**SUB: MATHEMATICS**

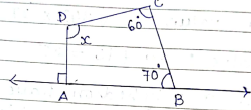
**SA-I (CH-1, 2, 3, 4, 6, 7, 10 & 12) TOTAL MARKS-80**

**SEC-A ()**

1. Find the value of .
2. Multiply by the reciprocal of .
3. The value of is \_\_\_\_.
4. Solve:
5. Can a polyhedron have 10 faces, 20 edges and 15 vertices?

**SEC-B ()**

1. Verify .
2. Simplify .
3. Solve: .
4. Represent (i) (ii) on number line.
5. Find the least square no. which is exactly divisible by each of the numbers 8, 12, 15 and 20.
6. Find the smallest number by which 8788 must be divided so that quotient is a perfect cube.
7. Find measure of x in the figure.



1. Fill in the blanks:

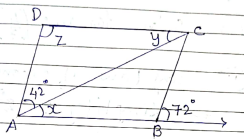
(i) A pyramid with square base has \_\_\_\_\_\_\_ faces, \_\_\_\_\_\_\_ vertices and \_\_\_\_\_\_ edges.

(ii) A triangular prism has \_\_\_\_\_\_ number of edges.

1. Construct a rhombus PLAN with LA = 4.2 cm and LN = 6 cm.

**SEC – C**

1. Find using appropriate properties: .
2. Simplify: .
3. Find the largest four digit number that is a perfect square. Also find its square root.
4. Find the angles x, y, z in the following parallelogram ABCD.



1. Construct a quadrilateral MATH with MA = 5 cm, AT = 4 cm, TH = 5 cm, . (Write steps of construction)
2. Solve and verify; .
3. Multiply 2560 by the smallest number so that the product is a perfect cube. Find the cube root of the number.
4. (i) Find five rational numbers between . –(2)

(ii) Write 0.00000175 in standard form. –(1)

**SEC-D ()**

1. (i) Find the square root of 299.29.

(ii) Find the cube root of -2192.

1. (i) Solve for m: .

(ii) Using law of exponents, simplify: .

1. (i) Simplify: .

(ii) Multiply by the reciprocal of

1. (i) Write a Pythagorean triplet whose one number is 14.

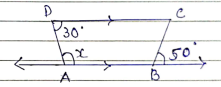
(ii) Ajay makes a cuboid measuring 5 cm by 10 cm by 5 cm. How many of these cuboids are required to make a perfect cube?

1. The present ages of Veena and Sheena are in the ratio 4 : 5. Eight years from now their ages will be in ratio 5 : 6. Find their present ages?
2. (a) How many diagonals do a hexagonal have?

(b) Find the measure of each exterior angle of a regular polygon of a side.

1. (a) A diagonal and a side of a rhombus are of equal length. Find the measure of the angles of the rhombus?

(b) Find the value of x from the following figure:



1. Solve: or .