



DELHI PUBLIC SCHOOL, GWALIOR

(Under the Aegis of DPS Society, New Delhi)

MODEL TEST PAPER

CLASS – VII

SUBJECT – MATHEMATICS

Time: 03 hrs.

Max. Marks: 80

General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper consists of 40 questions divided into four sections A, B, C & D.
- (iii) Section A comprises of 20 questions of 1 mark each.
Section B comprises of 6 questions of 2 marks each.
Section C comprises of 8 questions of 3 marks each.
Section D comprises of 6 questions of 4 marks each.
- (iv) There is no overall choice. However internal choices has been provided in some questions.
- (v) Use of calculators is not permitted.

Section-A

Choose the correct option:

[1x10=10]

1. If p be the probability of an event then
(a) $1 \leq p \leq -1$ (b) $0 \leq p \leq 1$ (c) $1 \leq p < 2$ (d) none of these
2. 3700 grams are equivalent to
(a) 0.37 kg (b) 3.7 kg (c) 37 kg (d) none of these
3. If the side of a square is (a+6) units, its perimeter is :
(a) 4a units (b) (4a + 24) units (c) [(a+4) + 4] units (d) none of these
4. Identify the linear pair of angles.
(a) 48° , 142° (b) 45° , 135° (c) 55° , 115° (d) none of these
5. The set that represents a Pythagorean triplet is :
(a) 10 , 13 , 5 (b) 3 , 4 , 5 (c) 6 , 8 , 14 (d) none of these
6. The value of $(-64) \div 16$ is :
(a) -4 (b) -5 (c) 4 (d) 5
7. To get number 40, the number $6\frac{2}{9}$ should be multiplied with
(a) $\frac{45}{7}$ (b) $\frac{43}{7}$ (c) $\frac{40}{7}$ (d) $\frac{46}{7}$
8. Range of the data : 58 , 67 , 90 , 58 , 84 , 93 , 59 , 18 and 76 is
(A) 74 (b) 73 (c) 71 (d) 75
9. If $x = 1$, the value of $(x^2 + 2)$ is :
(a) 4 (b) 5 (c) 3 (d) 2

10. The value of $2 \div \frac{3}{4}$ is :
- (a) $\frac{7}{3}$ (b) $\frac{8}{3}$ (c) $\frac{5}{3}$ (d) $\frac{7}{9}$

Fill in the blanks:-

[1x5=5]

11. $\frac{9}{5}$ of $\frac{15}{27} =$ _____.

OR

$(-206) \div$ _____ $= 1$

12. The product of 5 negative and 2 positive integers is _____.
13. $\frac{1}{200}$ in decimal can be written as _____.
14. The probability of an impossible event is _____.
15. Decimals having the same number of decimal places are called _____ decimals.

Answer in one word:-

[1x5=5]

16. What is the reciprocal of 0?
17. What is the commutative property of integers under addition?
18. Write the multiplicative inverse of $3\frac{1}{2}$.

OR

What is the representation of numbers using bars of uniform widths?

19. What is the mean of first five whole numbers?
20. In which triangle, the hypotenuse is the sum of the other two sides?

Section – B

21. A rectangular sheet of paper is $12\frac{1}{2}$ cm long and $10\frac{2}{3}$ cm wide. Find its perimeter. **[2]**
22. Solve the following: **[2]**
- (a) $2\frac{1}{5} \div 1\frac{1}{5}$ (b) $3\frac{1}{4} \times 6$

OR

Solve the following:

- (a) $2\frac{2}{3} + 3\frac{1}{2}$ (b) $8\frac{1}{2} - 3\frac{5}{8}$
23. Find the mean of first 5 whole numbers. **[2]**
24. (a) Write a pair of negative integers whose difference gives 8.
 (b) Write a negative and a positive integer whose difference is -3. **[2]**
25. Find the value of the following: **[2]**
- (a) $(-18) \times (-5) \times (-1)$ (b) $[(-36) \div 12] \div 3$

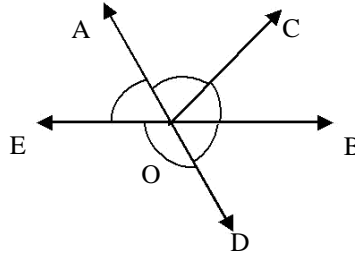
OR

In a quiz, team A scored $-40, 10, 0$ and team B scored $10, 0, -50$ in three successive rounds. Which team scored more?

26. Write the following statements in the form of equations: [2]
(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

27. Indicate which pairs of angles are:
(i) Vertically opposite angles
(ii) Linear pairs



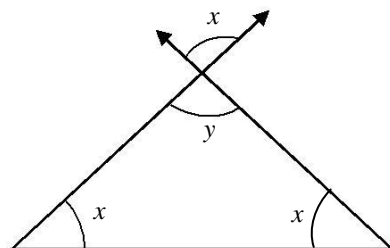
28. At Srinagar temperature was -5°C on Monday and then it dropped by 2°C on Tuesday. What was the temperature of Srinagar on Tuesday? On Wednesday, it rose by 4°C . What was the temperature on this day? [3]
29. A certain freezing process requires that room temperature be lowered from 40°C at the rate of 5°C every hour. What will be the room temperature 10 hours after the process begins? [3]

OR

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 ?

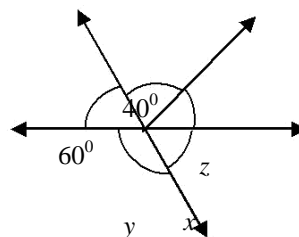
30. Arrange the following in descending order: [3]
 $\frac{1}{5}, \frac{3}{7}, \frac{7}{10}, \frac{2}{5}$

31. 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? [3]
32. Find the values of x & y in the following figure: [3]



OR

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



33. 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? [3]

OR

In A class test containing 15 questions, 4 marks are given to every correct answer and (-2) marks are given for every incorrect answer.

- (i) Anita attempts all questions but 9 of her answers are correct. What is her total score?
(ii) One of her friends gets only 5 answers correct. What will be her score?
34. 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? [3]

Section-D

35. Sale of English and Hindi books in the years 1995, 1996, 1997 and 1998 are given below: [4]

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 is least?
(ii) About how many books were sold in 1995?
36. A tree is broken at a height of 5m from the ground and its top touches the ground at a distance of 12m from the base of the tree. Find the original height of the tree. [4]

OR

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

37. 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: [4]
- a) The highest and the lowest marks obtained by the students.
b) Range of the marks obtained.
c) Mean marks obtained by the group.

38. Solve the following equations: [4]

i) $7m + \frac{19}{2} = 13$

ii) $-4(2 + x) = 8$

OR

Construct two equations for each of the following:

- (i) Starting with $x = 2$.
(ii) Starting with $y = -3$

39. Draw rough sketches for the following: [4]
- (a) In ΔABC , BE is a median.
 - (b) In ΔPQR , PQ and PR are altitudes of the triangle.
 - (c) In ΔXYZ , YL is an altitude in the exterior of the triangle.

OR

Is it possible to have a triangle with the following sides:
6cm, 3cm, 2cm

40. A farmer had a large field of dimensions 1396.5m by 272.72 m. Find the area of the field.

He left $\frac{1}{6}^{th}$ of this area to make a playground for the children of locality, find the area of the playground. [4]

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