INDEX

ENGLISH LANGUAGE AND LITERATURE (Code No. 184)
SYLLABUS CLASS – IX (2019-20)
SECTION - WISE WEIGHTAGE

Section		Total Weightage 80
A	Reading Skills	20
B	Writing Skills with Grammar	30
C	Literature Textbook and Supplementary Reading Text	30

Note -The annual board examination will be of 80 marks, with a duration of three hours. There will be internal assessment for 20 Marks.

SECTION A: READING   **50 Periods**

This section will have two reading passages.   20 Marks

1. A Factual passage 300-350 words with eight Objective Type Questions (including Multiple Choice Questions).   8 marks

2. A Discursive passages of 350-400 words with four Short Answer Type Questions to test inference, evaluation and analysis four Objective Type Questions (including Multiple Choice Questions) to test vocabulary.   12 marks

SECTION B: WRITING AND GRAMMAR

For writing tasks there will be internal choice.30 Marks   60 Periods

3: Writing an Article/Descriptive Paragraph (person/place/event/diary entry) in about 100-150 words based on visual or verbal cue/s.The questions will be thematically based on the prescribed books.   8 marks

4: Writing a short story based on a given outline or cue/s in about 150-200 words. **10 marks**

The Grammar syllabus will include the following areas

i. Tenses

ii. Modals

iii. Use of passive voice

iv. Subject – verb concord

v. Reporting

vi. Commands and requests

vii. Statements

viii. Questions

ix. Clauses:

a. Noun clauses

b. Adverb clauses of condition and time

c. Relative clauses

x. Determiners

xi. Prepositions

The above items may be tested through test types(grammar in context) as given below:

5 : Gap filling with one or two words to test Prepositions, Articles, Conjunctions and Tenses. 4 marks

6 : Editing or omission 4 marks

7 : Sentences reordering or sentence transformation in context. 4 marks

SECTION C: LITERATURE TEXTBOOKS   **60 Periods**

There will be Internal Choice for every question .   30 Marks

8. One out of two extracts from prose/poetry/play for reference to the context. Four Objective Type Questions: two questions of one mark each on global comprehension and two questions of one mark each on interpretation.

(1x4=4 marks)

9 Five Short Answer Type Questions from BEEHIVE AND MOMENTS (3 questions out of four from BEEHIVE and 2 questions out of three from MOMENTS) to test local and global comprehension of theme and ideas (to be answered in 30-40 words each)   (2x5=10 marks)

10. One out two long answer type questions from the book BEEHIVE to assess creativity, imagination and extrapolation beyond the text and across the texts. ((to be answered in 100-150 words each)   8 marks

11. One out of two Long Answer Questions from the book MOMENTS on theme or plot involving interpretation, extrapolation beyond the text   and inference or character sketch in about (100-150 words).   8 marks

Prescribed Books: Published by NCERT, New Delhi

- BEEHIVE – Textbook for class IX

- MOMENTS – Supplementary Reader for Class IX

- Words and Expressions-I, Workbook

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ENGLISH LANGUAGE AND LITERATURE (Code No. 184)

Textbooks:Literature Reader- Course (2019-20) CLASS – IX

PROSE (Beehive)	
1. The Fun They Had	7. Packing
2. The Sound of Music	8. Reach for the Top
3. The Little Girl	9. The Bond of Love
4. A Truly Beautiful Mind	10. Kathmandu
5. The Snake and the Mirror	11. If I were you
6. My Childhood	
POETRY	
1. The Road Not Taken	6. No Men Are Foreign
2. Wind	7. The Duck and the Kangaroo
3. Rain on the Roof	8. On Killing a Tree
4. The Lake Isle of Innisfree	9. The Snake Trying
5. A Legend of the Northland	10. A Slumber did My Spirit Seal
SUPPLEMENTARY READER (Moments)	
1. The Lost Child	6. Weathering the Storm in Ersama
2. The Adventures of Toto	7. The Last leaf
3. Iswaran the Storyteller	8. A House is Not a Home
4. In the Kingdom of Fools	9. The Accidental Tourist
5. The Happy Prince	10. The Beggar

ENGLISH LANGUAGE AND LITERATURE (Code No. 184)
CLASS – IX (2019 – 20)   Marks=80

Typology	Testing Competencies	Objective Type Question including MCQs(1 mark each	Short Answer Question 30-40 words (2 marks each)	Long Answer Question 1 100-150 words (HOTS)(8 marks each)	Very Long Answer Question 150-200 words (HOTS) (10 marks each)	T... r...
Reading Comprehension	Conceptual understanding, decoding, analyzing, inferring, interpreting and vocabulary	4 MCQ & 8 Objective Type Questions	4	-	-	
Writing Skill and Grammar	Creative expression of an opinion, reasoning, justifying, illustrating, appropriacy of style and tone, using appropriate format and fluency. Applying conventions, using integrated structures with accuracy and fluency	12	-	1	1	
Literature Textbook and Supplementary Reading Text	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.	4	5	2	-	
Total		1x28=28	2x9=18	8x3=24	10x1= 10	

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UNIT 1

Literature Reader-

F1- The Fun They Had

Key Words-mechanical, patted, screamed, school yard, awfully, laughter

P1- The Road Not Taken

Key Words- claim, trodden, diverged, undergrowth, wanted wear

Supplementary Reader

Ch-1-The lost child

Key Words- gaily, alleys, receding, grove, throngs

Workbook-Unit-1

Grammar-Verbs , Future Time Reference

Writing -Formal and informal letter

ACTIVITY: Speaking Task- The schools of the future will have no books and no teachers.

UNIT 2

Literature Reader-

F2- The Sound Of Music

Keywords-vibrations, prestigious, deteriorated, sheer, pursue, schedule, enormous.

P2- Wind

Key Words-shutters, crumbling, firmly,steadfast,flourish,weaklings

Supplementary Reader

Ch-The Adventures of Toto

Key Words- delicacy, scooping, wrenched, turnstile, quadruped

Workbook -

Unit-2

Grammar- Determiners

Writing -Diary Entry, Story Writing

ACTIVITY

1. Comprehension Passage- Workbook
2. Writing activity- Biographical sketch-Workbook

UNIT 3

Literature Reader-

F3- The Little Girl

Key Words quite, suicide, yawned, snoring, gathered, dragged, damned, whispered, dreadful

P3- Rain On the Roof

Key Words-hover,melancholy,patter,agony,patter,dawn

Supplementary Reader

Ch-3-Iswaran the storyteller

Key Words- dozing, desolate, sprawled, tusker, stamping, grunted

Workbook-Unit-3

Grammar- Modals

Writing – Email Writing, Article Writing

ACTIVITY

1. Listening Activity -Workbook
2. Speaking Activity: "How children accept their parents as persons with their own personality"

UNIT 4

Literature Reader-

F4-A Truly Beautiful Mind

Key Words- destined, appealed dashing, tenderness, lauded, agitating

P4- The Lake Isle of Innisfree

Key words-hive,glimmer,shore,pavements,core

Supplementary Reader

Ch-4 In the Kingdom of Fools

Key Words- jingling, scoundrel, stake, impaling, solemn

Workbook-Unit-4

Grammar- Connectors

Writing –Report Writing, Article Writing,

ACTIVITY : Practice of speaking skills-Extempore

: To find out information about the great visionary "Albert Einstein"

UNIT 5

Literature Reader-

F5-The Snake and the Mirror

Key Words- Meagre, Solitary, Gables, Slithered, Leaden rod, Feebly

P5- A Legend of the Northland

Key words-Curious, Swift, Hearth, Scarlet, Provoke

Supplementary Reader

Ch-5 The Happy Prince 295

Key Words- Glowed, Alighted, Drenched, Thimble, Fanning, Steeple

Work book-Unit-5

Grammar- Active- Passive Voice

Writing - Notice Writing, StoryWriting

ACTIVITY : Debate: 'Our happiness in life depends entirely on our mental attitude'

UNIT 6

Literature Reader-

F6-My Childhood

Key Words- Erstwhile, Austere, Allied Forces, Slot, Halt, Surge

P6- No Men are Foreign

Key words-Beneath, Defile, Dispossess, Outrage, Condemn

Supplementary Reader

Ch-6 Weathering the Storm in Ersama

Key Words- Devastated, Swirled, Menacing, Incessant, Huddled

Workbook-Unit-6

Grammar- Reported Speech

Writing –Article writing, message writing

ACTIVITY

1. Role Play (Group activity)

2. Group discussion on the topic 'Importance of young students in the making of New India'

UNIT 7

Literature Reader-

F7-Packing

Key Words- Uncanny, loll, Perspiration, Chaos, Reigned, Indignantly

P7- The Duck and the Kangaroo

Key words-Nasty, Roo-Matiz, Cloak, Worsted socks, Pale, Bound

Supplementary Reader

Ch-7 The Last Leaf

Key Words-Miner, Fierce, Vine, Janitor, Shivering, Clinging, Tiptoed

Workbook-Unit-7

Grammar- Prepositions

Writing –Diary Entry, speech writing

ACTIVITY Listening Task -Workbook

UNIT 8

Literature Reader-

F8-Reach for the Top

Key Words- Affluent, Culmination, Shyly, Enormity, Indescribable, Pinnacle

F9- The Bond of Love

Key Words- Rescued, shaggy, Panting, Wantonly, Floundering, Sump

P8- On Killing a Tree

Key words-Jab, Leprous hide, Sprouting, Snapped out, Boughs, Twisting

Supplementary Reader

Ch-8 A House is not a Home

Key Words-Tabby, Purring, Swatting, Dazed, Groping, In tow

Workbook-Unit-8

Grammar-Reported Speech

Writing -Story writing, Debate writing

ACTIVITY : Compose and narrate an interesting moral story

: Comprehension Passage-Workbook

UNIT 9

Literature Reader-

F9-Kathmandu

Key Words- Febrile, Corpse, Wilted, Protrudes, Mercenary, Deities, Marzipan

F10- A Slumber did my Spirit Seal

Key Words- Slumber, Diurnal, Earthly Years, Course, Motion

P9- The Snake Trying

Key words-Glides, Reeds, Ripples, Chased away, Pursuing

Supplementary Reader

Ch-9 The Accidental Tourist

Key Words-Lavatory, Self-locking, Dumbstruck, Budge, Clawing, Concourse

Workbook-Unit-9&10

Writing -Article writing, Diary Entry

ACTIVITY Speech : What Freedom means to you.

Integrated grammar based activity- Grammar game

UNIT 10

Literature Reader-

Ch 11- If I Were You

Key words- melodramatic, nonchalant, sarcasm, inflection, pantomime, queer

P10- A Slumber did My Spirit Seal

Key words- Slumber, Diurnal, Earthly years, Course, Motion

Supplementary Reader

Ch-10 The Beggar

Key Words-Copecks, Lodging, Suppliant, Mendicant, Swindling, Perplexity

Workbook-Unit-11

Grammar- Reported Speech and Determiners

Writing -Story writing, Diary Entry

ACTIVITY

1. Declamation on the topic 'Begging should be Banned'

2. Role play of 'If I were you'

MATHEMATICS -IX
(CODE NO. 041) Session 2019-20

The Syllabus in the subject of Mathematics has undergone changes from time to time in accordance with growth of the subject and emerging needs of the society. The present revised syllabus has been designed in accordance with National Curriculum Framework

2005 and as per guidelines given in the Focus Group on Teaching of Mathematics which is to meet the emerging needs of all categories of students. For motivating the teacher to relate the topics to real life problems and other subject areas, greater emphasis has been laid on applications of various concepts.

The curriculum at Secondary stage primarily aims at enhancing the capacity of students to employ Mathematics in solving day-to-day life problems and studying the subject as a separate discipline. It is expected that students should acquire the ability to solve problems using algebraic methods and apply the knowledge of simple trigonometry to solve problems of height and distances. Carrying out experiments with numbers and forms of geometry, framing hypothesis and verifying these with further observations form inherent part of Mathematics learning at this stage. The proposed curriculum includes the study of number system, algebra, geometry, trigonometry, mensuration, statistics, graphs and coordinate geometry, etc.

The teaching of Mathematics should be imparted through activities which may involve the use of concrete materials, models, patterns, charts, pictures, posters, games, puzzles and experiments.

Objectives

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

- consolidate the Mathematical knowledge and skills acquired at the upper primary stage
- acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills
- develop drawing skills
- feel the flow of reason while proving a result or solving a problem
- develop mastery of basic algebraic skills
- apply the knowledge and skills acquired to solve problems and wherever possible, by more than one method
- to develop ability to think, analyze and articulate logically
- to develop awareness of the need for national integration, protection of environment, observance of small family norms, removal of social barriers, elimination of gender biases
- to develop necessary skzlls to work with modern technological devices and mathematical softwares
- to develop interest in mathematics as a problem-solving tool in various fields for its beautiful structures and patterns, etc
- to develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics
- to develop interest in the subject by participating in related competitions
- to acquaint students with different aspects of Mathematics used in daily life
- to develop an interest in students to study Mathematics as a discipline.

COURSE STRUCTURE CLASS –IX (as prescribed by CBSE)

Units	Unit name	Number of chapters	Marks
I	NUMBER SYSTEMS	CH-1	08
II	ALGEBRA	CH-2,CH-4	17
III	COORDINATE GEOMETRY	CH-3	04
IV	GEOMETRY	CH-5,-CH-6,CH-7,CH-8,CH-9, CH-10,CH-11	28
V	MENSURATION	CH-12,CH-13	13
VI	STATISTICS &PROBABILITY	CH-14,CH-15	10
	TOTAL		80

COURSE STRUCTURE CLASS –IX (to be followed in class)

UNIT NUMBER	CHAPTER NAME
I	Ch 1-Number System
II	Ch 2-Polynomials
III	Ch 6-Lines and angles
	Ch 10-Circles
IV	Ch 5 Introduction To Euclid's Geometry
V	Ch 7- Triangles
	Ch 15- probability
VI	Ch-3 Coordinate geometry
	Ch-12 Heron's formula
VII	Ch 8- Quadrilaterals
VIII	Ch 14- Statistics
	Ch 9- Areas Of Parallelograms And Triangles
IX	Ch 4 – Linear Equations In Two Variables
X	Ch 13- Surface Areas And Volumes
	Ch 11- Constructions
Total	

15

UNIT I: NUMBER SYSTEMS

KEYWORDS: Real numbers, rational numbers, irrational numbers, number line

CHAPTER 1- REAL NUMBERS

1. Review of representation of natural numbers, integers, rational numbers on the number line. Representation of terminating / non-terminating recurring decimals on the number line through successive magnification. Rational numbers as recurring/ terminating decimals. Operations on real numbers.

2. Examples of non-recurring/non-terminating decimals. Existence of non-rational numbers (irrational numbers) such as $\sqrt{2}, \sqrt{3}$ and their representation on the number line. Explaining that every real number is represented by a unique point on the number line and conversely, viz. every point on the number line represents a unique real number.

3. Definition of nth root of a real number.

4. Existence of $\sqrt{x}$ for a given positive real number x and its representation on the number line with geometric proof.

5. Rationalization (with precise meaning) of real numbers of the type

$1/(a+b\sqrt{x})$ and $1/(\sqrt{x}+\sqrt{y})$ (and their combinations) where x and y are natural number and a and b are integers.

6. Recall of laws of exponents with integral powers. Rational exponents with positive real bases (to be done by particular cases, allowing learner to arrive at the general laws.)

ACITIVITIE: i) Square root spiral of natural numbers (lab Activity)

ii) Real number system by paper cutting and pasting

UNIT II

CHAPTER 2-POLYNOMIALS

KEYWORDS: Polynomial, Monomial, Binomial, Trinomial, Constant

Polynomial, Linear Polynomial, Quadratic Polynomial and Cubic Polynomial.

Content:

Definition of a polynomial in one variable, with examples and counter examples. Coefficients of a polynomial, terms of a polynomial and zero polynomial. Degree of a polynomial. Constant, linear, quadratic and cubic polynomials. Monomials, binomials, trinomials. Factors and multiples. Zeros of a polynomial. Motivate and State the Remainder Theorem with examples. Statement and proof of the Factor Theorem. Factorization of $ax2 + bx + c$, a ? 0 where a, b and c are real numbers, and of cubic polynomials using the Factor Theorem.

Recall of algebraic expressions and identities. Verification of identities:

$$(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$$
$$(x \pm y)^3 = x^3 \pm y^3 \pm 3xy\,(x \pm y)$$
$$x^3 \pm y^3 = (x \pm y)(x^2 \mp xy + y^2$$
$$x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)$$

and their use in factorization of polynomials.

UNIT III

CHAPTER 6 : LINES AND ANGLES

KEYWORDS : Collinear points, Line Segment, Lines, Angles and Triangles.

Content:

1. (Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 1800 and the converse.

2. (Prove) If two lines intersect, vertically opposite angles are equal.

3. (Motivate) Results on corresponding angles, alternate angles, interior angles

when a transversal intersects two parallel lines.

4. (Motivate) Lines which are parallel to a given line are parallel.

5. (Prove) The sum of the angles of a triangle is 180°.

6. (Motivate) If a side of a triangle is produced, the exterior angle so formed is equal to the sum of the two interior opposite angles.

ACTIVITIES:

1. If two lines intersects then (A) Sum of all four interior angles is 360^0 .

   (B) Sum of two adjacent angles is 180^0.

CHAPTER 10 : CIRCLES

KEYWORDS: Circle, Circular Region, Circumference of a Circle, Chord of a circle, Diameter of a circle, semicircle, Arc of a circle , Concentric circles, Sector of a circle, Cyclic Quadrilateral, Congruent circles.

Content:

Through examples, arrive at definition of circle and related concepts-radius, circumference, diameter, chord, arc, secant, sector, segment, subtended angle.

1. (Prove) Equal chords of a circle subtend equal angles at the center and (motivate) its converse.

2. (Motivate) The perpendicular from the center of a circle to a chord bisects the chord and conversely, the line drawn through the center of a circle to bisect a chord is perpendicular to the chord.

3. (Motivate) There is one and only one circle passing through three given non-collinear points.

4. (Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the center (or their respective centers) and conversely.

5. (Prove) The angle subtended by an arc at the center is double the angle sub tended by it at any point on the remaining part of the circle.

6. (Motivate) Angles in the same segment of a circle are equal.

7. (Motivate) If a line segment joining two points subtends equal angle at two other points lying on the same side of the line containing the segment, the four points lie on a circle.

8. (Motivate) The sum of either of the pair of the opposite angles of a cyclic quadrilateral is 180° and its converse.

ACTIVITIES:

• Angles in same segment of circle (Lab activity)

• Opposite angles of cyclic quadrilateral (Lab activity)

UNIT IV

CHAPTER 5 : INTRODUCTION TO EUCLID'S GEOMETRY

KEYWORDS : Geometry, Axioms, Postulates ,Euclidean and Non-Euclidean.

Content :

History - Geometry in India and Euclid's geometry. Euclid's method of formalizing observed phenomenon into rigorous Mathematics with definitions, common/ obvious notions, axioms/postulates and theorems. The five postulates of Euclid. Equivalent versions of the fifth postulate. Showing the relationship between axiom and theorem, for example:

(Axiom) 1. Given two distinct points, there exists one and only one line through them.

(Theorem) 2. (Prove) Two distinct lines cannot have more than one point in common.

UNIT V

CHAPTER 7: TRIANGLES

KEYWORDS: Triangles , Congruent figures

Content:

1. (Motivate) Two triangles are congruent if any two sides and the included angle of one triangle is equal to any two sides and the included angle of the other triangle (SAS Congruence).

2. (Prove) Two triangles are congruent if any two angles and the included side of one triangle is equal to any two angles and the included side of the other triangle (ASA Congruence).

3. (Motivate) Two triangles are congruent if the three sides of one triangle are equal to three sides of the other triangle (SSS Congruence).

4. (Motivate) Two right triangles are congruent if the hypotenuse and a side of one triangle are equal (respectively) to the hypotenuse and a side of the other triangle. (RHS Congruence)

5. (Prove) The angles opposite to equal sides of a triangle are equal.

6. (Motivate) The sides opposite to equal angles of a triangle are equal.

7. (Motivate) Triangle inequalities and relation between 'angle and facing side' inequalities in triangles.

ACTIVITIES: Angle sum property of triangle.(Lab Activity)

CHAPTER 15 : PROBABILITY

KEYWORDS: Probability, Experiment, Elementary event, Sample space, Trial, Event, Equally likely event ,Exhaustive Events, Mutually Exclusive Event, Favourable event.

Content:

History, Repeated experiments and observed frequency approach to probability.

Focus is on empirical probability. (A large amount of time to be devoted to group and to individual activities to motivate the concept; the experiments to be drawn from real - life situations, and from examples used in the chapter on statistics).

UNIT VI

CHAPTER 3 :COORDINATE GEOMETRY

KEYWORDS: Abscissa ,Ordinate, X- Axis, Y- Axis, Quadrant

Content:

The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, notations, plotting points in the plane.

ACTIVITY : Plotting of points on graph.

CHAPTER 12 : HERON'S FORMULA

KEYWORDS: Area, Perimeter, Diagonal, Regular hexagon.

Content:

Area of a triangle using Heron's formula (without proof) and its application in finding the area of a quadrilateral.

UNIT VII

CHAPTER 8: QUADRILATERALS

KEYWORDS: Quadrilaterals, Trapezium, Parallelogram, Square, Rhombus, Rectangle, Kite.

Content:

1. (Prove) The diagonal divides a parallelogram into two congruent triangles.
2. (Motivate) In a parallelogram opposite sides are equal, and conversely.
3. (Motivate) In a parallelogram opposite angles are equal, and conversely.
4. (Motivate) A quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal.
5. (Motivate) In a parallelogram, the diagonals bisect each other and conversely.
6. (Motivate) In a triangle, the line segment joining the mid points of any two sides is parallel to the third side and in half of it and (motivate) its converse.

ACTIVITY: Quadrilaterals formed by joining mid-points of sides of quadrilateral.

UNIT VIII

CHAPTER 14- STATISTICS

KEYWORDS: Primary data, secondary data, ungrouped data or raw data, mid-value or class mark, class size ,range, frequency, cumulative frequency.

Content:

Introduction to Statistics: Collection of data, presentation of data — tabular form, ungrouped / grouped, bar graphs, histograms (with varying base lengths), frequency polygons. Mean, median and mode of ungrouped data.

CHAPTER 9: AREA OF PARALLELOGRAM AND TRIANGLES

KEYWORDS : Parallelogram, Triangle, Congruent Figure.

Content:

Review concept of area, recall area of a rectangle.

1. Prove) Parallelograms on the same base and between the same parallels have the same area.
2. (Motivate) Triangles on the same (or equal base) base and between the same parallels are equal in area.

ACTIVITY: Area of parallelograms on the same base and between the same parallels.

UNIT IX

CHAPTER 4 : LINEAR EQUATIONS IN TWO VARIABLES

KEYWORDS : Linear, Linear equations in one variable, Linear equations in two variables

Content :

Recall of linear equations in one variable. Introduction to the equation in two variables.

Focus on linear equations of the type ax+by+c=0. Prove that a linear equation in two variables has infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting them and showing that they lie on a line. Graph of linear equations in two variables. Examples, problems from real life, including problems on Ratio and Proportion and with algebraic and graphical solutions being done simultaneously.

ACITIVITY: Activity based on linear graph.

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UNIT X

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SURFACE AREAS AND VOLUMES

Keywords : Cube, Cuboid, Cylinder, Cone, Sphere

Content:

Surface areas and volumes of cubes, cuboids, spheres (including hemispheres) and right circular cylinders/cones.

CHAPTER 11 : CONSTRUCTIONS

KEYWORDS: Construction, Ray, Line segment, Initial   point, Angle bisector , Equilateral triangle.

Content:

Construction of bisectors of line segments and angles of measure 60°, 90°, 45^0 etc., equilateral triangles.

Construction of a triangle given its base, sum/difference of the other two sides and one base angle.

Construction of a triangle of given perimeter and base angles.

MATHEMATICS Code (041)
QUESTION PAPER DESIGN
CLASS – IX (2019-20)

Time:3Hrs.   **Max. Marks: 80**

S. No.	Typology of Questions	Very Short Answer-Objective type (VSA) (1 Mark)	Short Answer-I (SA) (2 Marks)	Short Answer-II (SA) (3 Marks)	Long Answer (LA) (4 Marks)	Total Marks	% Weightage (approx.)
1	**Remembering:** Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	6	2	2	1	20	25
2	**Understanding:** Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	6	1	1	3	23	29
3	**Applying:** Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	5	2	2	1	19	24
4	**Analysing :** Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations **Evaluating:** Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. **Creating:** Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions	3	1	3	1	18	22
	Total	20x1 =20	6x2 =12	8x3=24	6x4=24	80	100

हिन्दी पाठ्यक्रम (सत्र 2019–20)
कक्षा – X

भारत एक बहुभाषी देश है जिसमें बहुत सी क्षेत्रीय भाषाएँ रची बसी हैं। भाषिक और सांस्कृतिक दृष्टि से भिन्न होने के बावजूद भारतीय परंपरा में बहुत कुछ ऐसा है जो एक दूसरे को जोड़ता है। यही कारण है कि मातृभाषा के रूप में अलग भाषा को पढ़ने वाला विद्यार्थी जब दूसरी भाषा के रूप में हिंदी का चुनाव करता है तो उसके पास अभिव्यक्त का एक दृढ़ आधार पहली भाषा के रूप में पहले से ही मौजूद होता है। इसलिए छठी से आठवीं कक्षा में सीखी हुई हिंदी का विकास भी वह तेजी से करने लगता है। आठवीं कक्षा तक वह हिंदी भाषा में सुनने, पढ़ने, लिखने और कुछ–कुछ बोलने का अभ्यास कर चुका होता है। हिंदी की बाल पत्रिकाएँ और छिटपुट रचनाएँ पढ़ना भी अब उसे आ गया है। इसलिए जब वह नवीं एवं दसवीं कक्षा में हिंदी पढ़ेगा तो जहाँ एक ओर हिंदी भाषा के माध्यम से सारे देश से जुड़ेगा वहीं दूसरी ओर अपने क्षेत्र और परिवेश को हिंदी भाषा के माध्यम से जानने की कोशिश भी करेगा, क्योंकि किशोरवय के इन बच्चों के मानसिक धरातल का विकास विश्व स्तर तक पहुँच चुका होता है।

शिक्षण उद्देश्य

*   दैनिक जीवन में हिंदी में समझने–बोलने के साथ–साथ लिखने की क्षमता का विकास करना।

*   हिंदी के किशोर–साहित्य, अखबार व पत्रिकाओं को पढकर समझ पाना और उसका आनंद उठाने की क्षमता का विकास करना।

*   औपचारिक विषयों और संदर्भों में बातचीत में भाग ले पाने की क्षमता का विकास करना।

*   हिंदी के जरिए अपने अनुभव संसार को लिखकर सहज अभिव्यक्ति कर पाने में सक्षम बनाना।

*   संचार के विभिन्न माध्यमों (प्रिंट और इलेक्ट्रॉनिक) में प्रयुक्त हिंदी के विभिन्न रूपों को समझने की योग्यता का विकास करना।

*   कक्षा में बहुभाषिक, बहुसांस्कृतिक संदर्भों के प्रति संवेदनशील सकारात्मक सोच बनाना।

*   अपनी मातृभाषा और परिवेशगत भाषा को साथ रखकर हिंदी की संरचनाओं की समझ बनाना।

शिक्षण युक्तियाँ

*   द्वितीय भाषा के रूप में पढ़ाई जा रही हिंदी भाषा का स्तर पढ़ने और पढ़ाने दोनों ही दृष्टियों से मातृभाषा सीखने की तुलना में कुछ मंथर गति से चलेगा। वह गति धीरे–धीरे बढ़ सके, इसके लिए हिंदी अध्यापकों को बड़े धीरज से अपने अध्यापन कार्यक्रमों को नियोजित करना होगा। किसी भी द्वितीय भाषा में

निपुणता प्राप्त करने–कराने का एक ही उपाय है–उस भाषा का लगातार रोचक अभ्यास करना–करना। ये अभ्यास जितने अधिक रोचक, सक्रिय एवं प्रासंगिक होंगे विद्यार्थियों की भाषिक उपलब्धि भी उतनी ही तेजी से हो सकेगी। मुखर भाषिक अभ्यास के लिए वार्तालाप, रोचक कहानी सुनना–सुनाना, घटना–वर्णन, चित्र–वर्णन, संवाद, वाद–विवाद, अभिनय, भाषण प्रतियोगिताएँ, कविता पाठ और अंत्याक्षरी जैसी गतिविधियों का सहारा लिया जा सकता है।

• काव्य भाषा के मर्म से विद्यार्थी का परिचय कराने के लिए जरूरी होगा कि किताबों में आए काव्यांशों की लयबद्ध प्रस्तुतियों के ऑडियो–वीडियो कैसेट तैयार किए जाएँ। अगर आसानी से कोई गायक/ गायिका मिले तो कक्षा में मध्यकालीन साहित्य के अध्यापन–शिक्षण में उससे मदद ली जानी चाहिए।

• एन. सी. ई. आर. टी. मानव संसाधन विकास मंत्रालय के विभिन्न संगठनों तथा स्वतंत्र निर्माताओं द्वारा उपलब्ध कराए गए कार्यक्रम/ ई सामग्री वृत्तचित्रों और सिनेमा को शिक्षण–सामग्री के तौर पर इस्तेमाल करने की जरूरत है। इनके प्रदर्शन के क्रम में इन पर लगातार बाचीत के जरिए सिनेमा के माध्यम से भाषा के प्रयोग की विशिष्टता की पहचान कराई जा सकती है और हिंदी की अलग–अलग छटा दिखाई जा सकती है।

• कक्षा में सिर्फ एक पाठ्यपुस्तक की उपस्थिति से बेहतर होगा कि शिक्षक के हाथ में तरह–तरह की पाठ्यसामग्री को विद्यार्थी देखें और कक्षा में अगल–अलग मौकों पर शिक्षक उनका इस्तेमाल कर सकें।

• भाषा लगातार ग्रहण करने की क्रिया में बनती है, इसे प्रदर्शित करने का एक तरीका यह भी है कि शिक्षक खुद यह सिखा सकें कि वे भी शब्दकोश, साहित्यकोश, संदर्भग्रंथ की लगातार मदद ले रहे हैं। इससे विद्यार्थियों में इनके इस्तेमाल करने को लेकर तत्परता बढ़ेगी। अनुमान के आधार पर निकटतम अर्थ तक पहुँचकर संतुष्ट होने की जगह वे सटीक अर्थ की खोज करने के लिए प्रेरित होंगे। इससे शब्दों की अलग–अलग रंगत का पता चलेगा, वे शब्दों के बारीक अंतर के प्रति और सजग हो पाएँगे।

• भिन्न क्षमता वाले विद्यार्थियों के लिए उपयुक्त शिक्षण–सामग्री का इस्तेमाल किया जाए तथा किसी भी प्रकार से उन्हें अन्य विद्यार्थियों से कमतर या अलग न समझा जाए।

• कक्षा में अध्यापन को हर प्रकार की विविधताओं (लिंग, धर्म, जाति, वर्ग आदि) के प्रति सकारात्मक और संवेदनशील वातावरण निर्मित करना चाहिए।

कक्षा 9वी हिंदी 'ब' परीक्षा हेतु पाठ्यक्रम विनिर्देशन 2019 – 2020
परीक्षा भार विभाजन

	विषयवस्तु	उप भार	कुल भार
1	अपठित गद्यांश व काव्यांश पर शीर्षक का चुनाव, विषय – वस्तु का बोध अभिव्यक्ति आदि पर अति लघु प्रश्न एवं लघु प्रश्न		
	अ अपठित गद्यांश (100 से 150 शब्दों के) (2×4) (1×1)	9	15
	ब अपठित काव्यांश लघु प्रश्न (विकल्प सहित) (2×3)	6	
2	व्याकरण के लिए निर्धारित विषयों पर विषय – वस्तु का बोध, भाषिक बिंदु /संरचना आदि पर प्रश्न (1×15)		
	1 शब्द और पद (1 अंक)	01	
	2 रचना के आधार पर वाक्य रूपांतर (3 अंक)	03	15
	3 समास (4 अंक)	04	
	4 अशुद्धि शोधन (4 अंक)	04	
	5 मुहावरे (3 अंक)	03	
3	पाठ्यपुस्तक स्पर्श भाग – 2 व पूरक पाठ्यपुस्तक संचयन भाग 2		
	अ गद्य खंड	10	
	1 पाठ्यपुस्तक स्पर्श के गद्य पाठों के आधार पर लघु प्रश्न (2×2) (1×1)	05	
	2 पाठ्य पुस्तक स्पर्श के निर्धारित पाठों (गद्य) पर एक निबंधात्मक प्रश्न (5×1) (विकल्प सहित)	05	
	ब काव्य खंड	10	25
	1 पाठ्यपुस्तक स्पर्श के काव्य खंड के आधार पर लघु प्रश्न (2×2) (1×1)	05	
	2 कविता की समझ पर आधारित एक निबंधात्मक प्रश्न (5×1) (विकल्प सहित)	05	
	स पूरक पाठ्यपुस्तक संचयन भाग – 2	05	
	पूरक पाठ्यपुस्तक संचयन के निर्धारित पाठों से दो प्रश्न पूछे जाएगें जिसमें से एक प्रश्न 3 अंक (विकल्प सहित)(3×1) व दूसरा 2 अंक (2×1) का होगा।	05	

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4	लेखन	
	अ संकेत बिंदुओं पर आधारित समसामयिक एवं व्यावहारिक जीवन से जुड़े हुए किन्ही तीन विषयों में से किसी एक विषय पर 80 से 100 शब्दों में अनुच्छेद (5×1)	5
	ब औपचारिक विषय से संबंधित पत्र।(5×1) (विकल्प सहित)	5
	स एक विषय 20 - 30 शब्दों में सूचना लेखन (5×1) (विकल्प सहित)	5
	द किसी एक स्थिति पर 50 शब्दों के अंतर्गत संवाद लेखन (5×1) (विकल्प सहित)	5 25
	इ विषय से संबंधित 25 - 50 शब्दों के अंतर्गत विज्ञापन लेखन (5×1) (विकल्प सहित)	5
	कुल	**80**

हिन्दी पाठ्यक्रम
कक्षा – 9वीं

UNIT -1

स्पर्श पुस्तक :

पाठ – 2   दुःख का अधिकार

पाठ – 9   रैदास के पद

व्याकरण : वर्ण – विच्छेद, अनुनासिक, अनौपचारिक पत्र, चित्र वर्णन

UNIT -2

स्पर्श पुस्तक :

पाठ – 10   रहीम के दोहे

संचयन पुस्तक

पाठ – 9   गिल्लू

व्याकरण : अनुस्वार, नुक्ता, विज्ञापन लेखन, अनुच्छेद लेखन

क्रिया कलाप नः 1 (भावात्मक कौशल) 'गिल्लू' को ध्यान में रखते हुए पशु पक्षियों के प्रति मनुष्य का व्यवहार कैसा होना चाहिए?

UNIT -3

स्पर्श पुस्तक :

पाठ – 3   एवरेस्ट : मेरी शिखर यात्रा

संचयन पुस्तक

पाठ – 2   स्मृति

व्याकरण   : उपसर्ग, संवाद लेखन

क्रिया कलाप नः 2 (पठन कौशल) किसी भी पर्वतीय स्थल का अनुभव (पढ़ना व लिखना)

UNIT -4

स्पर्श पुस्तक :

पाठ – 11   आदमीनामा

व्याकरण   :   विराम चिह्न, विज्ञापन लेखन, अनुच्छेद लेखन

क्रिया कलाप नः 3 (श्रवण कौशल)

                 आदमी के अच्छे और बुरे गुणों की जानकारी

नोट : –   अध्यापक प्रश्न देंगे Audio व विद्यार्थी उत्तर लिखेंगे।

UNIT - 5

स्पर्श पुस्तक :

पाठ – 14   तुम कब जाओगे अतिथि

व्याकरण   : प्रत्यय, संधि (स्वर संधि), चित्र – वर्णन

UNIT - 6

स्पर्श पुस्तक :

पाठ – 6   कीचड़ का काव्य

व्याकरण   : वर्ण विच्छेद, संधि (स्वर संधि), विज्ञापन लेखन

क्रिया कलाव नः 4 (रचनात्मक कौशल) स्वर संधि का वृक्षारेपण

UNIT -7

स्पर्श पुस्तक :

पाठ – 12   एक फूल की चाह

व्याकरण   : उपसर्ग, प्रत्यय, अनंच्छेद लेखन

क्रिया कलाप नः 2 (पठन कौशल) किसी भी पर्वतीय स्थल का अनुभव (पढ़ना व लिखना)

UNIT - 8

स्पर्श पुस्तक :

पाठ – 7   धर्म की आड़

पाठ – 14   अग्निपथ

संचयन पुस्तक

पाठ – 2   स्मृति

व्याकरण : संधि (व्यंजन संधि), अनौपचारिक पत्र

क्रिया कलाप नः 5 लेखन कौशल) 'अग्निपथ' कविता की सार्थकता

UNIT - 9

स्पर्श पुस्तक :

पाठ – 9   शुक्रतारे के समान

पाठ – 15   (भाग – 1) नए इलाके में

व्याकरण : संधि (विसर्ग संधि), अनुच्छेद लेखन

संचयन पुस्तक

पाठ – 5   हामिद खाँ

UNIT - 10

स्पर्श पुस्तक :

पाठ – 15   (भाग – 2) खूशबू रचते हैं हाथ

संचयन पुस्तक

पाठ – 6   दिये जल उठे

व्याकरण : विराम चिह्न, वर्ण विच्छेद

नोट : गतिविधियों के संबंध में जानकारी अध्यापिका के द्वारा दी जाएगी।

gi kph-004

IX B"thM

(ngp 2019 sIwkou 2020)

; bkBk gohfynk

n) eftsk s/fJeKrh ft7u7 (fJ7e ôpd tkb)   4

2H SN/gôpB-T7so 2 ne tkb/(25 s7 30 ôpdK ft7u)   (3%2) &6
    (ejkDh s/i htBh ft7u7)

3H t7v/T7soK tkb/gôpB (50 s7 60 ôpdK ft7u)   (1%3) &3
    (eftsk, tkose ftu7) (u'D nXkfos)

4H fJeKrh Ôu7 (50 s7 60 ôpdK ft7u)   (1%3) &3
    (u'D nXkfos)

fBoXkfos gkm-g7; seK

1H ;kfjse feoBK -1

    ekft-ouBktK - 1H cohdk i /s{nefb bshø7 (ô7y øohd)
                   2H f; wb o7y7; okfJok (r7p{BkBe d7t i h)
                   3H ; wK (GkJh tho f; 7x)
                   4H w7gi kph, gi kp dk ofj D tkbk (cho'÷dhB ôoø)
                   5H o7y (fôte7wko pNkb th)

    tkose -   1H e7pvh (fg7j ; otD f; 7x)
                   2H r gpk÷ (fgnkok f; 7x dksk)
                   3H ; t7-o7fynk (; kX{f; 7x nKub)
                   4H gi kph fto; k (j oe7ô f; 7x efj b)

2H ;kfjse or -1

    ejkDhnK -   1H fJ7e ; XkoD nkdwh (; 7s7y f; 7x Xho)
                   2H gôp7ô Bk s{s'oh7 pkpbk (p7s f; 7x u7mk)
                   3H d7X s/g7s (pfu7s e'b)

    fJeKrh   -   feos dk ; fseko (vkH7 j ouoB f; 7x)

    i htBhnK -   1H eosko f; 7x ; okGk (vkH7 j op7; f; 7x uktbk)

    2H g7bkV dh goh-ebgBk uktbk (; 7Bhb e7wko p7dh)

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fBoXkos rshftXhnK (Suggested Topics for Activity)

1H ; b/y   2H rgpk÷ (fgnkok f;x dksk)

3H GkôD w[ekpbk   4H tkd-fttkd

5H e[fJ÷ (g[pB'soh)   6H BkNe w[uD

7H fdB-fsTj[ko pko/i kDekoh   8H b'erhs

9H g[pksB ;[fGnkuko   10H ubs xNBktK dk toDB

BN- 1H ftfdnkoEh dk w[pKeD Tgo'es fdIs/rJ/fdôk-fBodôK nB[;ko ehsk i kt/

.

  2H w[pKeD ftô/Bkb ;p[Xs nfXnkge s/; e[b w[yh tIbIfBoXkos nfXnkge
       dh fBrokBh j/m j't/rk.

SYLLABUS 2019-20

CLASS- IX PUNJABI

Unit -1		**Working Days**		**Period**
April	22	ejkDh- fJe ; XkoB nkdwh		6
		i htBh - eosko f;x ;okGk		6
		ftnkeoB- ftoXh ôpd		2
		wIjkto/ - (T) nIyo tkb/		3
		nDfvImk g'bI		3
		rshftXh -;[pb/y		1
		Unit -1		
May	20	ôb'e - pkpk cohd i h		4
		ftnkeoB - wIjkto/n nIyo		2
		gIso- fBIi h		3
		rshftXh - wIjktfonK s/nXkfos		1

Unit -3

May & July	24	ejkDh - gd/; Bk s{s'oh pkpbk	6
		ôpd f;wb oy ; okfJok	5
		ftnkeoB - wj to/(J) nzyo tkb/	3
		ôpX-ôXh	2
		by-ftuko gXkB ns/nkw	2
		ftô/$rshftXh-fdB-fsTjkoK s/nXkfos	4

Unit - 4 & 5

August	24	eftsk - ;wK, tkose, ezpvh	306
+		nDfvzmh ekft -NeVh	3
Sep.		fuzso toBD	4
		ftnkeoB- ft;fwe	3
		wjkto/(;) nzyo tkb/	2
		fJeKrh - feos dk ;fseko	7
		wjkto/- (j) nzyo tkb/	2
		rshftXh - eftsk TjukoB	3

Ist Term Exam

Unit - (1-5)

Unit-6

Oct	19	tkose - rzgpk÷	6
		eftsk- w1gi kph gi kp dk ofj D tkbk	4
		wjkto/- (T) nzyo tkb/	2
		ftnkeoB - fbr pdb'	2
		gzso - dØsoh	4
		rshftXh - fbyD e'ôb s/nXkfos	

Unit - 7

Nov		ejkDh -d[X s/g]s	4
		eftsk - o[y	3
		w]jkto/ - (n) n]yo tkb/	2
		fefonk	4
		nDfv]mh ekft-N[eVh	3
		rshftXh -gVD s/;]DB eöb s/nXkfos	3

Unit - 8

Dec.	18	ihtBh-ebgBk ukgbk	6
		tkose- ; t?o]fynk	5
		w]jkto/ - (J) n]yo	2
		nDfv]mk g]b|	2
		b]y-ftuko g]XkB s/nkw ftô/	4

Unit - 9 & 10

Jan	19	tkose - g]i kph fto;k	3
		w]jkto/ - ; ns/j n]yo	3
		fu]so toBD	3
		fJe[rh- feos dk ;fseko	2
		rshftXh - g]bksB ;fGnkuko Bkb ;p]Xs	

SCIENCE SYLLABUS
Class-IX (Code No. 086)
SESSION- 2019 - 20

RATIONLE

The subject of Science plays an important role in developing well-defined abilities in cognitive, affective and psychomotor domains in children. It augments the spirit of enquiry, creativity, objectivity and aesthetic sensibility.

Upper primary stage demands that a number of opportunities should be provided to the students to engage them with the processes of Science like observing, recording observations, drawing, tabulation, plotting graphs, etc., whereas the secondary stage also expects abstraction and quantitative reasoning to occupy a more central place in the teaching and learning of Science. Thus, the idea of atoms and molecules being the building blocks of matter makes its appearance, as does Newton's law of gravitation.

The present syllabus has been designed around seven broad themes viz. Food; Materials; The World of The Living; How Things Work; Moving Things, People and Ideas; Natural Phenomenon and Natural Resources. Special care has been taken to avoid temptation of adding too many concepts than can be comfortably learnt in the given time frame. No attempt has been made to be comprehensive.

At this stage, while science is still a common subject, the disciplines of Physics, Chemistry and Biology being to emerge. The students should be exposed to experiences based on hands on activities as well as modes of reasoning that are typical of the subject.

General Instructions:

1. There will be an **Annual examination** based on entire syllabus

2. The annual examination will be of 80 marks and 20 marks weightage shall be for internal assessment.

3. The components of **Internal Assessment** would be:

a. Periodic Assessment of 10 marks that would include:

• For 5 marks- Three periodic tests conducted by the school. Average of the best two tests to be taken. This will have a weightage of 05 marks towards the final result.

• For 5 marks- Diverse methods of assessment as per the need of the class dynamics and curriculum transaction. These may include- short tests, oral test, quiz, concept map, etc. This will also have a weightage of 05 marks towards the final result.

b. Practical / Laboratory work should be done throughout the year and the student should maintain record of the same. Practical Assessment should be continuous. There will be weightage of 5 marks towards the final result. All practicals listed in the syllabus must be completed.

c. Portfolio to be prepared by the student- This would include classwork, other sample of student work, self-assessment and peer-assessment. This will carry a weightage of 5 marks towards the final results.

COURSE STRUCTURE: CLASS IX

	(Annual Examination)		Marks: 80
Unit No.	**Unit**	**Marks**	**Periods**
I	Matter - Its Nature and Behaviour	23	50
II	Organization in the Living World	20	45
III	Motion, Force and Work	27	60

IV	Our Environment	6	15
V	Food; Food Production	4	10
	Total	**80**	
	Internal assessment	**20**	
	Grand	**100**	
	Total	**Marks : 80**	

UNIT-I

1. **Matter in our surroundings-** matter, physical nature of matter- particulate, extremely small in size; characteristics of particles of matter- have space between them, move continuously, has force of attraction between them; sates of matter- solid, liquid and gas, comparison between them based on several properties

2. **Motion-** rest and motion a relative term, , describing motion- reference point, motion along a straight line, scalar and vector quantity, distance and displacement, uniform and non uniform motion, speed and velocity, acceleration

3. Fundamental unit of life- Cell as a basic unit of life; prokaryotic and eukaryotic cells, multicellular organisms; cell membrane and cell wall

Practicals

(i). To prepare stained temporary mounts of (a) onion peel and (b) human cheek cells and to record observations

UNIT-II:

1. Matter in our surroundings-effect of temperature and pressure on states of matter- inter conversions of states of matter; latent heat of fusion and vaporization; evaporation- factors effecting evaporation and cooling produced by evaporation

Practical –

i) To determine melting point of ice and boiling point of water.

2. Motion- graphical representation of motion- distance timeand velocity time graphs, equations of motions- graphical method, uniform circular motion

3. Fundamental unit of life- cell organelles; chloroplast, mitochondria, vacuoles, endoplasmic reticulum, Golgi apparatus; nucleus, chromosomes - basic structure, number Cell division - mitosis and meiosis.

UNIT-III:

1. Is matter around us pure-classification of matter- pure substance and mixtures; mixtures- homogeneous and heterogeneous-true solutions, suspensions and colloid; saturated and unsaturated solutions; concentration of solutions.

Practical-

i) Preparation of :

   a) a true solution of common salt, sugar and alum

   b) a suspension of soil, chalk powder and fine sand in water

   c) a colloidal solution of starch in water and egg albumin/milk in water and distinction between these on the basis of

     • transparency

     • filtration criterion

     • stability

2. Force and laws of motion-balanced and unbalanced forces, first law of motion- inertia; second law of motion-momentum

3. Improvement in food resources- improvement in crop yields, crop variety improvement, crop production management-nutrient management, irrigation, cropping pattern, crop protection management, storage of grains.

UNIT IV:

1. Is matter around us pure- separation techniques for mixtures-separation of solid from solid- magnetic separation, suitable solvent method and sublimation;

separation of solid from liquid-filtration, evaporation, crystallization, centrifugation, and chromatography; separation of liquid from liquid- distillation, fractional distillation, separating funnel; separation of various components of air;

Practical -Separation of the components of a mixture of sand, common salt and ammonium chloride (or camphor).

2. Force and laws of motion- third law of motion- recoil velocity; law of conservation of momentum

3. Improvement in food resources- Animal husbandry- cattle farming, poultry farming, fish production and bee keeping.

UNIT V-

1. Is matter around us pure- pure substances- elements and compounds, physical and chemical changes, water purification system.

Practical-

i) Preparation ofa mixture and a compoundusing iron filings and sulphur powder and distinction between these on the basis of:

    a) appearance, i.e., homogeneity and heterogeneity

    b) behavior towards a magnet

    c) behavior towards carbon disulphide as a solvent

    d) effect of heat

ii) Performing the following reactions and classifying them as physical or chemical changes :

    a. Iron with copper sulphate solution in water

    b. Burning of magnesium ribbon in air

    c. Zinc with dilute sulphuric acid

    d. Heating of copper sulphate crystals

    e. Sodium sulphate with barium chloride in the form of their solutions in water.

2. **Gravitation-** centripetal and centrifugal force, universal law of gravitation, free fall acceleration due to gravity, mass and weight, weight of object on moon.

3. **Tissues- Plant tissue-** meristematic tissue, simple permanent tissue, complex permanent tissue. Animal tissue- epithelial tissue, connective tissue, muscular tissue, nervous tissue.

Practical-Identification of Parenchyma, Collenchyma and Sclerenchyma tissues in plants, striped, smooth and cardiac muscle fibers and nerve cells in animals from prepared slides. Drawing their labeled diagrams.

UNIT VI:

1. **Atoms and molecules-** laws of chemical combinations- law of conservation of mass and law of constant proportion, Dalton's atomic theory-postulates; atoms- symbols of atoms, existence of atoms- molecules and ions

Practical-

i) Verification of the law of conservation of mass in a chemical reaction.

2. Floatation- thrust and pressure, pressure in fluids, buoyancy, why do objects float or sink, Archimedes principle, relative density.

Practical-

i) Determination of the density of solid (denser than water) by using a spring balance and a measuring cylinder.

ii) Establishing the relation between the loss in weight of a solid when fully immersed in
   a) tap water
   b) Strongly salty water, with the weight of water displaced by it by taking at least two different solids.

3. **Diversity in living organism-**Classification and evolution, five kingdom classification. Plant diversity- cryptogams and phenerogams.

Practicals

(i) Study of the characteristics of Spirogyra / Agaricus, Moss / Fern, Pinus (either with male or female cone) and an Angiospermic plant. Drawing and providing two identifying features of the groups they belong to.

(ii) Study of the external features of root, stem, leaf and flower of monocot and dicot plants.

UNIT VII:

1. Atoms and molecules- Writing chemical formulae, atomic mass and molecular mass, formula unit mass.

2. Work and energy- work and its scientific concept, energy and different forms of energy, interconversions of various forms of energy. Potential energy and kinetic energy

3.Diversity in living organism-Animal diversity-study of various phylum, binomial nomenclature,

Practical- Observing the given pictures / charts / models of earthworm, cockroach, bony fish and bird. For each organism, drawing of their picture and recording:

a) One specific feature of its phylum.

b) One adaptive feature with reference to its habitat.

UNIT VIII:

1. Atoms and molecules- Mole concept- relationship of mole to mass of the particles and numbers.

2. Work and energy- Law of conservation of energy, rate of doing work, commercial unit of energy

3. Why do we fall ill- Health and its failure, personal and community health, diseases and their causes, Infectious and Non-infectious diseases, their causes and manifestation.

UNIT IX

1. **Structure of atom-** Charged particles in matter- electron, proton and neutron, structure of atom- Thomson's model, Rutherford's model and Bohr's model of atom

2. Sound- production of sound, propagation of sound, sound- a mechanical wave, longitudinal and transverse wave, characteristics of sound waves- wave length, amplitude, frequency, time period, speed, pitch, loudness, quality, intensity of sound wave.

Practicals-

i) Determination of the speed of a pulse propagated through a stretched string / slinky.

3. **Why do we fall ill-** Means of spread, organ specific and tissue specific manisfestation, Principles of treatment and prevention.

UNIT X

1. **Structure of atom-**Atomic number, mass number, representation of atom, electronic configuration, valency, formation of cations and anions, isotopes and Isobars.

2. Sound- reflection of sound, laws of reflection, echo and reverberation, uses of multiple reflection of sound, infrasound and ultrasound, applications of ultrasound-medical, industrial and communication(SONAR), human ear and it's working.

Practicals-

i) Verification of the Laws of reflection of sound.

3. **Natural resources-** Air, role of atmosphere, winds, rain, Air, Water and Soil pollution (brief introduction), Biogeochemical cycles in nature:Water, Oxygen, Carbon and Nitrogen, green house effect, Holes in ozone layer and the probable damages.

QUESTION PAPER DESIGN

board Examination –Theory

Maximum Marks: 80   Duration :   3 Hours

Sr. No.	Typology of Questions	Objective Type * (01 mark)	SA (03 marks)	LA (05 marks)	Total
1	**Remembering:** Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	07	02	01	22.5%
2	**Understanding:** Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	04	02	02	25%
3	**Applying:** Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	04	01	02	21.25%
4	**Analyzing and Evaluating**: Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	05	02	01	20%
5	**Creating:** Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.	-	03	-	11.25%
	Total	20 (20)	10 (30)	06 (30)	100%

All questions would be compulsory. However, an internal choice of approximately 33% would be provided.

2) Internal Assessment: 20 Marks

- Periodic Assessment – 05 marks + 05 marks
- Subject Enrichment (Practical Work) – 05 marks
- Portfolio – 05 marks

Note: Objective Section would have 10 MCQ. Besides this, the section would include VSA, Assertion-Reasoning typequestions etc.

SYLLABUS 2019-20
CLASS: IX
SUBJECT: SOCIAL SCIENCE (CODE: 087)

BOOKS :

India and contemporary world 1 (History)

Contemporary India - 1 (Geography)

Democratic politics (Political Science)

Understanding Economics (Economics)

Book	Unit 1	Chapter No.
Geography	India - Size and location	1
History	The French revolution	1

Book	Unit 2	Chapter No.
Economics	The Story of village Palampur	1
Geography	Physical features of India	2

Activities: Map Work

Book	Unit 3	Chapter No.
History	Socialism in Europe and Russian revolution	2
Economics	People as a resource	2

Book	Unit 4	Chapter No.
Democratic Politics	What is Democracy ? Why Democracy ?	2

Activities: Map Work

Book	Unit 5	Chapter No.
Geography	Drainage	3
Democratic Politics	Constitutional Design	3

Book	Unit 6	Chapter No.
History	Nazism and the Rise of Hitler	3
Economics	Poverty as a challenge	3

Activity: (i)Map Work

(ii) Poster: river pollution

Book	Unit 7	Chapter No.
Geography	Climate	4
Democratic Politics	Electoral Politics	4

Book	Unit 8	Chapter No.
History	Forests and colonalism	6
Economics	Food Security in India	4

Activity: (i) Map Work

(ii) Identification of songs, dance ,festivals and special food
preparations associated with certain seasons in their particular region
and whether they have some commonality with other regions of India.

(iii) Visit a farm in a village and collect the details of foodgrains cultivated.

Book	Unit 9	Chapter No.
Geography	Natural vegetation and Wildlife	5
Democratic Politics	Working of the institutions	5

Book	Unit 10	Chapter No.
Geography	Population	6
Democratic Politics	Democratic Rights	6

Activity: (i) Map Work

(ii) Collect the information related to the flora and fauna of the region in which their school is situated, including the list of endangered species of the region and also the information regarding efforts being made to preserve them.

(iii) Poster: Depletion of forests and ecological imbalances

Project work:

Every student has to compulsorily undertake one project on Disaster Management. The projects have been carefully designed so as to:

(a) Create awareness in learners

(b) Enable them to understand and co-relate all aspects of Disaster Management.

(c) Relate theory with practice

(d) Relation of different aspects of life

(e) Provide hands on experience

The distribution of marks over different aspects relating to Project work is as follows:

S.NO.	ASPECTS	MARKS
1	Content accuracy and originality	1
2	Presentation and creativity	1
3	Process of project completion: initiative , cooperativeness, participation and punctuality	1
4	Viva or written test for content assimilation	2

Internal Assessment Criteria:

Internal Assessment   **Marks**

1) Unit test   10

2) Notebook   5

3) Subject enrichment activities   5

(i) UNIT TEST : 20 MARKS

Q.No.	Marks
1 - 7	1*7= 7
8 – 9	3* 2= 6
10	1*5=5
11 (map question)	1*2=2
TOTAL	20 Marks

(ii) MID- TERM/FINAL EXAMINATION :   **80 MARKS**

Q.NO.	MARKS
1- 20	1*20 =20
21-28	3*8= 24
29- 34	6*6= 36
35 (MAP QUESTION FROM HISTORY)	1*3 = 3
36 (MAP QUESTION FROM GEOGRAPHY)	1*3=3
TOTAL	80 MARKS

LIST OF MAP ITEMS FOR SOCIAL SCIENCE

Subject - History

Chapter-1: The French Revolution

Outline map of France (For locating and labelling/Identification)

- Bordeaux
- Nantes
- Paris
- Marseilles

Chapter-2: Socialism in Europe and the Russian Revolution

Outline map of World (For locating and labelling/Identification)

- Major countries of First World War

   (Central Powers and Allied Powers)

- Central Powers - Germany, Austria-Hungary, Turkey (Ottoman Empire)

- Allied Powers - France, England, (Russia), America

Chapter-3: Nazism and the Rise of Hitler

Outline map of World (For locating and labelling/Identification)

- Major countries of Second World War

Axis Powers – Germany, Italy, Japan

Allied Powers – UK, France, Former USSR, USA

- Territories under German expansion (Nazi power)

   Austria, Poland, Czechoslovakia(only Slovakia shown in

   the map), Denmark, Lithuania, France, Belgium

SUBJECT - GEOGRAPHY

CH-1 : INDIA-SIZE AND LOCATION

• India-States with Capitals, Tropic of Cancer, Standard Meridian, Southern most, northern most, eastern most and western most point of India (Location and Labelling)

CH-2 : PHYSICAL FEATURES OF INDIA

- Mountain Ranges: The Karakoram, The Zasker,The Shivalik, The Aravali, The Vindhya,The Satpura, Western & Eastern Ghats

- Mountain Peaks – K2, Kanchan Junga, Anai Mudi,
- Plateau -Deccan Plateau, Chotta Nagpur Plateau, Malwa plateau
- Coastal Plains- Konkan, Malabar, Coromandal & Northern Circar (Location and Labelling)

CH-3 : DRAINAGE

- Rivers : (Identification only)

    a)   The Himalayan River Systems-The Indus, The Ganges, and The Satluj

    b)   The Peninsular rivers-The Narmada, The Tapi, The Kaveri, The Krishna, The Godavari,The Mahanadi

- Lakes: Wular, Pulicat, Sambhar, Chilika, Vembanad, Kolleru

CH-4 : CLIMATE

- Cities to locate : Tiruvananthpuram, Chennai, Jodhpur, Bangalore, Mumbai, Kolkata, Leh, Shillong, Delhi, Nagpur. (Location and Labelling)
- Areas receiving rainfall less than 20 cm and over 400 cm (Identification only)

CH-5 : NATURAL VEGETATION AND WILD LIFE

- Vegetation Type : Tropical Evergreen Forest, Tropical Deciduous Forest, Thorn Forest, Montane Forests and Mangrove –For identification only
- National Parks : Corbett, Kaziranga, Ranthambor, Shivpuri, Kanha, Simlipal & Manas
- Bird Sanctuaries : Bharatpur and Ranganthitto
- Wild life Sanctuaries : Sariska, Mudumalai, Rajaji, Dachigam (Location and Labelling)

CH-6 : POPULATION (location and labelling)

- The state having highest and lowest density of population
- The state having highest and lowest sex ratio
- Largest and smallest state according to area

SYLLABUS

Subject : Information Technology

Subject code: 402

Class : IX

Exam: Written/ Practical Test + Activities + Notebook

Unit -1 : Communication Skills- I : Demonstrate knowledge of various methods of Communication, Identify elements of communication cycle, Identify the factors affecting our perspectives in communication, Demonstrate the knowledge of basic writing skills

Unit – 2 : Basic ICT Skills – I :   Describe the role of ICT in day-to-day life, Identify the various components of computer system, Identify various peripheral devices, Perform basic computer operation, Connect with the world using Internet and its applications.

Unit – 3: Self-Management Skills – I : Describe the meaning and importance of self- management, Identify the factors that helps in building self-confidence

Unit – 4: Introduction to IT- IT eS Industry.

Applications and the areas where computers are used.

Unit-5 : Data Entry & Keyboarding Skills: How to use Keyboard and typing skills.

Unit 6 : Digital Documentation :Word Processing (Elementary): Start the word processing application, Set up options in Writer, Enter and edit the text, Format the paragraph and text, Format pages, Create and use table, Print the document.

Unit 7 : Entrepreneurial Skills – I: Identify various types of business activities, Demonstrate the knowledge of distinguishing characteristics of entrepreneurship.

Unit 8 : Spreadsheet Applications (Elementary) : Create a Spreadsheet, Enter and edit the text in spreadsheet, Format data in the spreadsheet, Create charts and graphs, Add graphs, Use formulas and functions, Print the spreadsheet

Unit 9 : Presentation : Create a presentation, Slide Master, Add and Format Text, Add and Format Images, Manage Graphics Objects, Format Graphics Object, Create Slide Shows Transitions, and animations, Print, Export and Save the presentation

Unit 10 : Green Skills – I: Demonstrate the knowledge of the factors influencing natural resource conservation, Describe the importance of green economy and green skills.

Information Technology (Code no. 402)	
Theory	50 marks
Practical	50 marks
Total Marks	100 marks

Note: Submit Activity File with a Project .

CLASS- IX
SUBJECT: MUSIC AND DANCE

OBJECTIVE :

Music and Dance are one of these activities that not only enculacate the values of team spirit but also help in enhancing self-confidence and wholesome personality of individual. It creates creative expression and sharpens the senses through keen observation.

- It helps in creating awarness of art forms.
- Develops skills in use of various tools, instruments etc.
- Encourages a child to explore and experiment.
- It also helps developing asthetic sensibilities.
- Respect for social values and cultural heritage.

Art (Music, Dance) refiness the sense of application of the beauty of nature through basic elements of this form.

FIRST TERM	SECOND TERM
1. Shabad / Prayer	1. Community song/National song
2. National Anthem	2. Knowledge of Taals/Alankaars
3. English Song	3. Shabad/Prayer
4. Folk Songs	4. Bhajans
5. Devotional Songs/Patriotic songs	5. Semi classical songs/Patriotic songs
6. Classical dance	6. Punjabi dance
7.Religious dance	7. Different Folk dances
8. Western dance	8. Vandana
9. Theme based Dance performance	9. Combination of different classical dances

SYLLABUS – HEALTH AND PHYSICAL EDUCATION
CLASS – X

STRAND 1

GAMES/SPORTS – At least one of following:

A) Athletics or Swimming

B) Team Games

C) Individual Games

D) Adventure Sports

STRAND 2

Health and

Fitness

2.2 THE OBJECTIVES:

Regular, high quality PE programs should also provide all students with opportunities to develop:

2.2.1 An inclination towards, and strong motivation for lifelong maintenance of health and fitness *

2.2.2 Cardiovascular fitness, muscular endurance, muscular strength and flexibility to meet the demands of everyday life *

2.2.3 Agility, balance, coordination, reaction time, power and speed to be able to perform a wide range of daily tasks *

2.2.4 The techniques necessary to become a skillful performer and competitor in different sports and activities *

2.2.5 Such traits of character as self-mastery, discipline, courage, determination and confidence *

2.2.6 Good sports personship, fair play and ability to be an informed spectator *

2.2.7 An ability to perform in different activity – related roles such as attacker, defender, supporter, supported, referee, leader, captain.

STRAND 1: GAMES / SPORTS

(A) Any one or more games or activity out of Athletics/ Swimming, Team Games, Individual

Games and Adventure Sports must be taken up by each student as an individual, or as a class Team or as a school team.

(B) Team Games

Examples of team games

*   **Invasion Games:** Basketball, Hockey, Kabaddi, Netball, Gallery, Football, Water Polo, Judo, Karate/ Self Defence
*   **Net Games:** Lawn Tennis, Table Tennis, Badminton, Squash Volleyball
*   **Inning Games:** Cricket, Kho-Kho, Rounders, Softball, Stoolball
*   **Target Games:** Archery, Boccia, Bowls, and Golf

(C) Individual Games

Gymnastics, Skating, Judo, Wrestling, Boxing, Fencing, etc.

(D) Adventure Sports

Trekking; Nature Bathing (walking in natural surroundings, such as forests, mountains, alongside rivers, etc.), wall/rock climbing; rappelling; camping; rafting; mountain biking; skiing; personal survival and lifesaving, first-aid, etc.

STRAND 2: HEALTH AND FITNESS

In Mass P.T. / Yoga. Any other activity, which leads to a connection of the physical body with the mind and with the inner workings of the body, and also leads to an improvement in overall health and fitness, can also be taken up, such as:

Aerobics,

Dance,

Calisthenics,

Jogging,

Cross Country Run working out using weights/gym equipment

STRAND 3 : SEWA (Social Empowerment through Work Education and Action)

Introduction

SEWA aims to develop a whole person in their intellectual, personal, social, emotional and social growth. Learners engaged in this program are expected to be life-long learners and through experiential learning develop as active citizens and carying and compassionate humans. The experiental and constructive modes of learning emphasize the immediate Personal experience of the learner and view learning as a process.

SEWA takes learning beyond the walls of the classroom and sometimes even beyond the boundaries of the school, building bridges with the authentic and real world in meaningful and positive ways.

Objective :

There is an urgent need to foster strong mental and social health amongst today's children so that they can connect with their peers, their elders, the community, the environment, etc.

The main objective of the SEWA projects is to direct children's mind in constructive activities with positive outcomes through the facilitation of creative and critical thinking. This would help them to develop self-confidence and self-esteem.

Another objective of this programme is to underline the significance of the interdependence of all human beings and our dependence on the environment in this shrinking global village.

Student must acknowledge that they have a responsibility towards the less privileged, the disadvantaged, the CWSN (Divyang), the society, and the environment. The principle of giving to society has to become second nature to them. Following activities were taken up under 'SEWA' project:-

Project -1   :   'Swachcha Vidyalaya Swachcha Bharat'

Project -2   :   "Dignity of Labour"

Project -3   :   "Empathy"

Project -4   :   Care for Homeless Children

Project -5   :   Being Safe and Responsible

Project -6   :   Environment Conscious Citizens as Part of Eco-Clubs
                          (Compost pit in school)

Project -7   :   Reduce, Recycle, and Reuse (most important 3R's)

project/Activity 8 : Participating in the community health programme through door-
                          to-door contact programmes.

Project/Activity 9:   First Aid : Awareness raising and demonstration

Activity 10 :   Plantation of Shade/Fuel/Ornamental/Medicinal, Herbal
                          trees

Project /Activity 11 : Preparation of Family Budget and Maintenance of Daily
                          Households Accounts.

Project/Activity 12 : Helping school authorities in organising
                          (a) Picnics, tours, excursions, functions
                          (b) Exhibitions.

STRAND 4 :   HEALTH AND ACTIVITY RECORD.
                              PHYSICAL FITNESS COMPONENTS

SYLLABUS OF ART
CLASS IX

Art Activity

- Introduction of colours and its classification.
- Warm colour scheme (floral design).
- Cool colour scheme (geometrical design).
- Study of light &shade using different types of rendering.
- Nature study.
- Study of Balance (Formal & Informal)
- Study of Space (negative & positive).
- Block letter writing (mottos).
- Cartoon drawing commenting social problem.
- Stick figures compositions
- Slogan writing.
- Different type of compositions.
- Poster on social issues.

Craft Activity

- File cover making.
- Recycling Newspaper.
- Paper bags
- Foil Art
- Greeting cards using various textures.
- Book mark making
- Collage making
- Flower making