CLASS – VII   **Max.Marks: 60**
SUBJECT – MATHEMATICS   **TIME: 2 ½ HOURS**

Instructions: All questions are compulsory. Read all the questions and instruction carefully.

1. Section A has 8 questions of 1 mark each**.**
2. Section B has 6 questions of 2 marks each**.**
3. Section C has 8 questions of 3 marks each**.**
4. Section D has 4 questions of 4 marks each.
5. Please ask the isometric sheet from the invigilator.

SECTION A(1 X 8 = 8)

1. 15% of 600 is

   a) 15   b) 300   c) 4500   d) 90

2. Principal + Interest = ____?_____.
   a) Amount   b) Compound Interest   c) Percentage   d) None of these

3. Which number is neither a positive number nor a negative rational number?
   a) -1   b) 0   c) 1   d) None of these

4. No. of line segment required to form a skeleton of a cube-
   a) 8   b) 12   c) 6   d) 10

5. Two line segments are congruent if they have same_____?_____.
   a) Area   b) Volume   c) Weight   d) length

6. The distance around a circular region is known as its_____.
   a) Area   b) Volume   c) circumference   d) None of these

7. No. of lines of symmetry for the circle is _____.
   a) 4   b) 10   c) 0   d) Infinitely many

8. 1 hectare = _____?____
   a) $100m^2$ b) $1000m^2$ c) $10000cm^2$ d) $10000m^2$

SECTION B   (2 X 6 = 12)

9. Find the whole quantity if 5% of it is 1000.

10. Define cost price and selling price.

11. Rewrite rational number $\frac{-44}{72}$ in the simplest form.

12. Give the coefficient of y^2 from the given expressions-

    i) $8 - xy^2$ ii) $5y^2 + 7x$ iii) $4x^2y - 15xy^2$ iv) $3x$

13. If $\Delta DEF \cong \Delta BCA$, write the parts of ΔBCA that corresponds to-

    i) $\angle E$ ii) EF iii) $\angle F$ V) DF

14. Find the height of the parallelogram, if its area is $246cm^2$ and its base is 20cm.

SECTION C   (3 X 8 = 24)

15. Team India won 6 games this year against 4 games won last year. What is the per cent increases?

16. Find the value of: i) $\frac{3}{11} \times \frac{2}{15}$ ii) $\frac{-14}{12} \div \frac{-2}{13}$

17. What should be the value of "b" if the value of $x^3 + 5x^2 + 5x - b$ equals to 0, when x = -2?
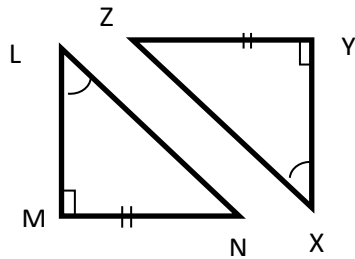
18. Simplify: i) $5x^2y - 5x^2 + 3yx^2 - 3y^2 + x^2 - y^2 + 8xy^2 - 3y^2$

ii) $3a - 2b - ab - (a - b + ab) + 3ab + b - a$

19.i) If z = 10, find the value of $z^3 - 3(z - 10)$.

ii) If p = (- 10), find the value of $p^2 - 2p - 100$.

20. Explain, why $\Delta LMN \cong \Delta XYZ$

21. Neha took a wire of length 44cm and bent it into the shape of a circle. Find the radius of the
     Circle. Also find its area. If the same wire is bent into the shape of a square, what will be the
length of square?

22. Draw three shapes with no line of symmetry.

SECTION D   (4 X 4 = 16)

23. Find the amount to be paid at the end of 3 years-

i) Principal amount =Rs.1200, Rate = 12% per annum

ii) Principal amount =Rs.7500, Rate = 5% per annum

24. Write the rational numbers in ascending order: i) $\frac{-1}{3}, \frac{-2}{9}, \frac{-4}{3}$ ii) $\frac{-3}{7}, \frac{-3}{2}, \frac{-3}{4}$

25. From the sum of $2y^2 + 3yz$, $-y^2 - yz - z^2$, and $yz + 2z^2$, subtract the sum of $3y^2 - z^2$ and $-y^2 + yz + z^2$.

26. The dimensions of a cuboid are 5cm, 3cm and 2cm. Draw two different isometric sketches of this cuboid.

(Note- Please ask the isometric sheet from the invigilator.)