SAMPLE PAPER

Class -7 **F.M -80**
Subject – Maths **Time-3 Hrs.**

Section -A (1x20=20)

1. 2.7×10^3 is equal to-
   (i) 2.7000 (ii) 2.007 (iii)2700 (iv) None of these
2. Find the product of $9x^3$ and $2x^4$
   (i) $11x^2$ (ii) $18x^2$ (iii) $18x^7$ (iv) $18x^{12}$
3. Find the area of the rectangle whose sides are 2a and 3a.
   (i) $6a^2$ (ii)6a (iii) $5a^2$ (iv) 5a

4. $X + X + X + X =$ ------
   i) 2X (ii) 3X
   (iii) 4X (iv) 4
5. Which of the following is a solution of the equation $3X - 7 = 7 - 4X$
   i) $X=0$ (ii) $X=14$
   (iii) $X=2$ (iv) $X=1$
6. If $\Delta ABC \cong \Delta PQR$, which of the following is not true ?
   i) $\angle A = \angle P$ (ii) $BC = QR$
   (iii) $\angle B = \angle R$ (iv) $AC = PR$
7. If in two triangles ABC and DEF, $\angle A = \angle D = 90°$, hypotenuse BC = hypotenuse EF, AB = DE , then $\Delta ABC \cong \Delta DEF$ by ---------- congruence condition.
   i) RHS (ii) SAS
   (iii) SSS (iv) ASA
8. Find the circumference of a circle whose radius is 7cm.
   i) 41 cm (ii) 42 cm
   (iii) 43 cm (iv) 44 cm
9. Area of a triangle whose base is 3 cm and height is 7 cm is -----
   i) 10.5 cm^2 (II) 21 cm^2
   (iii) 10.5 cm (iv) 105 cm^2
10. The observation that occurs maximum number of times in a data is called
    i) Range (ii) Median
    (ii) Mode (iii) Mean
11. What is the median of the observations 36 , 48 , 29 , 62 , 71 and 84
    i) 29 (ii) 62
    (iii) 55 (iv) 66
12. How many lines of symmetry a scalene triangle has?
    i) 3 (ii) 2
    (iii) 1 (iv) none
13. A regular heptagon has -------- lines of symmetry.
    i) 5 (ii) 6
    (iii) 7 (iii) 8
14. A tetrahedron has ------ vertices.
    i) 2 (ii) 3
    (iii) 4 (iv) 5
15. I have one square and four triangles . I am a -------
    i) Cube (ii) Pyramid
    (iii) Prism (iv) Cuboid

Fill in the blanks.

16. Two circles are congruent, if they have .....
17. The reciprocal of(⅔)^3 is .....
18. The HCF of 16 m - 4 m^2 is.....
19. Two lines are congruent, if they have same.....
20. If ΔABC is congruent to ΔEFD then side BC =side.....

Section -B (2x 6 = 12)

1. How many vertices, edges and faces will a cuboid have? What is the shape of its faces?
2. Find the mode of the given observations: 0,6,1,5,6,2,0,4,6, 3,4,6,3,1
3. The height of a parallelogram is 3 dm. If the area of is 240 cm^2, find the base of the parallelogram.
4. Find the area of a circle whose radius is 14 cm.
5. Write the number in the form Kx10^n where 1<k10 and n is an integer 0.000000000926
6. If A =(2a-3) and B = (5-3a) be two algebraic expressions such that 2A+B=6, then find the value of a.

Section -C (3x6=18)

1. Construct an equilateral triangle ABC. Find all its line of symmetry.
2. The base of a triangular field is three times its height. If the cost of cultivating the field at rs.36 per hectare is Rs 486, find its base and height.
3. If $2^{(2x-3)} = 64^{X}$, find the value of x.
4. Factorise the expression : $a^2+bc+ac+ab$
5. Solve the equation and check your answer

$$\frac{6x-2}{5}=\frac{2x-1}{3}-\frac{1}{3}$$

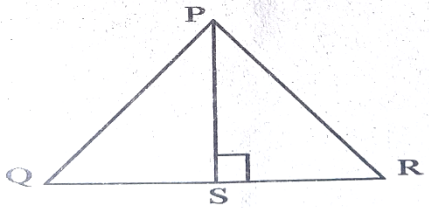
6. Show that in an isosceles triangle, angles opposite to equal sides are equal.

Section - D(5x6 =30)

1. Construct a triangular poster of major 4 cm, 5 cm, 7cm wrote "SAVE ELECTRICITY" on the poster.
   a) What should be done to save electricity. (write two points). (3+2 =5 marks).
2. The numerator of a fraction is 6 less than denominator. If 3 is added to the numerator, the fraction becomes 2/3. Find the original fraction.
3. A bicycle shop owner sold the following number of bicycles each day in a particular week . Present this information in the form of a bar graph .

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
No. of cycles sold	35	30	44	25	10	25

4. A rectangular piece of ground is 45 m long and 30 m wide . It has two roads each 1 m wide , running midway within it , one parallel to length and other parallel to the breadth . Find the area of roads . Also calculate the area of remaining ground .
5. In the figure PS bisect ∠P and PS ⊥ QR.
   a) Find the three pairs of matching parts to check whether ∠PSQ ≅ ∠PSR or not.
   b) Is ΔPSQ ≅ ΔPSR
   c) Is it true to say that QS = SR ? Why?



6. simplify and verify the result for given values
(5/4 x^2 -3/2 xy)(x+y+y^2). x=2, y=2.