Model Test Paper-II

(Based on Chapters 10 to 18)

Instructions :
1. All questions are compulsory.
2. The question paper consists of 30 questions, divided into three sections — A, B and C. Section A consists of 10 questions of 2 marks each, section B of 10 questions of 3 marks each and section C of 10 questions of 5 marks each.

SECTION - A

1. Pramod buys a fan for ₹ 600 and sells it for ₹ 750. Find his gain and gain percent.

2. One of the diagonals of a rhombus is equal to one of its side find the angles of the rhombus.

3. Find the regular number of sides of a regular polygon inscribed in a circle if each side of it subtends an angle of 60° at the centre.

4. Draw a triangle in which all sides are of 6 cm.

5. Construct a square ABCD, each of whose diagonal is 5.5 cm.

6. How are prism and cylinder alike?

7. Find distance of the chord from the center of a circle which radius is 10 cm and chord is 16 cm long.

8. Find the area of a rectangular plot one side of which measure 35 m and diagonal 37m.

9. The volume of a cylinder is $448\,\pi$ cm^3 and its height is 7 cm. Find its radius.

10. Find the mean of first 10 even natural numbers.

SECTION - B

1. Find the profit percent if C.P. = ₹ 275, Profit = ₹ 25.

2. Find the volume of a spherical ball radius 2.1cm.

3. Find the area of a parallelogram with base 5 cm and altitude 4.2 cm.

4. In fig. 1 line segments DE, FG and HI are each parallel to side AB of DABC. How many pairs of parallel line segments are there in the figure? Name each of them.
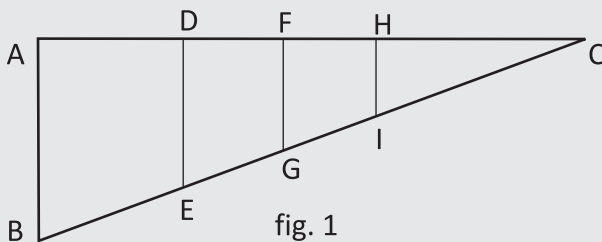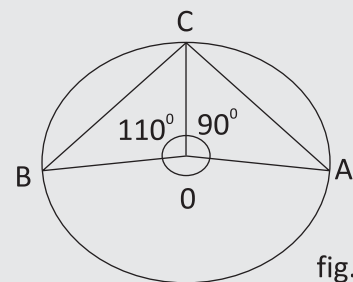

fig. 1

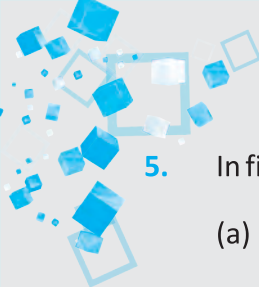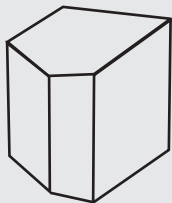
fig. 2

5. In fig. 2 $\angle AOC$ and $\angle BOC = 110^0$, Where 0 is the centre of the circle. Find:

    (a) $\angle AOB$ (b) $\angle BCA$
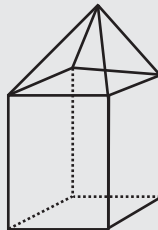
6. Find the area of a parallelogram whose base is 12 dm, the corresponding height being 5dm.

7. Verify Euler's formula for these solids.

    (a)   (b)

8. The circumference of the base of a cylindrical vessel is 132cm and its height is 25cm. How many litre of water can it hold?.

9. Find the volume of the water that a spherical solid ball of 28 cm diameter will replace.

10. The diameter of the base of a right circular cyllinder is 7cm. If its height is 40cm. Find its volume.

<center>SECTION - C</center>

1. The marked price of a water cooler is `4650. The shopkeeper offers an off season discount of 18% on it. Find its selling price.

2. ABCD is a rhombus. If $\angle ACB = 40°$, find $\angle ADB$.

3. The sides of a rectangle are in the ratio 5 : 4. Find its sides if perimeter is 90 cm.

4. The outer diameter of a pipe is 1m and it is 2m long. Find the cost of painting the outer surface of the pipe at the rate of ₹ 25 per m^2.

5. Construct a quadrilateral ABCD in which AB = BC = 3cm, AD = 5cm, $\angle A = 90^0$ and $\angle B = 105^0$.

6. Is a square prism same as a cube?

7. A chord of a circle is 20 cm and its distance from the centre is 24 cm. Find the radius of the circle.

8. Pulse rate (pre minute) of 30 persons were recorded as 61, 76, 72, 73, 71, 66, 78, 73, 68, 81, 78, 63, 72, 75, 80, 68, 75, 62, 71, 81, 73, 60, 79, 72, 73, 74, 71, 64, 76, and 71.

    Construct a frequency table using class intervals of equal width, one class interval being 60-65.

9. The perimeter of a parallelogram is 150cm. One of its sides is greater than the other by 25cm. Find the lengths of all the sides of the parallelogram.

10. Draw the line passing through (3, 4) and (4, 3) on a graph sheet. Find the coordinates of the point at which this line meets x-axis and y-axis.

A Gateway to Mathematics-8