਜਾਵੇ।
2. ਮੁਲਾਂਕਣ ਵਿਸ਼ੇ ਨਾਲ ਸੰਬੰਧਿਤ ਅਧਿਆਪਕ ਤੇ ਸਕੂਲ ਮੁਖੀ ਵੱਲੋਂ ਨਿਰਧਾਰਤ ਨਿਗਰਾਨ ਅਧਿਆਪਕ ਦੀ ਨਿਗਰਾਨੀ ਹੇਠ ਹੋਵੇਗਾ।

SUBJECT : PUNJABI

SUBJECT CODE : 004

CLASS – X (2026-27)

ਲਿਖਤੀ ਪਰੀਖਿਆ - 80 ਅੰਕ

ਆਂਤਰਿਕ ਮੁਲਾਂਕਣ - 20 ਅੰਕ

ਕੁੱਲ ਅੰਕ - 100

ਲਿਖਤੀ ਪਰੀਖਿਆ ਲਈ ਸਮਾਂ 3 ਘੰਟੇ

ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸਿੱਖਣ ਦੇ ਉਦੇਸ਼

ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਕਾਰਜ-ਪ੍ਰਣਾਲੀ ਨੂੰ ਸਮਝ ਕੇ ਉਸ ਦੀ ਢੁਕਵੀਂ ਵਰਤੋਂ ਦੇ ਯੋਗ ਬਣਾਉਣਾ ਤੇ ਸਾਹਿਤ ਦੀਆਂ ਵੱਖ-ਵੱਖ ਵਿਧਾਵਾਂ-ਕਵਿਤਾ, ਇਕਾਂਗੀ, ਕਹਾਣੀ ਅਤੇ ਵਾਰਤਕ ਤੋਂ ਜਾਣੂ ਕਰਾਉਣਾ ਤਾਂ ਕਿ ਵਿਦਿਆਰਥੀ ਭਾਸ਼ਾ ਦੇ ਵੱਖ-ਵੱਖ ਕੌਸ਼ਲਾਂ ਵਿੱਚ ਨਿਪੁੰਨ ਹੋ ਕੇ ਆਪਣੀ ਬਹੁ-ਪੱਖੀ ਪ੍ਰਤਿਭਾ ਦਾ ਵਿਕਾਸ ਕਰ ਸਕਣ। ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸਿੱਖਿਆ ਦਾ ਮੂਲ ਉਦੇਸ਼ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਸਾਹਿਤਕ ਵਿਰਸੇ ਨਾਲ ਜੋੜਨਾ ਹੈ।

1. ਸਲਾਨਾ ਲਿਖਤੀ ਪਰੀਖਿਆ

(Year End Written Exam - 80)

ਇਕਾਈ/ਸਿੱਖਣ ਦਾ ਖੇਤਰ	ਅੰਕ
ਭਾਸ਼ਾ	
(ੳ) ਅਡਵਾਂਸ ਪੜ੍ਹਨ-ਕੌਸ਼ਲ	10
(ਅ) ਵਿਆਕਰਨ	12
(ੲ) ਪ੍ਰਭਾਵਸ਼ਾਲੀ ਲਿਖਣ-ਕੌਸ਼ਲ	18
ਸਾਹਿਤ (ਪਾਠ-ਪੁਸਤਕਾਂ 'ਤੇ ਆਧਾਰਿਤ)	40

2. ਆਂਤਰਿਕ ਮੁਲਾਂਕਣ

(Internal Assesment - 20)

ਕਿਰਿਆਤਮਿਕ ਕੰਮ (Activity/Assignment)	20
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ਪੰਜਾਬੀ—004

X (ਦਸਵੀਂ)

ਸਲਾਨਾ ਪਰੀਖਿਆ ਲਈ ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਅੰਕ-ਵੰਡ

ਕੁੱਲ ਅੰਕ 80

I. ਪੜ੍ਹਨ-ਕੌਸ਼ਲ (Reading Skill)	10
1. ਅਣਡਿੱਠਾ ਪੈਰਾ (ਵਾਰਤਕ) 200-250 ਸ਼ਬਦਾਂ ਵਿੱਚ (6 ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ)	(6X1)=6
2. ਅਣਡਿੱਠੀ ਕਾਵਿ ਟੁਕੜੀ ਨਾਲ ਸੰਬੰਧਿਤ (ਚਾਰ ਪ੍ਰਸ਼ਨ)	(4X1)=4
II. ਵਿਆਕਰਨ (Grammar) (ਬਹੁ-ਵਿਕਲਪੀ ਅਤੇ ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ)	12
3. ਸਮਾਸੀ ਸ਼ਬਦ (ਬਹੁ-ਵਿਕਲਪੀ) } ਚੋਣ ਆਧਾਰਿਤ	2X1=2
4. ਬਹੁ-ਅਰਥਕ (ਬਹੁ-ਵਿਕਲਪੀ) } ਚੋਣ ਆਧਾਰਿਤ	2X1=2
5. ਕਿਰਿਆ ਵਿਸ਼ੇਸ਼ਣ (ਬਹੁ-ਵਿਕਲਪੀ) } ਚੋਣ ਆਧਾਰਿਤ	2X1=2
6. ਅਗੇਤਰ-ਪਿਛੇਤਰ (ਸ਼ਬਦ ਬਣਾਉਣਾ)	2X1=2
7. ਮੁਹਾਵਰੇ (ਕ ਤੋਂ ਝ ਤੱਕ) (ਵਾਕਾਂ ਵਿੱਚ ਵਰਤ ਕੇ ਅਰਥ ਸਪਸ਼ਟ ਕਰਨਾ) ਚੋਣ ਆਧਾਰਿਤ	4X1=4
III. ਪ੍ਰਭਾਵਸ਼ਾਲੀ ਲਿਖਣ-ਕੌਸ਼ਲ (Writing Skill)	18
8. ਲੇਖ-ਰਚਨਾ (ਵਿਚਾਰ-ਪ੍ਰਧਾਨ ਅਤੇ ਆਮ ਵਿਸ਼ੇ) 200 ਸ਼ਬਦ (ਤਿੰਨ ਲੇਖ ਚੋਣ ਆਧਾਰਿਤ—ਨੁਕਤਿਆਂ ਸਹਿਤ)	08
9. ਪੱਤਰ-ਰਚਨਾ (ਨਿੱਜੀ ਤੇ ਬਿਨੈ-ਪੱਤਰ) (ਦੋ ਪੱਤਰ ਚੋਣ ਆਧਾਰਿਤ—ਨੁਕਤਿਆਂ ਸਹਿਤ)	06
10. ਚਿੱਤਰ (ਫੋਟੋ)/ਤਸਵੀਰ (ਦ੍ਰਿਸ਼) ਦੇ ਆਧਾਰ 'ਤੇ ਵਰਨਣ (50 ਸ਼ਬਦਾਂ ਵਿੱਚ)	04
IV. ਪਾਠ-ਪੁਸਤਕਾਂ 'ਤੇ ਆਧਾਰਿਤ (Text Books)	40
ਅਤਿ ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (1 ਅੰਕ ਵਾਲੇ)	
11. ਕਹਾਣੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (ਬਹੁ-ਵਿਕਲਪੀ) ਚੋਣ ਆਧਾਰਿਤ	5X1=5
12. ਕਵਿਤਾ ਤੇ ਇਕਾਂਗੀ ਵਿੱਚੋਂ (ਬਹੁ-ਵਿਕਲਪੀ) ਚੋਣ ਆਧਾਰਿਤ	5X1=5
13. ਕਹਾਣੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (ਇੱਕ ਜਾਂ ਦੋ ਸ਼ਬਦਾਂ ਵਾਲੇ, ਚੋਣ ਆਧਾਰਿਤ)	4X1=4
ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (2 ਅੰਕ ਵਾਲੇ)	
14. ਕਹਾਣੀ, ਇਕਾਂਗੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (25 ਤੋਂ 30 ਸ਼ਬਦਾਂ ਵਿੱਚ) ਚੋਣ ਆਧਾਰਿਤ	(7X2)=14
ਵੱਡੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (4 ਅੰਕ ਵਾਲੇ)	
15. ਕਵਿਤਾ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (50 ਤੋਂ 60 ਸ਼ਬਦਾਂ ਵਿੱਚ) (ਚੋਣ ਆਧਾਰਿਤ)	(2X4)=8
16. ਇਕਾਂਗੀ 'ਚੋਂ ਵੱਡੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (50 ਤੋਂ 60 ਸ਼ਬਦਾਂ ਵਿੱਚ) (ਚੋਣ ਆਧਾਰਿਤ)	(1X4)=4

1. ਸਾਹਿਤ-ਮਾਲਾ : 10 (ਪੰਜਾਬੀ ਕਵਿਤਾ ਤੇ ਵਾਰਤਕ)

(ਪ੍ਰਕਾਸ਼ਕ - ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

- ਕਾਵਿ-ਰਚਨਾਵਾਂ —
1. ਸੋ ਕਿਉ ਮੰਦਾ ਆਖੀਐ (ਗੁਰ ਨਾਨਕ ਦੇਵ ਜੀ)
 2. ਕਿਰਪਾ ਕਰਿ ਕੈ ਬਖਸਿ ਲੈਹੁ (ਗੁਰੂ ਅਮਰਦਾਸ ਜੀ)
 3. ਤੂੰ ਮੇਰਾ ਪਿਤਾ ਤੂੰ ਹੈ ਮੇਰਾ ਮਾਤਾ (ਗੁਰੂ ਅਰਜਨ ਦੇਵ ਜੀ)
 4. ਸਤਿਗੁਰ ਨਾਨਕ ਪ੍ਰਗਟਿਆ (ਭਾਈ ਗੁਰਦਾਸ ਜੀ)
 5. ਜੰਗ ਦਾ ਹਾਲ (ਸ਼ਾਹ ਮੁਹੰਮਦ)

- ਵਾਰਤਕ —
1. ਘਰ ਦਾ ਪਿਆਰ (ਪ੍ਰਿੰ. ਤੇਜਾ ਸਿੰਘ)
 2. ਬੋਲੀ (ਸ. ਗੁਰਬਖਸ਼ ਸਿੰਘ)
 3. ਪ੍ਰਾਰਥਨਾ (ਡਾ. ਬਲਬੀਰ ਸਿੰਘ)
 4. ਮੇਰੇ ਵੱਡੇ-ਵੱਡੇ (ਗਿਆਨੀ ਗੁਰਦਿੱਤ ਸਿੰਘ)
 5. ਤੁਰਨ ਦਾ ਹੁਨਰ (ਡਾ. ਨਰਿੰਦਰ ਸਿੰਘ ਕਪੂਰ)

2. ਵੰਨਗੀ 10 (ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਤੇ ਇਕਾਂਗੀ)

(ਪ੍ਰਕਾਸ਼ਕ - ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

- ਕਹਾਣੀਆਂ —
1. ਕੁਲਫੀ (ਸੁਜਾਨ ਸਿੰਘ)
 2. ਅੰਗ-ਸੰਗ (ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ)
 3. ਧਰਤੀ ਹੇਠਲਾ ਬਲਦ (ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ)

- ਇਕਾਂਗੀ —
1. ਜ਼ਫਰਨਾਮਾ (ਡਾ. ਹਰਚਰਨ ਸਿੰਘ)
 2. ਦੂਜਾ ਵਿਆਹ (ਸੰਤ ਸਿੰਘ ਸੇਖੋ)

- ਨਿਰਧਾਰਿਤ ਪਾਠ-ਪੁਸਤਕਾਂ : 1. ਸਾਹਿਤ ਮਾਲਾ : 10 (ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)
2. ਵੰਨਗੀ 10 (ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

ਨੋਟ - 1. ਸਾਹਿਤ ਮਾਲਾ : 10, 2. ਵੰਨਗੀ 10 ਪਾਠ-ਪੁਸਤਕਾਂ ਨੂੰ ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ, ਸਾਹਿਬਜ਼ਾਦਾ ਅਜੀਤ ਸਿੰਘ ਨਗਰ (ਮੋਹਾਲੀ) ਵੱਲੋਂ ਪ੍ਰਕਾਸ਼ਤ ਕੀਤਾ ਗਿਆ ਹੈ। ਇਹ ਪੁਸਤਕਾਂ ਬੋਰਡ ਦੀ ਵੈੱਬਸਾਈਟ : www.pseb.ac.in 'ਤੇ ਵੀ ਉਪਲਬਧ ਹਨ।

ਦਸਵੀਂ ਜਮਾਤ ਵਿੱਚ ਪੰਜਾਬੀ ਵਿਸ਼ੇ ਦੀਆਂ ਗਤੀਵਿਧੀਆਂ ਅਤੇ ਮੁਲਾਂਕਣ Guidelines for Activities and Evaluation

ਪਾਠ-ਕ੍ਰਮ ਦਾ ਉਦੇਸ਼ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਛਿਪੀ ਹੋਈ ਪ੍ਰਤਿਭਾ ਨੂੰ ਬਾਹਰ ਲਿਆਉਣਾ ਹੈ, ਇਸ ਲਈ ਬੋਰਡ ਵੱਲੋਂ ਸਲਾਨਾ ਪਰੀਖਿਆ ਦੇ ਨਾਲ-ਨਾਲ ਆਂਤਰਿਕ ਮੁਲਾਂਕਣ ਲਈ 20 ਅੰਕ ਰਾਖਵੇਂ ਰੱਖੇ ਗਏ ਹਨ। ਜਿਸ ਦੇ ਤਹਿਤ—

5 ਅੰਕ	ਸਭ ਤੋਂ ਚੰਗੇ ਦੋ ਨਿਯਮਤ (ਪਰਿਓਡਿਕ) ਟੈਸਟਾਂ ਦਾ ਔਸਤ
5 ਅੰਕ	ਬਹੁ-ਭਾਂਤੀ ਮੁਲਾਂਕਣ
5 ਅੰਕ	ਪੋਰਟਫੋਲੀਓ
5 ਅੰਕ	ਵਿਸ਼ਾ ਆਧਾਰਿਤ ਅਗਾਂਹਵਧੂ ਗਤੀਵਿਧੀਆਂ

ਇਹਨਾਂ ਗਤੀਵਿਧੀਆਂ ਦਾ ਮੁਲਾਂਕਣ ਵਿਸ਼ੇ ਨਾਲ ਸੰਬੰਧਿਤ ਅਧਿਆਪਕ ਤੇ ਸਕੂਲ ਮੁਖੀ ਵੱਲੋਂ ਨਿਰਧਾਰਿਤ ਨਿਗਰਾਨ ਅਧਿਆਪਕ ਦੀ ਨਿਗਰਾਨੀ ਵਿੱਚ ਪੜ੍ਹਨ-ਸੰਬੰਧੀ (Comprehension), ਲਿਖਣ ਕੌਸ਼ਲ (Writing Skill), ਬੋਲਣ ਕੌਸ਼ਲ (Speaking Skill) ਅਨੁਸਾਰ ਕੀਤਾ ਜਾਵੇਗਾ।

ਦਿਵਯਾਂਗ ਵਿਦਿਆਰਥੀਆਂ ਲਈ	
<p>ਜੇਕਰ ਵਿਦਿਆਰਥੀ ਨਾ ਬੋਲ ਸਕਦਾ ਹੈ ਤੇ ਨਾ ਹੀ ਸੁਣ ਸਕਦਾ ਹੈ।</p> <p>ਜਾਂ</p> <p>ਕੇਵਲ ਸੁਣ ਸਕਦਾ ਹੈ ਪਰ ਬੋਲ ਨਹੀਂ ਸਕਦਾ।</p> <p>ਜਾਂ</p> <p>ਕੇਵਲ ਬੋਲ ਸਕਦਾ ਹੈ ਪਰ ਸੁਣ ਨਹੀਂ ਸਕਦਾ।</p>	<p>ਵਿਦਿਆਰਥੀ ਦੇ ਬੋਲਣ ਤੇ ਸੁਣਨ ਕੌਸ਼ਲ ਲਈ ਉਹ ਆਪਣੇ ਮਨਪਸੰਦ ਵਿਸ਼ੇ 'ਤੇ ਕੋਈ ਵੀ ਕਹਾਣੀ ਲਿਖ ਸਕਦਾ ਹੈ। ਜਿਸ ਰਾਹੀਂ ਉਸ ਦੀ ਸਿਰਜਣਾਤਮਿਕ ਤੇ ਕਲਪਨਾ ਸ਼ਕਤੀ ਦਾ ਨਿਰੀਖਣ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।</p> <p style="text-align: center;">ਸ਼ਬਦਾਂ ਦੀ ਸੀਮਾ</p> <p>ਦਸਵੀਂ ਜਮਾਤ ਲਈ 250-300 ਸ਼ਬਦ</p>

ਸੁਝਾਅ

	ਵਿਸ਼ਾ	ਮੁਲਾਂਕਣ ਵਿਧੀ
1.	ਭਾਸ਼ਾ ਨੂੰ ਪ੍ਰਫੁੱਲਤ ਕਰਨ ਲਈ ਨਿਰਧਾਰਿਤ ਰੂਪ-ਰੇਖਾ	<ol style="list-style-type: none"> 1. ਸ਼ਬਦ-ਭੰਡਾਰ 2. ਰਚਨਾਤਮਕ 3. ਪੇਸ਼ਕਾਰੀ
2.	ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਨੂੰ ਬੋਲਣ ਤੇ ਲਿਖਣ ਦੀ ਕਲਾ ਨੂੰ ਨਿਖਾਰਨਾ	<ol style="list-style-type: none"> 1. ਭਾਸ਼ਾ ਦੀ ਸੂਝ-ਬੂਝ 2. ਸਵੈ-ਭਰੋਸਾ 3. ਹੁਨਰ ਦੀ ਪਰਖ 4. ਪੇਸ਼ਕਾਰੀ
3.	ਵਿਦਿਆਰਥੀ ਦਾ ਆਪਣੇ ਸਹਿਪਾਠੀਆਂ ਨਾਲ ਵਰਤਾਓ। ਸਥਿਤੀ ਤੇ ਨੈਤਿਕਤਾ	<ol style="list-style-type: none"> 1. ਪੇਸ਼ਕਾਰੀ ਦਾ ਹੁਨਰ 2. ਰਚਨਾਤਮਿਕਤਾ 3. ਵਿਸ਼ੇ ਨੂੰ ਗ੍ਰਹਿਣ ਕਰਨ ਦੀ ਸੂਝ 4. ਸ਼ਬਦਾਵਲੀ 5. ਵਿਅਕਤੀਗਤ ਉੱਤਮਤਾ
4.	ਸਕੂਲ ਦੇ ਰਸਾਲੇ ਜਾਂ ਕਿਸੇ ਹੋਰ ਮਾਧਿਅਮ ਲਈ ਰਚਨਾਤਮਿਕ ਕਾਰਜ	<ol style="list-style-type: none"> 1. ਭਾਸ਼ਾ-ਗਿਆਨ 2. ਸ਼ਬਦ-ਭੰਡਾਰ 3. ਪ੍ਰਭਾਵਸ਼ਾਲੀ ਲਿਖਤ 4. ਰਚਨਾਤਮਿਕਤਾ
5.	ਵਿਦਿਆਰਥੀ ਦੇ ਗਿਆਨ ਗ੍ਰਹਿਣ ਕਰਨ ਦੇ ਸ੍ਰੋਤ। ਜਿਵੇਂ— ਪਾਠ-ਪੁਸਤਕਾਂ, ਇੰਟਰਨੈਟ ਅਤੇ ਹੋਰ ਸ੍ਰੋਤ	<ol style="list-style-type: none"> 1. ਮੌਲਿਕਤਾ 2. ਰਚਨਾਤਮਿਕ 3. ਤਰਕ ਭਰਪੂਰ ਯੋਗਤਾ

6. ਕਿਸੇ ਵੀ ਲਿਖਤੀ ਅੰਸ਼ ਨੂੰ ਕਾਰਟੂਨ/ਚਲ-ਚਿੱਤਰ (ਫਿਲਮ) ਤਸਵੀਰ ਰਾਹੀਂ	1. ਮੌਲਿਕਤਾ 2. ਨਿਰੰਤਰਤਾ 3. ਕਲਪਨਾ 4. ਪੇਸ਼ਕਾਰੀ (ਹਾਵ-ਭਾਵ ਰਾਹੀਂ)
7. ਭਾਸ਼ਾ ਉਚਾਰਨ : ਅਰਥ ਭਰਪੂਰ, ਉਚਾਰਨ ਢੰਗ, ਵਾਕ-ਬਣਤਰ 1. ਵਿਅਕਤੀ 2. ਸਮੂਹ ਵਿੱਚ	1. ਠੀਕ ਸ਼ਬਦਾਵਲੀ ਦਾ ਪ੍ਰਯੋਗ ਕਰਨਾ 2. ਠੀਕ ਵਾਕ ਬਣਾਉਣਾ 3. ਸਹੀ ਸ਼ਬਦ ਚੋਣ 4. ਸਹੀ ਬੋਲਚਾਲ
8. ਤੁਰੰਤ ਦਿੱਤੇ ਵਿਸ਼ੇ 'ਤੇ ਬੋਲਣਾ (ਪਾਠ-ਕ੍ਰਮ ਜਾਂ ਆਮ ਜੀਵਨ 'ਚੋਂ)	1. ਗ੍ਰਹਿਣ ਕਰਨਾ 2. ਕਲਪਨਾ 3. ਪੇਸ਼ਕਾਰੀ 4. ਵਿਚਾਰ ਪ੍ਰਗਟਾਅ 5. ਸਵੈ-ਭਰੋਸਾ 6. ਸਮੁੱਚਾ ਪ੍ਰਭਾਵ

ਸੁਝਾਈਆਂ ਗਤੀਵਿਧੀਆਂ (Suggested Activities)

- | | |
|---------------------------------|--------------------------|
| 1. ਸੁਲੇਖ | 2. ਕਵਿਤਾ ਉਚਾਰਨ ਜ਼ਬਾਨੀ) |
| 3. ਭਾਸ਼ਣ ਮੁਕਾਬਲਾ | 4. ਵਾਦ-ਵਿਵਾਦ |
| 5. ਕੁਇਜ਼ (ਪ੍ਰਸ਼ਨੋਤਰੀ) | 6. ਨਾਟਕ ਮੰਚਣ |
| 7. ਦਿਨ-ਤਿਉਹਾਰ ਬਾਰੇ ਜਾਣਕਾਰੀ | 8. ਲੋਕ-ਗੀਤ |
| 9. ਪੁਰਾਤਨ ਸੱਭਿਆਚਾਰ ਬਾਰੇ ਜਾਣਕਾਰੀ | 10. ਚਲੰਤ ਘਟਨਾਵਾਂ ਦਾ ਵਰਣਨ |

- ਨੋਟ— 1. ਵਿਦਿਆਰਥੀ ਦਾ ਮੁਲਾਂਕਣ ਉਪਰੋਕਤ ਦਿੱਤੇ ਗਏ ਦਿਸ਼ਾ-ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਕੀਤਾ ਜਾਵੇ।
2. ਮੁਲਾਂਕਣ ਵਿਸ਼ੇ ਨਾਲ ਸੰਬੰਧਿਤ ਅਧਿਆਪਕ ਤੇ ਸਕੂਲ ਮੁਖੀ ਵੱਲੋਂ ਨਿਰਧਾਰਤ ਨਿਗਰਾਨ ਅਧਿਆਪਕ ਦੀ ਨਿਗਰਾਨੀ ਹੇਠ ਹੋਵੇਗਾ।

SCIENCE

Subject Code – 086

Classes IX (2026-27)

Introduction

Science is the study of the natural and physical world around us through a systematic process of observing, questioning, forming hypotheses, testing hypotheses through experiment, analysing evidence, and continuously revising our knowledge. It develops essential skills like curiosity, creativity, evidence-based thinking, and sound decision-making that help us lead rational and fulfilling lives. Learning Science provides valid knowledge about the world, and builds scientific values and capacities. It draws knowledge from Biology, Chemistry, Physics, Earth Science, Mathematics, Computational Sciences, and sometimes Social Science and Vocational Education to offer an interdisciplinary understanding of the role of science.

Science Education helps students to develop an understanding of the natural and physical world through systematic inquiry. Learning Science also develops important capacities, such as observation, questioning, analysis, inference, etc. This helps individuals to meaningfully participate in society and the world of work with a scientific temper, critical and evidence-based thinking, asking relevant questions, analysing practices and norms, and acting for necessary change.

Science Education aims to achieve:

- Scientific understanding of the natural and physical world;
- Capacities for scientific inquiry;
- Understanding the evolution of scientific knowledge;
- Interdisciplinary understanding between Science and other curricular areas;
- Understanding of the relationship between Science, Technology, and Society;
- Scientific temper, and
- Creativity.

Together, the NEP 2020 and NCF-SE 2023 envision science classrooms that encourage curiosity, creativity, collaboration and connection with the real world, ultimately nurturing not just future scientists, but responsible, informed and critically thinking citizens.

Learning standards (Curricular Goals and Competencies) describe what students should know, understand, and be able to do in Science. In Grades 9 – 10, Science is taught using an integrated approach that combines Biology, Chemistry, Physics, and Earth Science. This helps students understand the connections between disciplines and relate Science to their observations and experiences. At this stage, scientific inquiry skills are developed alongside conceptual understanding, with content selected both for disciplinary relevance and real-life usefulness. Students must deepen their understanding of the world, explore scientific questions through discussion and experimentation, and communicate their learning in various ways. It is important to note that the Curricular Goals are interdependent and not separate.

Learning standards are organised into four levels: broad curricular aims define the overall objectives for Science Learning by the end of each schooling stage; more specific Curricular Goals guide the design of the science curriculum for each stage and topic; Competencies

represent measurable scientific skills and knowledge-based on these goals, assessed at the end of each stage; and detailed Learning Outcomes (LOs) are granular milestones of learning and usually progress in a sequence leading to the attainment of a competency. These LOs enable teachers to plan their content, pedagogy, and assessments towards achieving specific competencies.

Curricular Goals (CGs) and Competencies (Cs)

CG 1 – Explores the world of matter, its interactions, and properties at the atomic level

C 1.1 – Describes classification of elements in the Periodic Table, and explains how compounds (including carbon compounds) are formed based on the atomic structure (Bohr's model) and properties (valency).

C 1.2 – Investigates the nature and properties of chemical substances (distillation, crystallisation, chromatography, centrifugation, types and properties of mixtures, solutions, colloids, and suspensions)

C 1.3 – Describes and represents chemical interactions and changes using symbols and chemical equations (acid and base, metal and non-metal, reversible and irreversible)

CG 2 – Explores the physical world around them, and understands scientific principles and laws based on observations and analysis

C 2.1 – Applies Newton's laws to explain the effect of forces (change in state of motion — displacement and direction, velocity and acceleration, uniform circular motion, acceleration due to gravity) and analyses graphical and mathematical representations of motion in one dimension

C 2.2 – Explains the relationship between mass and weight using universal law of gravitation, and connect it to the laws of motion

C 2.3 – Manipulates the position of object and properties of lenses (focus, centre of curvature) to observe image characteristics and correspondence with a ray diagram, and extends this understanding to a combination of lenses (telescope, microscope)

C 2.4 – Manipulates and analyses different characteristics of the circuit (current, voltage, resistance) and mathematises their relationship (Ohm's law), and applies it to everyday usage (electricity bill, short circuit, safety measures)

C 2.5 – Defines work in scientific terms, and represents the relationship between potential and kinetic energy (conservation of energy) in mathematical expressions

C 2.6 – Demonstrates the principle of mechanical advantage by constructing simple machines (system of levers and pulleys)

C 2.7 – Describes the origin and properties of sound (wavelength, frequency, amplitude) and differences in what we hear as it propagates through different instruments

C 2.8 – *Explores interconnected systems and phenomena that support and affect life on Earth (hydrosphere, biosphere, atmosphere, geosphere, cryosphere and their interrelationships, earth processes, hazards, etc.)

*Additional Competency for Earth Science

CG 3 – Explores the structure and function of the living world at the cellular level

C 3.1 – Explains the role of cellular components (nucleus, mitochondria, endoplasmic reticulum, vacuoles, chloroplast, cell wall), including the semi-permeability of cell membrane in making cell the structural basis of living organisms and functional basis of life processes

C 3.2 – Analyses similarities and differences in the life processes involved in nutrition (photosynthesis in plants; absorption of nutrients in fungi; digestion in animals), transport (transport of water in plants; circulation in animals), exchange of materials (respiration and excretion), and reproduction

C 3.3 – Describes the mechanisms of heredity (in terms of DNA, genes, chromosomes) and variation (as changes in the sequence of DNA)

CG 4 – Explores interconnectedness between organisms and their environment

C 4.1 – Applies the knowledge of cellular diversity in organisms along with the ecological role organisms play (autotrophic or heterotrophic nutrition) to classify them into five kingdoms

C 4.2 – Illustrates different levels of organisations of living organisms (from molecules to organisms)

C 4.3 – Analyses different levels of biological organisation from organisms to ecosystems and biomes along with interactions that take place at each level

C 4.4 – Analyses patterns of inheritance of traits in terms of Mendel's laws and its consequences at a population level (using models and/or simulations)

C 4.5 – Analyses evidences of biological evolution demonstrating the consequences of the process of natural selection in terms of changes—in allele frequency in population, structure, and function of organisms

CG 5 – Draws linkages between scientific knowledge and knowledge across other curricular areas

C 5.1 – Explores how literature and arts have influenced Science

C 5.2 – Examines a case study related to the use of Science in human life from the perspective of Social Sciences and Ethics (for example, Marie Curie, Jenner, treatment of patients with mental illnesses, the story of the atomic bomb, green revolution and GMOs, conservation of biodiversity)

C 5.3 – Applies scientific principles to explain phenomena in other subjects (sound pitch, octave, and amplitude in music; use of muscles in dance form and sports)

CG 6 – Understands and appreciates the contribution of India through history, and the present time to the overall field of Science, including the disciplines that constitute it

C 6.1 – Knows and explains the significant contributions of India to all matters (concepts, explanations, methods) that are studied within the curriculum in an integrated manner

CG 7 – Develops awareness of the most current discoveries, ideas, and frontiers in all areas of scientific knowledge in order to appreciate that Science is ever evolving, and that there are still many unanswered questions

C 7.1 – States concepts that represent the most current understanding of the matter being studied, ranging from mere familiarity to conceptual understanding of the matter as appropriate to the developmental stage of the students

C 7.2 – States questions related to matters in the curriculum for which current scientific understanding is well-recognised

CG 8 – Explores the nature of Science by doing Science

C 8.1 – Develops accurate and appropriate models (including geometric, mathematical, graphical) to represent real-life events and phenomena using scientific principles, and use these models to manipulate variables and predict results

C 8.2 – Designs and implements a plan for scientific inquiry (formulates hypotheses, makes predictions, identifies variables, accurately uses scientific instruments, represents data— primary and secondary—in multiple modes, draws inferences based on data, and understanding of scientific concepts, theories, laws and principles, and communicates findings using scientific terminology)

COURSE OUTLINE

CLASS IX (2026-27)

Cell

No. of Periods: 12

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> • Discovery of cell • Plant and animal cells • Prokaryotic and eukaryotic cells • Cell as a structural and functional unit of life; structure and function of key organelles (nucleus, mitochondria, chloroplast, endoplasmic reticulum, vacuoles, plasma membrane, cell wall) • Permeability of cell membranes • Cellular division and cancer • Recent advancement in cell biology 	C-3.1	<ul style="list-style-type: none"> • Differentiate between plant and animal cell, prokaryote and eukaryote • Describe the structural and functional features of cells • Explain the role of cells in the structure and functions of organisms • Explain activities inside the cell and its interactions with the environment • Demonstrate osmosis in cells • Prepare slides to observe cell structure
	C-3.2	<ul style="list-style-type: none"> • Differentiate between diffusion and osmosis
	C-3.3	<ul style="list-style-type: none"> • Explain the role of cell division mitosis and meiosis in creating similarities and variations
	C-4.2	<ul style="list-style-type: none"> • Identify and describe the role of biomolecules in the structure and function of cell
	C-5.2	<ul style="list-style-type: none"> • Cite case study related to the use of science in human life, for example, Leigh Syndrome and mitochondrial dysfunction
	C-5.3	<ul style="list-style-type: none"> • Apply learning of a structure and function of muscles cells or joints in dance form and/or sports
	C-6.1	<ul style="list-style-type: none"> • Discuss significant contributions of India, for example, Professor Arun Kumar Sharma for his work on chromosomes and methods for its studies
	C-7.1	<ul style="list-style-type: none"> • Recognise that the cell is a structural unit of life and functional unit of life processes
	C-7.2	<ul style="list-style-type: none"> • Pose questions, such as — Can we create artificial cell which behaves exactly like a natural living cell?

	C-8.1	<ul style="list-style-type: none"> Exhibit creativity and design models using low cost or no-cost eco-friendly material to study structure and functions of cell and cell organelles
	C-8.2	<ul style="list-style-type: none"> Carry out an experiment to understand the osmosis Analyze result and present finding using scientific terms

Tissues

No. of Periods: 13

Key Concepts		Learning Outcomes
<p>Tissues: Introduction and importance</p> <ul style="list-style-type: none"> Level of organisation in the living organisms Plant and animal tissues Types of plant tissues Meristematic tissues (types and function of each) Permanent tissues (types, structure and function of each) Animal tissues Overview (epithelial, connective, muscular and nervous tissues — types, structure and function of each) Elementary idea of musculoskeletal system Care of musculoskeletal system: injuries, postural care, nutrition and exercise 	C-4.2	<ul style="list-style-type: none"> Differentiate between plant and animal tissues; meristematic and permanent tissues; simple and complex tissues; parenchyma, collenchyma and sclerenchyma; xylem and phloem; striated smooth and cardiac muscles; Different types of joints Relate the structure of the different types of tissues with their functions Explain the role of various types of tissues in plants and animals Describe the level of organisation in a multicellular organism
	C-5.3	<ul style="list-style-type: none"> Establish the correlation between different tissues for fitness, for example, role of muscles, cartilage and bones in facilitating movement
	C-6.1	<ul style="list-style-type: none"> Explain the importance of yoga exercises for physical agility and in maintaining the correct posture
	C-6.1	<ul style="list-style-type: none"> Discuss significant contributions of India, for example, Professor Sipra Guha Mukherjee and Professor S.C. Maheshwari for their significant contribution in the plant cell and tissue culture research in India
	C-7.1	<ul style="list-style-type: none"> Discuss the techniques and medical recommendations in recovery from muscular injuries

	C-8.2	<ul style="list-style-type: none"> Carry out an experiment to understand the growth in plant due to apical meristem Represent data in multiple modes, including appropriate figures, tables, graphs, or digital formats, interpret and draw inferences from the data Analyse results and present findings using scientific terms Communicate findings and conclusions effectively, such as those from experiments, activities, or projects, both orally and in written form
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Reproduction

No. of Periods: 13

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> Introduction to different forms of reproduction — sexual and asexual Types of asexual reproduction with examples Sexual reproduction in flowering plants (flower and its parts, pollination, fertilisation, seed dispersal) Sexual reproduction in humans: male and female reproductive systems (structure and function, formation of gametes, sperm and egg, fertilisation, pregnancy and development of embryo, menstrual cycle) Reproductive health and hygiene Introduction to birth control methods and importance 	C-2.8	<ul style="list-style-type: none"> Analyse the interactions between members of different groups of organisms, such as plants and pollinators
	C-3.2	<ul style="list-style-type: none"> Compare asexual and sexual reproduction Describe male and female reproductive organs in plants and animals Differentiate between ovule and seed; ovary and fruit Explain pollination and fertilisation
	C-3.3	<ul style="list-style-type: none"> Explain how variations are introduced by sexual reproduction
	C-4.3	<ul style="list-style-type: none"> Identify and explain the role of biotic and abiotic agents in seed dispersal and pollination
	C-5.1	<ul style="list-style-type: none"> Illustrate the structure of male and female reproductive units or systems in plants and animals
	C-5.2	<ul style="list-style-type: none"> Recognise the significance of contraceptive devices for population control and health including reproductive health
	C-6.1	<ul style="list-style-type: none"> Describe the contribution of India to the understanding of human anatomy
	C-6.1	<ul style="list-style-type: none"> Discuss significant contributions of India, for example, Professor Panchanan Maheshwari for

		laying the foundation of plant cell and tissue culture research in India
	C-7.1	<ul style="list-style-type: none"> Recognise the importance of improvements in medical field for assisted reproductive technologies
	C-7.2	<ul style="list-style-type: none"> Pose questions, such as — How do heavy metals harm reproductive organs? Can extreme heat affect fertility?

Diversity

No. of Periods: 12

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> Importance of classification Five kingdoms and their key features with examples Major division of animals and plants Binomial nomenclature Acellular entities: viruses 	C-4.1	<ul style="list-style-type: none"> Distinguish organisms based on certain characteristics, such as number of cells present, cellular organisation and mode of nutrition Classify various organisms in groups, such as five kingdoms, on the basis of their cellular organisation and ecological role Describe the significance and rules of binomial nomenclature Apply binomial nomenclature on some common organisms in their surroundings
	C-2.8	<ul style="list-style-type: none"> Analyse the interactions between members of different groups of organisms, such as lichens Discuss ecological role of diverse organisms
	C--7.1	<ul style="list-style-type: none"> Recognise three domains of classification of organisms on molecular basis

Exploring Mixtures and their Separation

No. of Periods: 12

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> Homogeneous and heterogeneous mixtures; Solutions, suspensions, colloids and their properties Various ways to express concentration of solutions (mass by mass percentage of a solution, 	C-1.2	<ul style="list-style-type: none"> Differentiate between homogeneous and heterogeneous mixtures on the basis of their properties Demonstrate separation techniques, such as crystallisation, distillation, paper chromatography, sublimation, centrifugation and coagulation Classify mixtures as solutions, suspensions, or colloids based on their properties Explain the scientific principles behind different

<p>mass by volume percentage of a solution, volume by volume percentage of a solution)</p> <ul style="list-style-type: none"> Separation techniques based on the physical properties of components, including crystallisation, distillation, paper chromatography, sublimation, centrifugation and coagulation 		<p>separation techniques</p> <ul style="list-style-type: none"> Apply the knowledge of homogeneous and heterogeneous mixtures in daily life Define and calculate the concentration of solutions using mass by mass percentage, mass by volume percentage, volume by volume percentage Analyse graphs of solubility and explain how the solubility of substances changes with temperature Use scientific conventions and standard units to express concentrations Handle common laboratory chemicals and apparatus safely Relate separation techniques with practices observed in the local environment
	C-5.1	<ul style="list-style-type: none"> Draw labelled diagrams or flow charts of separation techniques
	C-5.2	<ul style="list-style-type: none"> Display awareness about the societal impact of chemistry in making life healthier, cleaner and sustainable
	C-5.3	<ul style="list-style-type: none"> Correlate the phenomenon used in centrifugation to the spinning dance
	C-6.1	<ul style="list-style-type: none"> Describe the cultural practices, like traditional methods of distillation Display awareness about the contributions of Indian scientists, such as Dilip Mahalanabis
	C-7.1	<ul style="list-style-type: none"> Demonstrate the use of small-scale or micro-scale experiments, such as crystallisation of copper sulfate, as an alternative to traditional methods
	C-7.2	<ul style="list-style-type: none"> Poses question, such as — Can we create artificial blood that works just as real blood for all patients?
	C-8.1	<ul style="list-style-type: none"> Exhibit creativity and work collaboratively in groups to create models of apparatus used for separating mixtures, such as a paperfuge and a distillation unit, using eco-friendly materials
	C-8.2	<ul style="list-style-type: none"> Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, and predict the results of an experiment or investigation based on their hypotheses

		<ul style="list-style-type: none"> • Accurately use scientific instruments, apparatus and chemicals to collect data • Analyse results and findings using scientific terms • Represent findings in multiple modes, including appropriate figures, tables, graphs, or digital formats, and interpret and draw inferences from the findings • Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form
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Structure of an Atom

No. of Periods: 14

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> • Atoms are the basic units of elements • Atoms consist of subatomic particles • Atomic Models (Thomson's Model, Rutherford's Model, and Bohr's Model) • Distributions of electrons in elements (up to 18 elements) • Symbols • Valency as the combining capacity • Atomic number • Mass number • Isotopes • Isobars 	C-1.1	<ul style="list-style-type: none"> • Differentiate between subatomic particles (electrons, protons, and neutrons) based on their charge, and position in the atom • Illustrate how electrons are distributed in different energy levels, such as K, L, M, N ... or by numbers $n = 1, 2, 3, 4 \dots$ • Explain valence electrons, valency, atomic number, atomic mass, isotopes, and isobars • Calculate the number of electrons, protons, and neutrons of an element using its atomic and mass numbers • Interpret data, such as atomic mass, maximum number of electrons in a shell, and valency to classify elements accurately • Use scientific conventions as per international standards, such as notations for electron, proton, neutron, unified atomic mass unit (u), and distribution of electrons in various shells, such as K, L, M, N ...
	C-1.3	<ul style="list-style-type: none"> • Recognise and accurately apply the chemical symbols for the first eighteen elements according to IUPAC
	C-5.1	<ul style="list-style-type: none"> • Draw labelled diagrams of various atomic models, such as Thomson's model, Rutherford's model and Bohr's model • Create and present a role play, stage play, or story of 'Journey Inside the Atom' to display awareness about the contributions of key scientists in the

		discovery and development of atomic structure
	C-5.2	<ul style="list-style-type: none"> • Display awareness about the role of Indian scientists and their contributions to atomic science for peaceful purposes and explore how their works influenced India's scientific development
	C-5.3	<ul style="list-style-type: none"> • Display awareness about the societal impact of science in making life healthier, like the use of various isotopes in medicines to treat different diseases, and atomic energy in power generation • Design and develop games that utilise atomic number, mass number, and subatomic particle clues to accurately predict and identify elements
	C-6.1	<ul style="list-style-type: none"> • Display awareness about the contributions of the ancient Indian philosopher, Acharya Kanad's idea of indivisible particles (Parmanu)
	C-7.1	<ul style="list-style-type: none"> • Describe the use of the atomic mass unit (u) to measure the mass of atoms as per IUPAC recommendations • Describe scientific discoveries that explain how the structure of the atom has evolved over time through various atomic models proposed by different scientists
	C-7.2	<ul style="list-style-type: none"> • Pose question, such as—is it possible to completely understand everything that happens inside an atom?
	C-8.1	<ul style="list-style-type: none"> • Exhibit creativity and work collaboratively in groups to design different models of atoms
	C-8.2	<ul style="list-style-type: none"> • Formulate hypotheses about scientific phenomena by applying prior knowledge and understanding of scientific concepts, and predict the results of data based on the hypotheses • Analyse results and present findings using scientific terms • Correlate the results and conclusions of different models of atomic structure • Represent data in multiple modes, including appropriate figures, tables, graphs or digital formats, and interpret and draw inferences from the data

		<ul style="list-style-type: none"> Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form
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Atoms and Molecules

No. of Periods: 14

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> Law of conservation of mass Law of constant proportion Dalton's Atomic theory Molecules of elements, Molecules of covalent compounds and their properties Ions, Ionic compounds and their properties Writing chemical formulae Molecular mass Formula unit mass 	C-1.1	<ul style="list-style-type: none"> Differentiate between chemical species based on their properties or characteristics, such as atoms and molecules, elements and compounds, ionic and covalent compounds, cations and anions, formula unit mass and molecular mass Plan and demonstrate activities to observe and verify the law of conservation of mass Explain the Dalton's atomic theory, the law of conservation of mass, the law of constant proportions, and formation of ionic and covalent compounds Calculate the charge on an ion, valency from the atomic number, the molecular and formula unit mass Use scientific conventions, symbols, and valency to write the chemical formulae of simple compounds Display awareness about the scientific discoveries, such as the contributions of Antoine Lavoisier, Joseph Proust, and John Dalton Handle common laboratory chemicals and apparatus safely
	C-5.1	<ul style="list-style-type: none"> Draw diagrams of electron dot structures of atoms and molecules
	C-5.2	<ul style="list-style-type: none"> Describe how atoms and molecules can lead to beneficial applications, such as medicine, energy and peaceful use of atomic science Relate atomic bonding to social bonding
	C-5.3	<ul style="list-style-type: none"> Design educational games to write chemical formulae using symbols
	C-6.1	<ul style="list-style-type: none"> Display awareness about the contributions of Indian scientists in promoting the peaceful use of atomic energy and the traditional use of the red pigment 'cinnabar' obtained from rocks

	C-7.1	<ul style="list-style-type: none"> Describe the basic concepts that matter are made of particles; elements combine in fixed ratios to form compounds; the law of conservation of mass; and different types of bonding (ionic and covalent)
	C-7.2	<ul style="list-style-type: none"> Pose question, such as — Are there any chemical changes that do not obey the law of conservation of mass?
	C-8.1	<ul style="list-style-type: none"> Exhibit creativity and work collaboratively in groups to construct simple models of compounds
	C-8.2	<ul style="list-style-type: none"> Formulate hypotheses about scientific phenomena by applying prior knowledge and understanding of scientific concepts and laws, and predict the results of data based on the hypotheses Accurately use scientific instruments, apparatus and chemicals to collect data Analyse results and findings using scientific terms Represent data in multiple modes, including appropriate figures, tables, graphs or digital formats Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form

Earth as a System: Energy, Matter & Life

No. of Periods: 12

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> Earth as interconnected system Nature of solar energy: solar radiation, electromagnetic spectrum, and speed of light Solar energy interaction with the Earth's Surface and differential heating of the Earth (the role of the atmosphere and the Earth's surface) Differential warming of the Earth causes winds 	C-2.8	<ul style="list-style-type: none"> Explain the interconnectedness between different spheres of the Earth (biosphere, geosphere, hydrosphere, cryosphere and atmosphere) Explain the nature of solar radiation Explain that solar radiation is an electromagnetic waves having different Frequencies Explain how heat from the Sun warms the Earth's surface differently based on the shape, latitude and tilt of the Earth Explain the interaction of solar radiation with the Earth's surface and relate the differential heating of the Earth's surface with the atmospheric phenomena, such as air movement, evaporation, etc., and describe phenomena like mountain, valley, sea and land breezes

<ul style="list-style-type: none"> • Biogeochemical cycles (water cycle, carbon cycle, nitrogen cycle, oxygen cycle) • Human impact on Earth's system 		<ul style="list-style-type: none"> • Describe how the latitude and tilt of the Earth, and absorption and reflection of solar radiation by different surfaces cause differential heating of the Earth's surface • Identify various components of the Earth that interact with solar energy • Explain the role of the atmosphere in influencing weather and climate on the Earth • Identify the reflectivity of different materials through reliable scientific sources, such as the internet and books • Describe how elements like carbon, nitrogen, oxygen and water are recycled between biotic and abiotic environments • Explain biogeochemical cycles, and the roles of biogeochemical cycles in circulating matter and energy continuously between the non-living environment (abiotic) and living (biotic) organisms, making nutrients available, and maintaining environmental balance
	C-6.1	<ul style="list-style-type: none"> • Reflect the changing nature of Earth's environment through our traditional knowledge
	C-7.2	<ul style="list-style-type: none"> • Pose questions, such as — What will happen if there is no differential heating of the Earth?
	C-8.1	<ul style="list-style-type: none"> • Draw flow charts, concept maps for biogeochemical cycles, differential heating of the Earth's surface and Electromagnetic spectrum
	C-8.2	<ul style="list-style-type: none"> • Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of differential heating of the Earth and biogeochemical cycle • Predict the results of an experiment or investigation based on their hypotheses • Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form

Motion**No. of Periods: 13**

Key Concepts		Learning Outcomes
<ul style="list-style-type: none">• Motion — displacement, velocity, acceleration• Graphical representation of motion for an object moving in a straight line in one direction (with constant velocity, and constant acceleration)• Kinematic equations for motion in a straight line with constant acceleration (by graphical method)• Elementary idea of uniform circular motion	C-2.1	<ul style="list-style-type: none">• Differentiate between distance travelled and displacement, and speed and velocity for objects moving in a straight line• Define displacement, velocity, acceleration, and uniform circular motion• Express displacement, velocity, acceleration in appropriate SI units• Plot and interpret position-time graphs and velocity-time graphs to describe the motion of an object moving in a straight line in one direction (with constant velocity and constant acceleration)• Calculate average velocity from position-time graph, displacement and average acceleration from velocity-time graph• Derive kinematic equations for motion in a straight line with constant acceleration by graphical method• Calculate values of unknown physical quantities from the given physical quantities, using kinematic equations• Derive the expression of speed for uniform circular motion
	C-8.1	<ul style="list-style-type: none">• Analyse real-life events and phenomena, and identify the key factors that influence their Behaviour.
	C-8.2	<ul style="list-style-type: none">• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles• Predict about the outcome of an experiment or investigation based on their hypotheses• Identify the variables that are relevant to a scientific investigation and determine how to control or manipulate them• Accurately use scientific instruments and equipment to collect data• Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data• Communicate their findings using scientific terminology and effectively communicate their conclusions to others

Force and Laws of Motion**No. of Periods: 13**

Key Concepts		Learning Outcomes
<ul style="list-style-type: none">• Force; balanced and unbalanced forces• Force of friction• Newton's first law of motion• Newton's second law of motion• Newton's third law of motion	C-2.1	<ul style="list-style-type: none">• Explain that force has magnitude as well as direction• Identify situations in which balanced and unbalanced forces are acting on an object• Explain the role of friction on the motion of objects• Recognise that for an object moving with constant velocity, the net force is zero, whereas a change in velocity (acceleration) is caused by a force• State and explain Newton's first law of motion• State and explain Newton's second law in terms of mass and acceleration• Calculate force using mathematical expression of Newton's second law of motion• Define SI unit of force• State and explain Newton's third law of motion• Apply Newton's laws of motion to explain everyday life events
	C-8.1	<ul style="list-style-type: none">• Analyse real-life events and phenomena, and identify the key factors that influence their behaviour• Develop a model to represent real-life event• Use models to manipulate variables and predict results
	C-8.2	<ul style="list-style-type: none">• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles• Predict about the outcome of an experiment or investigation based on their hypotheses• Identify the variables that are relevant to a scientific investigation and determine how to control or manipulate them• Accurately use scientific instruments and equipment to collect data• Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data• Communicate their findings using scientific terminology and effectively communicate their conclusions to others

Work, Energy and Simple Machines**No. of Periods: 13**

Key Concepts		Learning Outcomes
<ul style="list-style-type: none">• Concept of work; work done by a constant force• Work-Energy theorem• Mechanical energy, kinetic and potential energy, and conversion between potential energy and kinetic energy• Conservation of energy• Power• Simple machines and their mechanical advantage (pulley, inclined plane, lever)	C-2.5	<ul style="list-style-type: none">• Define work done by a constant force and its SI unit• Calculate work done by a force using mathematical expression• State work-energy theorem• Explain the concept of energy and state its SI unit• Name forms of energy and identify their interconversion in surroundings (elementary idea)• Define kinetic energy of a moving object and derive its mathematical expression• Define potential energy for an object raised to a height and derive its mathematical expression• Calculate kinetic and potential energy using mathematical expressions• Explain conversion between potential energy and kinetic energy (for the case of an object under free fall)• State the law of conservation of energy• Define power and its unit• Calculate power using its mathematical expression
	C-2.6	<ul style="list-style-type: none">• Identify different simple machines (pulley, inclined plane and lever)• Define mechanical advantage and calculate its value for simple machine• Demonstrate and explain mechanical advantage of simple machines their conclusions to others
	C-8.1	<ul style="list-style-type: none">• Analyse real-life events and phenomena, and identify the key factors that influence their behaviour• Develop model to represent real-life event• Use models to manipulate variables and predict results
	C-8.2	<ul style="list-style-type: none">• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles• Predict about the outcome of an experiment or investigation based on their hypotheses• Identify the variables that are relevant to a scientific

		<p>investigation and determine how to control or manipulate them</p> <ul style="list-style-type: none"> • Accurately use scientific instruments and equipment to collect data • Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data • Communicate their findings using scientific terminology and effectively communicate their conclusions to others
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Sound

No. of Periods: 11

Key Concepts		Learning Outcomes
<ul style="list-style-type: none"> • Production of sound • Propagation of sound (as a longitudinal wave through a medium) • Graphical representation of sound wave • Characteristics of sound wave (wavelength, frequency, time period, amplitude, intensity, speed) • Human perception of sound (pitch, loudness) • Propagation of sound in different media (solid, liquid) • Reflection of sound (echo, reverberation), echolocation 	C-2.7	<ul style="list-style-type: none"> • Demonstrate the production of sound in multiple ways (through vibration of strings, membranes, air columns) using materials in surroundings • Explain that sound is produced by vibrations • Demonstrate that sound can travel through different mediums (air, solid and liquid) • Describe that sound needs a medium for propagation • Explain that sound travels as a longitudinal wave • Describe the characteristics of sound waves the (wavelength, frequency, time period, amplitude, intensity and speed) • Analyse graphs representing sound • Write relationship between time period and frequency of sound wave • Derive mathematical expression for speed of sound • Calculate speed of sound using its mathematical expression • Explain human perception of sound in terms of audible range, loudness and pitch of sound • Describe reflection of sound, and apply it to echo and reverberations in surroundings • Explain the use of sound waves for echolocation
	C-5.3	<ul style="list-style-type: none"> • Describe music in terms of characteristics of sound waves, such as loudness and pitch
	C-6.1	<ul style="list-style-type: none"> • Name historical buildings designed for echoes, such as whispering gallery of Gol Gumbaz

		<ul style="list-style-type: none"> • Display awareness about Sir C.V. Raman
	C-8.1	<ul style="list-style-type: none"> • Analyse real-life events and phenomena, and identify the key factors that influence their behaviour • Develop model to represent real-life event • Use models to manipulate variables and predict results
	C-8.2	<ul style="list-style-type: none"> • Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles • Predict about the outcome of an experiment or investigation based on their hypotheses • Identify the variables that are relevant to a scientific investigation and determine how to control or manipulate them • Accurately use scientific instruments and equipment to collect data • Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data • Communicate their findings using scientific terminology and effectively communicate their conclusions to others

Practical will be announced shortly.

Assessment Structure	Marks
Annual Examination (03 hrs.)	80 Marks
Internal Assessment <ul style="list-style-type: none"> • Periodic Assessment - 05 marks + 05 marks • Subject Enrichment (Practical Work) - 05 marks • Portfolio - 05 marks 	20 Marks
Total	100 Marks

PRESCRIBED BOOKS:

- Science-Textbook for class IX-NCERT Publication
- Assessment of Practical Skills in Science-Class IX - CBSE Publication
- Laboratory Manual-Science-Class IX, NCERT Publication
- Exemplar Problems Class IX – NCERT Publication

Social Science
Subject Code-087
Class - IX (2026-27)

RATIONALE

The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive and contributing citizens for building an equitable, inclusive and plural society as envisaged by our Constitution. [NEP 2020, pages 4-5]

Social Science is a compulsory subject at Secondary Stage Phase-I of school education. Social Science can play a unique role within the school curriculum to enable Knowledge, Capacities, and Values and Dispositions that underpin the purpose of education as committed to in NEP 2020.

The teaching and learning of Social Science at the secondary stage is aligned with the transformational vision of the National Curriculum Framework for School Education (NCF-SE) 2023 and the National Education Policy (NEP) 2020. The NCF-SE 2023 emphasises learning, i.e., competency-based, inquiry-oriented, and rooted in Indian Knowledge Systems (IKS) and lived realities. The deliberate reduction of content load with a focus on core concepts rather than memorisation, creates space for discussion, exploration, and deep understanding. The framework's call for interdisciplinarity encourages students to draw meaningful connections across disciplines and relate classroom learning to real-life contexts and experiences.

Furthermore, the NCF-SE 2023 envisions rootedness in India, in which learning is grounded in India's diverse heritage and intellectual traditions, while also being combined with a global outlook. Within this perspective, Social Science education engages students with India's historical experiences, democratic values, and patterns of economic and social development, geographical understanding alongside global processes and contemporary challenges. By integrating the aims of the NEP 2020, Social Science education seeks to transform learning into a process that builds knowledge, capacities, and values essential for personal growth, social harmony and national progress.

Social Science at the secondary stage is an integrated study of human society like its evolution, structures, and dynamics through the disciplines of History, Geography, Political Science, and Economics. It explores how societies function and transform over time through the interplay of historical, geographical, cultural, political, economic, and environmental forces. The subject goes beyond the factual understanding to include inquiry, interpretation, and analysis.

Students learn to source and validate information, interpret data and evidence, and construct logical explanations, thus fostering critical and reflective thinking. It also cultivates empathy, respect for diversity, and a sense of justice and responsibility — values that reflect India's intellectual traditions of reasoning, dialogue, and debate as pathways to truth and understanding.

AIMS & OBJECTIVE

As per NCF- 2023, the aims of teaching Social Science in school education can be summarised as follows:

- a. Develop disciplinary knowledge and understanding of how society functions through an interplay of historical, geographical, social, economic, and political factors.

This can be enabled through:

- i. an understanding of continuity and change in human civilisation, its causation and effect and its impact on modern life.
 - ii. an understanding of the interaction between nature and human beings, the spatial patterns arising out of this interaction and its effect on human life.
 - iii. an awareness and understanding of the diversity of people and their practices in different societies, regions and cultures within societies.
 - iv. an awareness of various social, political and economic institutions, their origin, functioning and transformations over time.
- b. Develop an understanding and appreciation for the methods of enquiry relevant to Social Science and deepen students' skills to engage with the key questions and issues confronting society.

These could be specifically seen as:

- i. Skills in sourcing evidence, interpreting them, checking through multiple sources and evidences and constructing a coherent narrative.
 - ii. Skills in recognizing spatial patterns, map-reading, interpretation and analysis of various interconnected concepts and processes.
 - iii. Skills of creative and analytical thinking to form informed opinions, demonstrate logical decision-making and incline towards a problem- solving attitude.
 - iv. Skills to collect, organize, analyse, represent, and present data and information on various historical, geographical, and socio-political issues.
 - v. Skills to question unsubstantiated ideas, biases, stereotypes, and assumptions to foster scientific temper and propose meaningful responses to contemporary concerns of society.
- c. Foster ethical, human, and Constitutional values:

As the NEP 2020 emphasises to foster a “democratic outlook and commitment to liberty and freedom; equality, justice, and fairness; embracing diversity, plurality, and inclusion; humaneness and fraternal spirit; social responsibility and the spirit of service; ethics of integrity and honesty; scientific temper and commitment to rational and public dialogue; peace; social action through Constitutional means; unity and integrity of the nation, and a true rootedness and pride in India with a forward-looking spirit to continuously improve as a nation.

NOTE-Refer to NCF-2023-Page no-320-323

In alignment with the NEP 2020, Social Science education seeks to develop responsible human beings capable of rational thought and action, possessing compassion, empathy, courage, resilience, scientific temper, and creative imagination — qualities that prepare them to contribute meaningfully to the nation and humanity.

Studying Social Science is essential for developing informed, empathetic, and active citizens. It enables learners to situate themselves within broader social, cultural and environmental contexts, and to recognise their role in shaping them. Through this subject, students understand the origins of democratic values, Constitutional principles, and India's civilisational ethos of unity in diversity. They also develop awareness of pressing issues such as inequality, conflict, environmental degradation and economic challenges, and learn to respond to them with evidence-based reasoning and ethical reflection. Social Science thus, bridges knowledge and action, encouraging learners to think critically about society and participate responsibly and effectively in it.

CURRICULAR GOALS-CG

As per NCF 2023 - At the Secondary Stage, students will go into details to understand India's past and appreciate its complexity, diversity, and unity brought about by cultural integration and the sharing of knowledge traditions across geographical and linguistic boundaries. NCF 2023 Page no -154

- CG-1 Understands and analyses the important phases in Indian history and draws insights to understand present-day India
- CG -2 Analyses the important phases in world history and draw insight to understand the present-day world
- CG-3 Understands the idea of a nation and the emergence of the modern Indian Nation
- CG -4 Develops an understanding of the inter-relationship between human beings and their physical environment and how that influences the livelihoods, cultural diversity, and biodiversity of the region
- CG -5 Understand the Indian Constitution and explores the essence of Indian democracy and the characteristics of a democratic government.
- CG -6 Understand and analyse social, cultural, and political life in India over time – as well as the underlying historical Indian ethos and philosophy of unity in diversity – and recognises challenges faced in these areas in the past and present and the efforts (being) made to address them
- CG -7 Develop an understanding of the inter-relationship between human beings and their physical environment and how that influences the livelihoods, cultural diversity, and biodiversity of the region
- CG -8 Evaluate the economic development of a country in terms of its impact on the lives of its people and nature
- CG-9 Understand and appreciate the contribution of India through history and present times, to the overall field of Social Science, and the disciplines that constitute it

COMPETENCIES

Competencies are specific learning achievements that are observable and can be assessed systematically. In NCF, Competencies are directly derived from a Curricular Goal and are

expected to be attained by the end of a Stage. The following competencies need to be developed in students to achieve the curricular goals at secondary stage.

- CG-1.1 Explains the historical events and processes using different types of sources with specific examples from Indian history
- CG-1.2 Explains and analyses the chronology of human life on the Indian subcontinent, from prehistory to its civilisational beginnings and beyond, and its relations with other civilisations over time, such as those in Mesopotamia, Greece, Central Asia, China, Southeast Asia, Arabia, and Eastern Africa
- CG-1.3 Traces aspects of continuity and change in different phases of history across the Indian subcontinent (including cultural trends, social and religious trends and reforms, and economic and political transformations)
- CG-1.4 Explains the growth of new indigenous ideas across India in Mathematics, Philosophy, Science and Technology, Medicine, Architecture, Agriculture, Literature and Art, and Social Science (such as zero and the Indian number system, *ahimsa*, the six systems of Indian philosophy, Ayurveda, yoga, the 22 *shrutis* of Indian music, horticulture, use of herbs and spices, etymology, meters, and grammar) and how they affected the course of the Indian history
- C-2.1 Explains historical events and processes with different types of sources with specific examples from India and world history.
- C-2.3 Traces aspects of continuity and change in different phases of world history (including cultural trends, social and religious reforms, and economic and political transformations)
- C-2.4 Explains the growth of new ideas and practices across the world (including humanism, mercantilism, industrialisation, scientific developments and explorations, imperialism, colonialism, the rise of the new nation states across the world, and various technologies including the most current) and how they affected the course of world history.
- C-2.5 Recognises the various practices that arose, such as those in C- 2.4, and came to be condemned later on (such as racism, slavery, colonial invasions, conquests, and plunder, genocides, exclusion of women from democratic and other institutions), all of which have also impacted the course of world history and have left unhealed wounds.
- C 3.1 Analyses the meaning of nation and how the concept evolved over time across the world and in the specific context of India, including its roots in the rich civilisational history of the Indian subcontinent
- C3.2 Identifies and analyses important phases of the Indian national freedom struggle against British colonial rule, with special reference to the movement led by Mahatma Gandhi and other important figures as well as those that led to independence, and understands the specific Indian concepts, values, and methods (such as Swaraj, Swadeshi, passive resistance, fight for dharma self- sacrifice, *ahimsa*) that played a part in achieving Independence.
- C-4.1 Locates physiographic regions of India and the climatic zones of the world on a globe/map.
- C-4.2 Explains important geographical concepts, characteristics of key landforms, their origin, and other physical factors of a region
- C-4.3 Draws inter- linkages between various components of the physical environment, such as climate and relief, climate and vegetation, vegetation, and wildlife.
- C-4.4 Analyses and evaluates the inter- relationship between the natural environment and human beings and their cultures across regions and, in the case of India, the special environmental ethos that resulted in practices of nature conservation

- C-4.5 Critically evaluates the impact of human interventions on the environment, including climate change, pollution, shortages of natural resources (particularly water), and loss of biodiversity; identifies practices that have led to these environmental crises and the measures that must be taken to reverse them.
- C-4.6 Develops sensitivity towards the judicious use of natural resources (by individuals, societies, and nations) and suggests measures for their conservation
- C-5.1 Understands that the Indian Constitution draws from the great cultural heritage and common aspirations of the Indian nation, and recalls India's early experiments with democracy (assemblies in *Mahajanapadas*, kingdoms and empires at several levels of the society, guilds *sanghas* and *ganas*, village councils and committees, *Uthiramerur* inscriptions)
- C-5.2 Appreciates fundamental Constitutional values and identify their significance for the prosperity of the Indian nation.
- C-5.3 Explains that fundamental rights are the most basic human rights, and they flourish when people also perform their fundamental duties
- C-5.4 Analyses the basic features of a democracy and democratic government – and its history in India and across the world – and compares this form of government with other forms of government.
- C-5.5- Analyses the critical role of non-state and non-market participants in the functioning of a democratic government and society, such as the media, civil society, socio-religious institutions, and community institutions
- C-6.1 Understands how the Indian ethos and the cultural integration across India did not attempt uniformity, but respected and promoted a rich diversity in Indian society, and how this harmonisation and unity in diversity, with a historical respect for all cultures, women have counted among India's great strengths by promoting peaceful coexistence
- C-6.2 Understands that despite C-6.1, forms of inequality, injustice, and discrimination have occurred in different sections of society at different times (due to internal as well as outside forces such as colonisation), leading to political, social, and cultural efforts, struggles, movements, and mechanisms at various levels towards equity, inclusion, justice, and harmony, with varying outcomes and degrees of success.
- C 6.3 Analyses aspects of differential treatment or discrimination that may exist in the Indian society, based on, socio-cultural background, region, language spoken, and what individuals and societies can do to eradicate such differential treatment
- C 6.4 Understands that a progressive society and nation, such as India is one that recognises not only its civilisational strengths but also its socio-economic, cultural and political challenges, and continuously makes efforts to address those challenges to become ever more prosperous, inclusive, just, and harmonious
- C-7.1 Defines key features of the economy, such as, production, distribution, demand, supply, trade, and commerce, and factors that influence these aspects (including technology)
- C-7.2 Evaluates the importance of the three sectors of production (primary, secondary, and tertiary) in any country's economy, especially India
- C-7.3 Distinguishes between 'unorganised' and 'organised' sectors of the economy and their role in production for the local market in small, medium, and large-scale production centres (industries), and recognises the special importance of the so-called 'unorganised' sector in

Indian economy and its connections with the self-organising features of Indian society

- C-7.4 Traces the beginning and importance of large- scale trade and commerce (including e- commerce) between one country and another - the key items of trade in the beginning, and the changes from time to time.
- C-8.1 Gathers, comprehends and analyses data related to income, capital, poverty, and employment in one's locality, region and at the national level. Markets.
- C- 8.2 Understands and analyses the concepts and practices of the range of economic systems — from free market to entirely state-controlled markets.
- C-8.3 Understands these features in the context of ancient India, with its thriving trade, both internal and external, and its well- established trade practices and networks, business conventions, and diverse industries, all of which made India one of the world's leading economies up to the colonial period
- C-8.4 Describes India's recent path towards again becoming one of the three largest economies of the world, and how individuals can contribute to this economic progress.
- C-8.5 Appreciates the connections between economic development and the environment, and the broader indicators of societal wellbeing beyond GDP growth and income.
- C – 9.1 Knows and explains the significant contributions of India to all matters (concepts, explanations, methods) studied within the curriculum, in an integrated manner

Pedagogy for teaching geography should integrate experiential, visual, and analytical approaches to make learning more meaningful and connected to the real world. Effective geography teaching goes beyond textbooks- it involves helping students observe, analyse, and interpret the Earth's surface and human-environment relationships. The use of three-dimensional models enables students to visualise complex geographical processes, such as mountain formation, river systems, and soil profiles, thus making abstract concepts tangible. Field observation is an essential pedagogical tool that promotes experiential learning; by directly engaging with local landscapes, students develop geographical inquiry skills, observation techniques, and data collection abilities. Incorporating Bhuvan images, India's indigenous satellite imagery and mapping platform allow learners to explore their own regions using real-time geospatial data and satellite views, linking classroom knowledge to local realities. Map reading is another fundamental component, as it cultivates spatial awareness, orientation, and the ability to interpret symbols, scales, and coordinates. Likewise, photo interpretation — analysing aerial and satellite photographs — helps students understand the land-use patterns, vegetation cover, urbanisation, and environmental changes. When combined, these methods foster critical thinking, spatial reasoning, and a deeper appreciation of the dynamic Earth systems that geography seeks to explain.

For understanding the past and India's rich heritage, teachers are expected to engage students in the following ways. Firstly, they are expected to analyse inscriptions or edicts (for example, Ashoka's edicts, and Gupta records) to understand how rulers communicated policies, messages, and ethical guidelines to their subjects. Secondly, they are to encourage students to read excerpts or chapters from Indian literary sources that throw light on the social, cultural, and political life of people. Thirdly, they are expected to conduct research and present examples of forts, temples, mosques, and palaces to illustrate cultural, architectural, and political developments in the Indian history. Finally, the teachers should explore and discuss the works of artists and philosophers of the Renaissance period, highlighting their contributions and influence.

Students should be made to locate the extent of various important empires on a world map. They are also expected to investigate and explain the key Indian ideas that shaped the thinking of Western philosophers, scientists, and artists. Finally, students should be encouraged to use a world map to trace India's trade and cultural exchanges with other civilisations, and analyse their patterns and impact.

Transaction of political concepts requires connecting students with evidence, inquiry, and real-world reasoning. Document-based inquiry helps learners explore authentic sources, such as Vedic texts, constitutional excerpts, and letters from national leaders to interpret historical contexts and moral reasoning. Case-based pedagogy, using landmark judgments, maps, and data analysis, builds decision-making and analytical skills, encouraging students to apply theory to practice. Evidence-based learning engages learners with real datasets from Census, NITI Aayog, or UNDP reports to develop data literacy and link concepts like equality and representation with measurable realities. Further, multimedia and experiential approaches use podcasts, documentaries, and archival materials to connect abstract political ideas with real experiences, sharpening students' interpretive and critical listening skills. Visual and graphic organiser-based pedagogy-through charts, tables, and concept maps — supports comprehension, memory, and summarisation by converting complex ideas into structured visuals. Together, these pedagogies transform classrooms into laboratories of civic thinking, empathy, and inquiry. They nurture students as reflective citizens who can interpret evidence, question assumptions, and engage meaningfully with India's democratic processes.

The pedagogy for teaching Economics needs to be interactive, experiential, and inquiry-driven, enabling students to relate economic concepts to real-life situations. Teachers can use role-play activities — such as running a lemonade stall or simulating the circular flow of income with students acting as households, firms, banks, and the government to make ideas like production, income, and expenditure tangible. Class discussions on familiar issues, such as rising vegetable prices during monsoons, help students link classroom learning with everyday experiences and develop critical thinking. Engaging classroom activities and games, like preparing a classroom budget, allow students to understand scarcity, choice, and opportunity cost in a fun and participatory way. The use of visual tools — including maps, pie charts, and graphs — can help students analyse data on GDP, trade, and sectoral trends. The case studies on topics like pollution as an externality, public goods like street lights, or successful entrepreneurs encourage application and deeper reflection. Surveys and field visits to local shopkeepers or MSMEs further bridge theory and practice by exposing students to real market dynamics. Incorporating current resources, such as newspaper articles or the Union Budget fosters analytical skills and awareness of contemporary economic issues. Through this diverse, hands-on approach, learners will move beyond memorisation to active understanding, making Economics relevant, engaging, and empowering

COURSE OUTLINE

Class IX-2026-27

Part 1

S. No.	Theme (time allocation in instructional hours)	Outline/Concepts	Learning Outcomes and Competencies Students will be able to:
1.	Understanding Social Science (4 Hours)	<ul style="list-style-type: none"> • Meaning, scope and relevance of Social Science • Understanding Social Science from an Indian perspective 	<ul style="list-style-type: none"> • Explain the relevance of studying Social Science to understand society, environment, economy, and governance in our lives. • Explain the meaning and scope of Geography, History, Political Science, and Economics as disciplines and recognise their interconnections. • Appreciate diversity, inclusivity, sustainability, and equity as guiding values when studying society and making decisions.
2.	Shaping of the Earth's Surface (8 Hours)	<ul style="list-style-type: none"> • Theory of plate tectonics • Interior of the Earth • Role of weathering and erosion; agents of gradation — river, waves and currents, wind, glaciers, and underground water • Landforms and disasters: earthquakes, landslides, avalanches, Glacial Lake Outburst Flood (GLOF) and duststorms 	<p>C4.2</p> <ul style="list-style-type: none"> • Describe the concept of plate tectonics and analyse its relevance in understanding Earth's dynamics. • Locate major tectonic plates on a world map. • Explain processes of weathering and erosion with suitable examples. • Identify the prominent agents of gradation operating in a given region. • Describe major landforms and explain the processes involved in their formation. • Explain the causes of natural disasters and propose strategies for their mitigation.
3.	Atmosphere and Climate (7 Hours)	<ul style="list-style-type: none"> • Structure and composition; elements of weather and climate • Seasons of India and monsoons • Climate change • Floods • Carbon footprint 	<p>C4.3, C4.4, C4.5</p> <ul style="list-style-type: none"> • Explain the different atmospheric layers and represent them using sketches and diagrams. • Observe and analyse local winds and their impact. • Understand the impact of the Indian monsoon on life, agriculture, and livelihoods across different regions.

			<ul style="list-style-type: none"> • Explain the causes and effects of climate change. • Represent climatic data (temperature, rainfall, etc.) through appropriate graphs, charts, or diagrams. • Analyse how climate change influences the frequency and intensity of natural disasters.
4.	Early Humans and Beginning of Civilisation (9 Hours)	<ul style="list-style-type: none"> • Cultural development from 2 million years ago • Early human history, periodisation: Archaeological ages • Who are human ancestors? • Palaeolithic hunter-gatherers and use of stone tools 	<p>C1.2, C2.1, C2.2, C2.3</p> <ul style="list-style-type: none"> • Describe how prehistoric time divisions are organised. • Explain how humans lived before the invention of writing • Understand the beginning of the settled life with development of agriculture, and domestication of plants and animals. • Explore the factors of urban development and transformation through time.
		<ul style="list-style-type: none"> • Mesolithic transition to food production: Mesolithic sites and tools • Neolithic and the beginning of farming: Neolithic revolution domestication of plants and animals • Harappan and contemporary cultures • Mesopotamian, Egyptian, and Chinese civilisation 	<ul style="list-style-type: none"> • Appreciate the diversity of crafts and trade, and their role the establishment of prosperous economy. • Understand the diversity of food habits. • Describe the social, political, and religious structures of the civilisations of Egypt and Mesopotamia.
5.	State and Society (upto 1000 CE) (9 Hours)	<ul style="list-style-type: none"> • Vedic Age — geography; texts; rituals; political institutions, and social order • Administrative structure of early empires • Quest for knowledge — educational heritage, institutions, knowledge traditions, and cultural practices 	<p>C1.3, C2.3, C3.1, C1.4</p> <ul style="list-style-type: none"> • Explain various facets of Vedic society and polity. • Appreciate the achievements of Indian empires and their cultural legacy. • Understand the knowledge traditions and practices of India. • Understand the foundations of the Indian social and political institutions and their continuity.

		<ul style="list-style-type: none"> • Traders and trade routes, guilds and merchants, crafts and industries 	
6.	Democracy (9 Hours)	<ul style="list-style-type: none"> • Meaning features and types of democracy • Roots of democracy in India • Challenges to democracy in India • Democratic systems in the world 	<p>C5.1, C5.2</p> <ul style="list-style-type: none"> • Understand the features of democracy. • Appreciate early democratic traditions in India and how they influenced modern democracy. • Differentiate between parliamentary and presidential systems. • Identify examples of both systems across countries, such as India, USA, France, Russia, and Canada.
7.	Elections (9 Hours)	<ul style="list-style-type: none"> • Factors of importance of elections • Electoral systems • Delimitation Commission • Election Commission of India and its role • Constituency, electoral rolls, enumerators • Party system in India 	<p>C5.2, C5.3, C5.4, C5.5, C6.2, C6.3, C6.4, C9.1</p> <ul style="list-style-type: none"> • Identify factors highlighting importance of elections in a democracy. • Categorise three types of electoral systems and list examples. • Identify the major laws that govern the conduct of elections in India. • Describe the main provisions of the Representation of the People Acts. • Define the concept of delimitation and its purpose in the Indian electoral system. • Identify the role and functions Election Commission of India (ECI) in the electoral process. • Explain constituency, electoral roll, enumerator. • Understand the party system in India. • Explain the meaning and features of a coalition government in the Indian political system. Explain key provisions of the Anti-Defection Law with reference to political instability and the need for anti-defection measures.
8.	Building Blocks in Economics (7 Hours)	<ul style="list-style-type: none"> • Scarcity of resources, opportunity cost and the need for making choice. What do economists do? 	<p>C8.2</p> <ul style="list-style-type: none"> • Explain the meaning of scarcity, choice, and opportunity cost in everyday life, and economic decision-making. • Describe what economists do and how they study production, distribution, and consumption of goods and services.

		<ul style="list-style-type: none"> • What to produce, how to produce, and for whom to produce? • Difference between market, centrally planned, and mixed economic systems • Welfare economy 	<ul style="list-style-type: none"> • Recognise how economic analysis helps in policy-making and solving real-world issues. • Describe the three central problems of an economy — what to produce, how to produce, and for whom to produce. • Identify and differentiate the characteristics of planned, free market, and mixed economic systems. • Explain the concept of a welfare economy and the importance of social safety nets.
9.	The Price Puzzle: What Drives the Market (8 Hours)	<ul style="list-style-type: none"> • Laws of demand and supply • Real-world deviations from textbook theory, such as in case of necessities, luxury goods, perishable items, and expectations • Some related concepts — price ceilings and market failures (externalities, information asymmetry, public goods) 	<p>C7.1</p> <ul style="list-style-type: none"> • Explain the Law of Demand and Law of Supply with the help of real life examples. • Interpret how changes in price affect the quantity demanded and quantity supplied of goods and services. • Identify the equilibrium price and quantity where demand and supply intersect. • Analyse how changes in market conditions (e.g., increase in demand or supply) lead to surplus or shortage and affect equilibrium. • Explain the concept of price ceilings and how they can lead to shortages or black markets. • Understand market failures and identify their main types. • Understand public goods (non-excludable and non-rival goods like parks or street lighting).

Part 2

S. No.	Theme (time allocation instructional hours)	Outline/Concepts	Learning Outcomes (pertinent) CGs, Cs Students will be able to:
1.	Oceans and Life (7 Hours)	<ul style="list-style-type: none"> • Introduction to ocean relief, movement of ocean water- waves, tides and currents • Marine resources and their significance; open seas, navigation fishing, and livelihood concerns and challenges • Cyclones and 	<p>C4.1, C4.2</p> <ul style="list-style-type: none"> • Explain the movement of ocean waters, including waves, tides, and currents. • Analyse the connections between ocean currents, and global and regional climate patterns. • Understand the importance of marine resources for human livelihoods and ecosystems. • Examine the relationship between oceans, climate, livelihoods, and natural disasters. • Highlight key rules, conventions, and

		<p>Tsunamis — early warning systems</p> <ul style="list-style-type: none"> • International maritime rules and regulations 	<p>international agreements governing ocean navigation. and the use of marine resources.</p> <ul style="list-style-type: none"> • Explain the need for international cooperation and agreements in the sustainable use of ocean resources. • Construct models or sketches representing ocean relief.
2.	Life on Earth (7 Hours)	<ul style="list-style-type: none"> • Biomes: Distribution and characteristics; biosphere reserves in India • Forest and ecotourism; forest dwellers, their livelihoods, and challenges • Forest and wildlife conservation • Government efforts to support forest dwellers 	<p>C4.3, C4.4, C4.5, C4.6</p> <ul style="list-style-type: none"> • Identify the major biomes of the world and describe their key climatic conditions, characteristic flora, and fauna. • Locate biosphere reserves on the map of India. • Appreciate local traditional practices related to biodiversity conservation and analyse their effects. • Explain the concept and importance of biosphere reserves in conserving ecosystems and biodiversity. • Analyse the concept of ecotourism and discuss its role in promoting sustainable forest ecosystem and conservation. • Investigate the causes of forest fires in the local area, and prepare a plan for mitigation and prevention.
3.	Resistance and Resilience (1000 CE – 1700 CE) (9 Hours)	<ul style="list-style-type: none"> • Safeguarding sovereignty: resistance, alliances and confederacies • Development of art and architecture, languages and literature • The Bhakti tradition • Forts and fortifications • Expansion of Indian economy and state 	<p>C1.3, C1.4, C3.1</p> <ul style="list-style-type: none"> • Explain the cultural, political, and military contributions of regional kingdoms in India. • Appreciate how diverse communities and regions shaped India's history from 1000 CE to 1700 CE. • Explore how regional kingdoms adapted to changing political, economic, and cultural contexts over time. • Analyse the continuity of the civilisational history of India as a nation upto 18th century CE.
4.	India and the World-I (1900 BCE- 1200 CE) (8 Hours)	<ul style="list-style-type: none"> • Trade and commerce — trade with Mesopotamia, Greece, Roman Empire, China and Southeast Asia • Cultural Connections — Interactions with Greece and Rome, Central Asia, China, and Influence on South East Asia 	<p>C1.2, C1.4, C6.1, C2.3, C9.1</p> <ul style="list-style-type: none"> • Explore India's relations with early civilisations of the world. • Identify the major articles of trade and the major trading ports. • Appreciate the significant contributions of India in diverse spheres in an integrated manner. • Appreciate the influence of Indian religion and culture, particularly in Southeast Asia.

		<ul style="list-style-type: none"> • Indian Knowledge Systems — Medicine, Mathematics and Astronomy, Medicine, Religion 	
5.	Authority (10 Hours)	<ul style="list-style-type: none"> • The Roots of Authority: in Kautilya and <i>shukraniti- danda</i> and relationship with <i>nyaya</i> and <i>bala</i>; the types of <i>nyaya</i> and <i>bala</i> • Constitutional status of justice and security since ancient times • Links the role of citizens with the elections and the democratic institutions • Types of authority — functional, sensitive, and welfare-oriented 	<p>C5.1, C5.2, C 5.3</p> <ul style="list-style-type: none"> • Explain the roots of authority in Indian political thought. • Interpret the relationship between <i>Danda</i> (discipline/ force) and <i>Nyaya</i> (justice) as the twin foundations of authority, development, and security. • Trace the evolution of authority structures in India. • Understand the post- independence concept of justice and security. • Illustrate types of authority. • Develop an understanding of citizen discipline, justice, and strength. • Illustrate the role of citizens in authority.
6.	From Ideas to Startups (8 Hours)	<ul style="list-style-type: none"> • What is entrepreneurship and explain the resources required to start a business • Case studies of successful entrepreneurs • Creative destruction with examples • Start-up ecosystem in India. • Make in India initiative, role of MSMEs and the unorganised sector in India's economic growth. • Stages of starting and executing a business idea through a business plan • Some basic accounting concepts 	<p>C7.3</p> <ul style="list-style-type: none"> • Define entrepreneurship and explain its importance in innovation, job creation, and economic growth. • Understand the key resources for business. • Explain how resources are managed to produce goods and services. • Analyse real-world examples of successful entrepreneurs. • Describe the features of India's start-up ecosystem and initiatives like Make in India, Startup India, and Digital India. • Recognise the role of Micro, Small, and Medium Enterprises (MSMEs) and the unorganised sector in promoting employment, innovation, and inclusive growth. • Identify and explain the stages of starting a business from developing an idea to creating and executing a business plan. • Understand simple profit and loss. Identify the key components of a balance.

7.	Smart Ways to Manage Your Finances (6 Hours)	<ul style="list-style-type: none"> • Relevance of personal financial management in daily life • Inflation and its impact on purchasing power • Simple vs. compound interest rate • Budgeting • Various savings and investment options like fixed deposit, stocks, bonds, mutual funds, etc. • Risk and insurance • Personal income tax 	CG8 <ul style="list-style-type: none"> • Explain what personal financial management means and why it is essential in everyday life. • Recognise how managing income, spending, saving, and investment helps achieve financial stability and long-term goals. • Explain the difference between simple interest and compound interest. • Prepare a simple personal or family budget showing income, expenditure, and savings. • Identify various savings and investment instruments. • Understand the relationship between risk and return in different investment types. • Understand the concept of income tax and why citizens are required to pay it.
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Note-Course Structure will be provided shortly

CLASS IX (2025-26)
INTERNAL ASSESSMENT: 20 MARKS

Type of Assessment	Description	Marks
Periodic Assessment	Pen Paper Test	5
Multiple Assessment	Quiz, debate, role play, viva-voce, group discussion, visual expression, interactive bulletin boards, gallery walks, exit cards, concept maps, peer assessment, self- assessment etc. through interdisciplinary project , Report Writing on field visits, Commentaries/visual interpretations, site-map making	5
Subject Enrichment Activity	Project work (Interdisciplinary)	5
Portfolio	Classroom, work done (activities/assignments) reflections, narrations, journals etc. Achievements of the student in the subject throughout the year. Participation of the student in different activities like Heritage India quiz etc.	5

CLASS IX
PRESCRIBED TEXT BOOKS

S. No.	Name of the Book	Publisher
1	Social Science-Part 1	NCERT
2	Social Science-Part 2	NCERT