

DELHI PUBLIC SCHOOL, GWALIOR MODEL TEST PAPER CLASS – VII

SUBJECT – MATHEMATICS

Time: 3 hrs. M.M. 80

General Instructions

- 1. All questions are compulsory.
- 2. The question paper consists of 28 questions divided into 4sections A, B, C and D.
- 3. There is no overall choice. However, internal choice has been provided in 2 questions of 2 marks each, 3 questions of 3 marks each and 2 questions of 4 marks each.
- 4. Use of calculator is prohibited.

Section-A

- 1. Find $\frac{2}{5}$ of 10 litres
- 2. Write the equation for the statement "the sum of three times x and 11 is 32".
- 3. Find the probability of getting an even number when a die is thrown.
- 4. Is the sum of any two angles of a triangle always greater than the third angle?

Section – B

- 5. (a) Write a pair of negative integers whose difference gives 8
 - (b) Write a negative and a positive integer whose difference is −3
- 6. Find the value of the following:
 - (a) $(-18) \times (-5) \times (-1)$
 - (b) $[(-36) \div 12] \div 3$
- 7. A rectangular sheet of paper is $12\frac{1}{2}$ cm long and $10\frac{2}{3}$ cm wide. Find its perimeter.

\mathbf{OR}

If area of a square is $625m^2$. Find its side.

- 8. Solve the following:
 - (a) $2\frac{1}{5} \div 1\frac{1}{5}$
 - (b) $3\frac{1}{4} \times 6$
- 9. Find the mean of first 5 whole numbers

OR

Find the mode and median of the given data:

10. Write the following statements in the form of equations:

(i) The sum of four times x and 10 is 50.

(ii) If you add 5 to one-fifth of z, you get 50.

Section-C

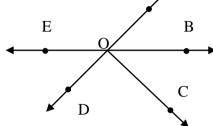
11. Express the following as decimals:

- 7 rupees 7 paise in `
- (b) 35 mm in cm.
- 3470 g in Kg. (c)

12. Indicate which pairs of angles are:

(i) Vertically opposite angles

(ii) Linear pairs



At Srinagar temperature was -5° C on Monday and then it dropped by 2° C on Tuesday. What 13. was the temperature of Srinagar on Tuesday? On Wednesday, it rose by 4^oC. What was the temperature on this day?

A freezing process requires that room temperature be lowered from 40°C at the rate of 5°C 14. every hour. What will be the room temperature 10 hours after the process begins?

<u>OR</u>

An elevator descends into a mine shaft at the rate of 8 m/min. If the descent starts 20m above the ground level, how long will it take to reach – 460 m?

Arrange the following in descending order: $\frac{1}{5}$, $\frac{3}{7}$, $\frac{7}{10}$, $\frac{2}{5}$ 15.

$$\frac{1}{5}$$
, $\frac{3}{7}$, $\frac{7}{10}$, $\frac{2}{5}$

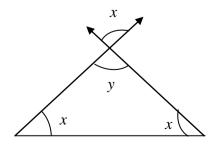
<u>OR</u>

Express 35mm in cm, m and km.

16. How many pieces of plywood, each 0.35 cm thick are required to make a pile 1.89m high?

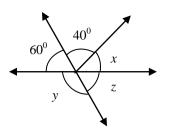
17. People of Sundargram planted trees in the village garden. Some of the trees were fruit trees. The number of non-fruit trees were two more than three times the number of fruit trees. What was the number of fruit trees planted, if the number of non-fruit trees planted was 77?

18. Find the values of x & y in the following figure:



OR

Find the value of x, y and z in the following figure:



Section-D

- 19. A cement company earns a profit of `8 per bag of white cement sold and a loss of `5 per bag of grey cement sold.
 - (a) The company sells 3,000 bags of white cement and 5,000 bags of grey cement in a month. What is its profit or loss?
 - (b) What is the number of white cement bags it must sell to have neither profit nor loss, if the number of grey bags sold is 6,400 bags?
- 20. Lipika reads a book for $1\frac{3}{4}$ hours every day. She reads the entire book in 6 days. How many hours in all were required by her to read the book?

<u>OR</u>

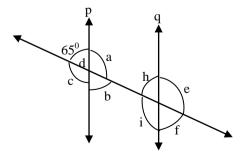
Shyama bought 5kg 300g apples and 3kg 250g mangoes. Sarala bought 4kg 800g oranges and 4kg 150g bananas. Who bought more fruits?

- 21. Construct two equations for each of the following:
 - (i) Starting with x = 2
 - (ii) Starting with y = -3
- 22. Sale of English and Hindi books in the years 1995, 1996, 1997 and 1998 are given below:

Years	1995	1996	1997	1998
English	350	400	450	620
Hindi	500	525	600	650

Draw a double bar graph and answer the following questions:

- (i) In which year was the difference in the sale of the two language books least?
- (ii) About how many books were sold in 1995?
- 23. In the adjoining figure, p||q. Find the unknown angles.



24. A tree is broken at a height of 5m from the ground and its tip touches the ground at a distance of 12m from the base of the tree. Find the original height of the tree.

OR

Find the perimeter of the rectangle whose length is 40cm and a diagonal is 41cm.

- 25. The marks (out of 100) obtained by a group of students in a Science test are 85, 76, 90, 85, 39, 48, 56, 98, 81 and 75. Find:
 - i) The highest and the lowest marks obtained by the students.
 - ii) Range of the marks obtained.
 - iii) Mean marks obtained by the group.
- 26. Solve the following equations:-
 - (a) $7m + \frac{19}{2} = 13$
 - (b) -4(2+x)=8
- 27. Draw rough sketches for the following:
 - (a) In \triangle ABC, BE is a median
 - (b) In \triangle PQR, PQ and PR are altitudes of the triangle
 - (c) In \triangle XYZ, YL is an altitude in the exterior of the triangle.
- 28. Solve the following:
 - (a) Ram's father is 49 years old. He is 4 years older than three times Ram's age. What is Ram's age?
 - (b) Anwar thinks of a number. If he takes away 7 from 5/2 of the number, the result is 23, then find the number.

