संस्कृतम्

'भारतस्य प्रतिष्ठे द्वे संस्कृतं चैव संस्कृतिः' अपूर्वः ज्ञाननिधिः संस्कृतभाषायां निहितः अस्ति। अनेकासु भाषासु संस्कृतशब्दानां बाहुल्यं वर्तते। अतः संस्कृतभाषायाः ज्ञानम् अन्यभारतीयभाषाणां ज्ञानाय सहायकम् एव अस्ति। एषा भाषा भारतीयभाषाणां परिपोषिका अस्ति। संस्कृतभाषा राष्ट्रिय-एकतायाः दृष्ट्या अतिमहत्त्वपूर्णा अस्ति। अष्टमकक्षायाः विद्यार्थिनः संस्कृतभाषया सम्यक् परिचिताः भवेयुः इति विचारयन् अयं पाठ्यक्रमः निर्धारितः।

अधिगम-उपागमाः

- संस्कृतभाषया कथितान् निर्देशान् श्रुत्वा पठित्वा च तदनुसारं व्यवहारं कर्तुं समर्थाः भवेयुः।
- संस्कृते लिखिताः लघुकथाः पद्यानि च श्रुत्वा तानि अवगच्छेयुः।
- संस्कृतभाषया लघुवाक्यानि वदेयुः।
- पाठ्यपुस्तके प्रदत्तान् पाठान् श्लोकान् च पठित्वा भावं ग्रहीतुं समर्थाः भवेयुः।
- प्रदत्तविषयं चित्रं वा आधृत्य संस्कृतेन सरलवाक्यानि रचयेयुः।
- श्लोकानां सस्वरवाचने समर्थाः भवेयुः।
- संस्कृतभाषया सरलपत्राणि लघून् अनुच्छेदान् च लेखितुं समर्थाः भवेयुः।
- संस्कृतभाषां साहित्यं च प्रति समुत्सुकाः भवेयुः।
- मातृभाषायां प्रयुक्तशब्दान् अभिज्ञातुं समर्थाः भवेयुः।
- नैतिक-सामाजिक-राष्ट्रियमूल्यानां विकासः भवेत्।

परीक्षा-प्रारूपम्

- आन्तरिकमूल्याङ्कनम् 20 अङ्काः
- वार्षिक-परीक्षा 80 अङ्काः
- **खण्डानुगुणं कालांशनिर्धारणम्**

प्रश्नपत्रस्य वर्गीकरणम्	अङ्काः	कालांशाः
अपठित-अवबोधनम्	10	10
रचनात्मककार्यम्	15	35
अनुप्रयुक्तव्याकरणम्	25	45
पठित-अवबोधनम्	30	60

क्र.संख्या	मूल्याङ्कन-बिन्दवः	अधिभारः
1.	**आवधिकमूल्याङ्कनम्** - एकस्मिन् सत्रे तिस्त्रः चक्रीयाः परीक्षाः भविष्यति। तासु द्वयोः एव अधिभारः ग्रहीतव्यः यत्र विद्यार्थिनः प्राप्ताङ्काः श्रेष्ठाः सन्ति।	5 अङ्काः
2.	**बहुविधमूल्याङ्कनम्-(वैयक्तिकम्/ सामूहिककार्यम)** • मौखिक परीक्षणम् • प्रश्नोत्तरी • बहुविकल्पात्मक-प्रश्नोत्तरी • शब्दपूर्तिः • साक्षात्कारः • सर्वेक्षणम् • संवादः • स्वपरिचयः • परिवेशपरिचयः • सामूहिकचर्चा • कक्षाप्रस्तुतिः (चित्रकथा, कथावाचनम्) • बहुभाषिकतायाः व्यवहारः • भूमिकानिर्वाहः • पी.पी.टी. निर्माणम् • ऑडियो-वीडियो आदीनि	5 अङ्काः

3.	**विषय-संवर्धन-गतिविधयां** • श्रवण-भाषणकौशलयोः परीक्षणम्- • मौखिकपरीक्षणम् • साक्षात्कारः • संस्कृतसम्भाषणम् • सस्वरवाचनम् • श्रुतलेखः • शब्दरचना • भित्तिपत्रनिर्माणम् • वर्तनीशुद्धि आदयः	5 अङ्काः
4.	**निवेश-सूचिका (पोर्टफोलियो)** • कक्षाकार्यं गृहकार्यं वा • अभ्यसप्रपत्राणि • क्रीडा-एकीकरणसम्बन्धिनः क्रियाकलापाः (गतिविधय) • कला-एकीकरणसम्बन्धिः क्रियाकलापाः (गतिविधय) • नाट्यप्रस्तुतिः • श्लोकगायनम् • गीतगायनम् • बहुविषयक-परियोजना **मूल्याङ्कनार्थं निर्देशः-** • कार्यसंयोन प्रस्तुतिः च (स्वच्छकार्यम्, आकर्षकम्, सुलेखः, विवरणिका, आवरणम् च) • पाठ्यचर्यानुगुणं जातस्य छात्रविकासस्य साक्ष्यानि • समयबद्धता, कार्यपूर्णता • विषयसम्बद्धता, मौलिकता	5 अङ्काः

पाठ्यक्रमः

खण्डः - 'क'

अपठित-अवबोधनम्

एकः सरलसंस्कृतगद्यांशः (60-80 शब्दमित) **(10 अङ्काः)** 10

खण्डः - 'ख'

रचनात्मककार्यम् **15 अङ्काः**

- पत्रलेखनम् (रिक्तस्थानपूर्तिद्वारा) 5
- चित्रवर्णनम् अथवा अनुच्छेदलेखनम् 5
- संवादपूर्तिः कथापूर्तिः वा (मजूषायाः सहायताया रिक्तस्थानपूर्तिमाध्यमेन) 5

खण्डः - 'ग'

अनुप्रयुक्तव्याकरणम् **(25 अङ्काः)**

- **वर्णमाला**- वर्णविच्छेदः वर्णसंयोजनञ्च 2
- **सन्धिः** - दीर्घः, गुणः, वृद्धिः, यण् 3
- **शब्दरूपाणि** - 3
  अकारान्तपुलिङ्शब्दाः- रामवत्
  अकारान्तस्त्रीलिङ्शब्दाः- लतावत्
  अकारान्तनपुंसकलिङ्शब्दाः- फलवत्
  इकारान्तपुलिङ्शब्दाः- मुनिवत्
  इकारान्तस्त्रीलिङ्शब्दाः- मतिवत्
  ईकारान्तस्त्रीलिङ्शब्दाः- नदीवत्
  उकारान्तपुलिङ्शब्दाः- साधुवत्
  सर्वानामशब्दाः- अस्मद्, युष्मद्, किम् (त्रिषु लिङ्ेषु) तत् (त्रिषु लिङ्ेषु) एतत् (त्रिषु लिङ्ेषु) भवत् (पुलिङ् स्त्रीलिङ् च)
- **सङ्ख्या**- एकतः शतं पर्यन्तम् 3
  (एकतः चतुःपर्यन्तम् त्रिषु लिङ्गेषु केवलं प्रथमा विभक्तौ)
  (पञ्चतः शतं पर्यन्तम्)

- **कारकाणि** 1
- **उपपदविभक्तयः च-** 3
  - ❖ द्वितीया- परितः, उभयतः, प्रति, गम्, विना
  - ❖ तृतीया- अलम्, सह, विना
  - ❖ चतुर्थी- नमः, दा, रूच्,
  - ❖ पञ्चमी - बहिः, पृथक्, विना
  - ❖ षष्ठी- उपरि, अधः, पुरतः, पृष्ठतः
  - ❖ सप्तमी - विश्वस्, स्निह्, निपुण
- **धातुरूपाणि**
  परस्मैपदिनः-(पञ्चलकारेषु) पठ्, गम्, दृश्, स्था, स्मृ, अस्, भू, वद्, कृ, पा, लिख्, नम् 3
  (आत्मनेपदिनः)-(लट्लृट्लकारयोः) सेव्, लभ्, रूच्, शुभ्
- **प्रत्ययाः-** क्त्वा, ल्यप्, तुमुन्, क्त 3
- **अव्ययपदानि-** अत्र, तत्र, कुत्र, सर्वत्र, यदा, तदा, कदा, इतस्ततः, अपि, कुतः, कथम्, किमर्थम्, अधुना, एव, उच्चैः, ह्यः अद्य, श्वः 2
- **उपसर्गाः-** अनु, अव, आ, उत्, उप अप, निर्, दुर्, नि, प्र, प्रति, परि, वि, सम्, सु 2

खण्डः - 'घ'

पठित-अवबोधनम् **(30 अङ्काः)**

1. गद्यांश-आधारिताः प्रश्नाः 5
2. पद्य(श्लोक)-आधारिताः प्रश्नः 5
3. नाट्य(संवाद)-आधारिताः प्रश्नः 5
4. श्लोकान्वयः (रिक्तस्थानपूर्तिमाध्ययेन) 4
5. प्रश्ननिर्माणम् 4
6. कथापूर्तिः (मञ्जूषयाः सहायतया रिक्तस्थानपूर्तिमाधयमेन) 3
7. शब्दार्थचयनम् 4

पाठ्यपुस्तकम् (सुरभिः)

1. सुवचनानि
2. वसुधैव कुटुम्बकम्
3. अहं नदी अस्मि
4. क्षमस्व महर्षे!
5. दिव्या गीर्वाणभारती
6. मधुराणि वचनानि
7. सफलं तस्य जीवितम्
8. क्रोधेन कार्यं न सिध्यति
9. अविश्वस्ते न विश्वसेत्
10. गुणाः पूजास्थानम्
11. हितं मनोहारि च दुर्लभं वचः (केवलम् आन्तरिकमूल्याङ्कनाय)
12. स्वाध्यायात् मा प्रमदः (केवलम् आन्तरिकमूल्याङ्कनाय)

MATHEMATICS

General Instructions :-

1. Examination at the end of the year will be from the entire syllabus and will be of 80 marks.
2. Internal Assessment will be of 20 marks, for which the instructions are as follows :

S. No.	Tools of Internal Assessment	Total Weightage out of 20 Marks
1	**Periodic Tests - Pen and paper test** (Three periodic tests will be conducted at School level as per their own schedule and the average of the best two scores will be reduced to 5 marks for internal assessment.)	5
2	**Multiple Assessment** for each student to be done by using the Tools of Observation, Oral Test, Individual/Group work, Field work, Class discussion (Quizzes, Debates, Role play etc.) and, Bulletin Board etc.)	5
3	**Subject Enrichment Activities** Mathematics Laboratory Activities: (A) Suggested activities [Minimum 2 activities] (B) Mandatory Activities [3]	5
4	Portfolio 1. Journal 2. HW/CW Note books (to display exemplary work) 3. Art Integrated Activity/Multi disciplinary HHW Project/ Experiential Learning Activity [Atleast one]	5
5	**Assessing the Portfolio** (Guidelines for Teachers) • Organisation - Neatness and Visual Appeal • Completion of guided work focussed on specific curriculum objectives • Evidence of student's growth • Inclusion of relevant work **Note :** Evidence of Multiple Assessment & Subject Enrichment Activities also to be filed in Portfolio.	

Weightage to form of questions

Form of Questions	MCQ/ Assertion Reasoning (1 Mark)	Case Study based questions (4 marks)	Short answer-1 (2marks)	Short answer-2 (3marks)	Long answer (5marks)	Total
No. of Questions	10+2	2 (1+1+2*)	8	8	4	33
Marks Allotted	12	8	16	24	20	80

DETAILED SYLLABUS

The details of syllabus, content, number of periods and marks allotted to each unit are given below :

S.No.	Unit	Topics	No. of Pds.	Marks allotted
1.	Number System	1. Squares and Square Roots 2. Cubes and Cube Roots 3. Exponents and Radicals	14 8 8	14

2.	Commercial Maths	4. Direct and Inverse Variation 5. Profit, Loss & Discount 6. Compound Interest	10 12 12	14
3.	Algebra	7. Algebraic Identities 8. Polynomials 9. Linear equations in one variable	12 10 12	16
4.	Geometry	10. Parallel Lines 11. Understanding Quadrilaterals 12. Construction of Quadrilaterals 16. Rotational Symmetry	10 14 10 4	15
5.	Graphs	13. Introduction to Graphs	6	5
6.	Mensuration	14. Mensuration	16	10
7.	Statistics / Probability	15. Statistics & Probability	14	6

Some Suggested Tools for Internal Assessment Subject Enrichment Activities

Mathematics Laboratory Activities :

(A) Suggested Activities : (Minimum 3 activities must be taken)

1. To Verify the Algebraic Identity $(a+b)^2 = a^2 2ab+b^2$ by paper cutting and pasting.
2. To understand the definitions based on Quadrilateral using Frayer's Model.
3. Fold a paper eight times in any way. Unfold and locate various convex and concave polygons.
4. To verify that the sum of interior angles of a quadrilateral is 360° by paper cutting & pasting.
5. To verify that the sum of exterior angles of a polygon is 360°. Verify the result for a triangle, quadrilateral, pentagon and hexagon.
6. To verify that :
   (i) diagonals of a rectangle are of equal length.
   (ii) diagonals of a square are of equal length.
   (iii) Investigate the results for a rhombus and a parallelogram

using stretched threads.

7. To compare the surface areas of two unit cubes and the cuboid formed by joining these unit cubes.
8. To explore the relationship between :
   (a) length (in cm) and perimeter (in cm^2)
   (b) length (in cm) and area (in cm^2) of 5 squares of different dimensions drawn as a squared paper.
9. To draw the front view, top view and side view of three dimensional shapes made by combining unit cubes.
10. To make a paper die using a paper net of a cube and to observe the occurrence if different outcomes 1, 2, 3, 4, 5, 6 appearing on its top face when it is thrown 25 times.
11. To make the following shapes by paper folding and cutting:
    (a) A kite
    (b) A Rhombus
12. To verify that the difference between the squares of consecutive natural numbers is equal to their sum by paper cutting and pasting of squared sheets.

(B) Mandatory Activities

1. Make cut outs of the following shapes and write down their order of rotation and angle of rotation:
   (a) Equilateral triangle (b) Rectangle
2. Making 3-D models of prisms and pyramid using their nets and verifying Euler's formula for these solids.
3. Make a group project on GST using actual cash bills

(I) Art Integration Activities : (atleast one)

(1) Exploring triangular numbers using dot patterns.
(2) Making patterns using regular polygons. (for example sierpinski triangle).
(3) Find the side of a square sheet of given area 462 25 sq. cm & create a beautiful greeting card using tessellations with a mathematical quotation.
(4) Mathematics Doodle

(5) To make a cylindrical pen stand and find its total surface area.
(6) Make a colourful rangoli using Geogebra.
(7) Make a catchy advertisement/pamphlet depicting the SALE of a product/garments/airfare showing marked price & discount.

(II) Project Work/Experiential Learning Activities :

(1) Life history of any Indian Mathematician and his/her contribution in the field of Mathematics (Project or PPT)
(2) Number patterns (specially involving squares and cubes of numbers).
(3) Do a survey of 20 people and collect the data whose screen time is more than 4 hours. Represent the collected data in the form of Histogram using paper cutting & pasting.
(4) Draw a map of the route from your house to your school/ local market showing important landmarks.
(5) Make a mathematical e-magazine.
(6) Value of maths in your life & its relationship with other subjects.

(III) Recreational Activities :

(1) To make a mathematical clock using the concept of square & square root/cube & cube root of a number.
(2) Make a Kahoot choosing a topic from your current syllabus.
(3) Crossword puzzle/Maze/Game.
(4) Script writing and role play on profit, loss discount & GST.

Unit 1. Square and Square Roots **(14 Periods)**

Square of a number, triangular numbers and numbers between two consecutive square numbers, finding square root of a number by the repeated subtraction method, finding square roots of perfect squares by factorization.

Using division method, finding square roots of -

(i) Positive integers which are perfect squares.

(ii) Decimals which are perfect squares.

Finding square roots of numbers which are not perfect squares by the division method correct up to three decimal places. Problems

based on square roots (simple problems only). Square roots of other Numbers (not perfect squares) by estimation.

Learning Outcomes :

1. Students will be able to appreciate :
   - Squares of even numbers are even
   - Squares of odd numbers are odd
   - Perfect squares and number ending in 2, 3, 7 or 8 is never a perfect square.
   - Concept of Pythagorean triplet
2. Students will be able to find square root of a number
   - By prime factorisation
   - By long division method
3. Students will be able to understand and apply the following rules:

   Rule 1. If a and b are perfect square numbers $(b \neq 0)$ then

   $$\sqrt{a \times b} = \sqrt{a} \times \sqrt{b}$$

   $$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

   Rule 2. The pairing of numbers in the division method starts from the decimal point.
   For the integral part it goes from right to left and for the decimal part, it goes from left to right.

   Rule 3. If p and q are not perfect squares, then to find $\sqrt{\frac{p}{q}}$, we express $\frac{p}{q}$ as a decimal and then apply division method.

Unit 2. Cubes and Cube Roots **(6 Periods)**

Cube of a number, Cube roots of perfect cubes by factorization (cube root should not exceed two digits). Cube root of a number through estimation. (only for perfect cubes)

Learning Outcomes :

1. Students will be able to understand :
   - Cube and cube root of negative number is negative i.e. $\sqrt[3]{-x} = -\sqrt[3]{x}$
   - Cube of an even natural number is even and cube of odd natural number is odd.
2. Students will be able to apply the following rules :
   For any two integers a and b, we have
   (i) $\sqrt[3]{ab} = \sqrt[3]{a} \times \sqrt[3]{b}$
   (ii) $\sqrt[3]{\frac{a}{b}} = \frac{\sqrt[3]{a}}{\sqrt[3]{b}}, b \neq 0$

Unit 3. Exponents and Radicals **(8 Periods)**

Idea of rational exponents, Laws of exponents including rational numbers as exponents, Idea of radicals and radicand.

Learning Outcomes :

1. Students will be able to convert radical form to exponential form and vice versa.
2. Students will be able to apply the following rules :
   - If a is any rational number different from zero and x, y are any rational numbers, then

   (i) $a^x \times a^y = a^{x+y}$ (ii) $a^x \div a^y = a^{x-y}$
   (iii) $(a^x)^y = a^{xy}$ (iv) $(a)^0 = 1$

Unit 4. Direct and Inverse Variations **(10 Periods)**

Direct variation, Inverse variation with examples. Problems on Time and Work and Time and Distance.

Learning Outcomes :

1. Students will be able to distinguish between Direct Variation and Inverse Variation.
2. Students will be able to solve the problems on time and work as well as time and distance using the concepts of direct and inverse variations.

Unit 5. Profit / Loss and Discount **(12 Periods)**

Problems on profit and loss including discount (rebate), marked price, selling price (only single discount to be discussed) G.S.T. (only for internal assessment through activity)

Learning Outcomes :

The students will be able to :

1. understand concept of profit and loss and discount.
2. calculate S.P./C.P. Marked price.
3. apply concept of discount.
4. understand GST and its calculation.

Unit 6. Compound Interest **(12 Periods)**

Meaning of Compound Interest. Calculation of amount and compound interest by unitary method. Calculation of amount and compound interest by formula up to three years. Interest compounded annually, half yearly or quarterly up to three conversion periods Growth and Depreciation.

Learning Outcomes :

Student will be able to :

1. distinguish between simple interest and compound interest.
2. calculate compound interest from amount, using formula or otherwise.
3. calculate compound interest when compounded annually, half-yearly and quarterly.
4. analyse growth and depreciation applicable in various situations.

Unit 7. Algebraic Identities **(12 Periods)**

Study of the following identities :

1. $(a + b)^2 = a^2 + 2ab + b^2$
2. $(a - b)^2 = a^2 - 2ab + b^2$
3. $(a + b)(a - b) = a^2 - b^2$

The above identities may be verified through cardboard models.

Expansion of the square of a trinomial :

$(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$

Product of two binomials :

$(x + a)(x + b) = x^2 + (a + b)x + ab$

Factorization of Algebraic Expressions based on above Identities.

Learning Outcomes :

After the completion of this chapter students will be able to :

1. distinguish between identity and equation.
2. learn the application of identities.
3. factorise algebraic expressions using the identities.
4. apply the identities in different practical situations.

Unit 8. Polynomials **(10 Periods)**

Idea of a polynomial in one variable and its terms Coefficients and degree after converting it to standard form Division of a monomial by a monomial.

Division of a polynomial in one variable by a monomial or binomial. (Restricted to polynomials in one variable of degree '4').

Division of a polynomial in one variable by a monomial or binomial (Restriced to polynomials in one variable of degree '4')

Division of a polynomial by a linear polynomial by factor method. Verification by long division method

Dividend = Divisor x Quotient + Remainder.

(Explain the cases of non-zero remainder and remainder equal to zero).

Concept of factor of a polynomial when the remainder is zero.

Learning Outcomes :

The students will be able to :

1. identify coefficients and degree of a polynomial.
2. divide a polynomial in one variable by a monomial or a binomial.
3. verify the long division by Dividend = Divisor x Quotient + Remainder.
4. understand and appreciate the factor of a polynomial when remainder is zero.

Unit 9. Linear Equations in One Variable **(10 Periods)**

Solving equations of the type $\frac{ax+b}{cx+d}=k; cx+d \neq 0$

Word problems on linear equations in one variable.

Simple problems from daily life situations like age, coins, number of students of a class. speed, distance, formation of '2' digit numbers etc. with special emphasis on ability to translate word problems into mathematical statements.

Learning Outcomes :

The student will be able to :

1. solve linear equations in one variable.
2. convert the word problem into a linear equation based on different life situations.

Unit 10. Parallel Lines **(10 Periods)**

Definition, Angles made by a transversal with two parallel lines & their properties.

Verification and application of the following properties :

1. Two lines parallel to the same line are parallel to each other.
2. Two lines perpendicular to the same line are parallel to each other.
3. Division of a Line Segment :
   - I. To divide a line segment into a given number of equal segments.
   - II. To divide a line segment in a given ratio internally. (constructions should be done by using ruler and compasses only).

Learning Outcomes :

After the completion of this unit students will be able to :

1. appreciate different types of angles and their relation when a transversal intersects two parallel lines and vice-versa.
2. divide a line segment in equal parts using parallel line with the help of ruler & compass.
3. comprehend that two lines parallel/perpendicular to the same line are parallel to each other.

Unit 11. Understanding Quadrilaterals **(12 Periods)**

Introduction to curves. Polygons and its types and properties.

Quadrilaterals and its special types (trapezium, parallelogram. rectangle, rhombus & square). Properties of special type of quadrilaterals. (Example of kite may be given as a special type of quadrilateral).
Verification of the following properties :

(i) Opposite sides of a parallelogram are equal.
(ii) Opposite angles of a parallelogram are equal.
(iii) Diagonals of a parallelogram bisect each other.
(iv) Diagonals of a rectangle are equal and bisect each other.
(v) Diagonals of a rhombus bisect each other at right angles.
(vi) Diagonals of a square are equal, perpendicular to each other and bisect each other.

(Simple problems based on these properties involving one or two logical steps).

Learning Outcomes :

After the completion of this chapter student will be able to :

1. recognize different types of quadrilaterals i.e. trapezium, parallelogram, rectangle, rhombus, square and kite.
2. understand the properties of parallelogram, rectangle, rhombus and square.
3. distinguish between different type of quadrilaterals.

Unit 12. Construction of Quadrilaterals (10 Periods)

Construction of quadrilateral (using ruler and compasses only) given -

(i) Four sides and one diagonal
(ii) Three sides and both diagonals
(iii) Two adjacent sides and three angles
(iv) Three sides and two included angles

(The sides should be in whole no. of cm or at least multiples of ½ cm. Angles should be multiples of 15°.)

Learning Outcomes :

After the completion of this chapter students will be able to :

1. construct a quadrilateral with given conditions.
2. comprehend whether construction of a quadrilateral with given data is possible or not.

Unit 13. Introduction to Graphs (5 Periods)

Cartesian plane. Plotting a point on the Cartesian plane. Independent and dependent variables. Drawing of graphs and type of figure.

Learning Outcomes :

After the completion of this chapter students will be able to :

1. understand the Cartesian plane and its various elements.
2. identify the coordinates of a point.
3. evaluate the distance of a point from x-axis and y-axis.
4. plot the point on a Cartesian plane.
5. join the points and identify the figure so formed.
6. identify abscissa and ordinates of a point.

Unit 14. Mensuration (6 Periods)

Area of trapezium, general quadrilateral and polygon.
Surface area of cuboid, cube and right Circular cylinder. Volume of cuboid. cube and right circular cylinder.
[Visualising solid shapes. polyhedron. Mapping space around us. (by activities only)].

Learning Outcomes :

The student will be able to :

1. find the area of plane figure (trapezium & quadrilateral).
2. find the area of a polygon by dividing into various quadrilaterals and triangles.
3. calculate the surface area of rectilinear solid figures
4. calculate the volume of rectilinear solids i.e. cube & cuboids.
5. calculate the surface area of a right circular cylinder.
6. calculate the volume of right circular cylinder.
7. understand the formation of cubes, cuboid with the help of nets.
8. locate and identify side view, top view and front view of solid figures.
9. verify Euler's formula for polyhedrons.
10. map the different routes in one's surrounding.