BGS INTERNATIONAL PUBLIC SCHOOL
SECTOR-5, DWARKA, NEW DELHI
MID TERM EXAMINATION(2025-26)

SCHOOL CODE: 25279

CLASS: VII
SUBJECT: MATHEMATICS
SET: 1

MM: 80
TIME: 3 Hrs.

General Instructions

1) The question paper has 5 sections A-E.

2) Section A has 20 MCQs carrying 1 mark each.

3) Section B has 5 questions carrying 02 marks each.

4) Section C has 6 questions carrying 03 marks each.

5) Section D has 4 questions carrying 05 marks each.

6) Section E has 3 case based integrated units of assessment (04 marks each) with sub-parts of the values 1, 1 and 2 marks each respectively.

7) All questions are compulsory however internal choices are provided in some questions.

8) Draw neat figures wherever required.

SECTION A

Q1. What is the sum of the pair of two interior angles formed on same size of transversal line?

    (a) 90°   (b) 180°   (c) 360°   (d) 270°

Q2. What is the mode of the data: 3,3, 57,5,7, 4,9, 6,1,7 and 3?

    (a) 3   (b) 6   (c) 7   (d) 5

Q3. What will you get if you multiply 0.7 with 0.07?

    (a) 0.49   (b) 0.049   (c) 4.9   (d) 0.0049

Q4. The sum of a variable p and 9 is 5, then p= ?

    (a) 4   (b) −4   (c) 14   (d) −14

Q5. What is $6 \div 5\frac{1}{4}$?

    (a) $\frac{8}{7}$ (b) 8   (c) $\frac{7}{8}$ (d) $\frac{71}{4}$

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Q6. How many lines of symmetry are there in a regular pentagon?

(a) 5   (b) 6   (c) 3   (d) 8

Q7. Which angle will be the supplement angle of 79° is

(a) 180°   (b) 11 °   (c) 101 °   (d) 91 °

Q8. Find the value of $5a^2 - 16$, if $a = 2$.

(a) 6   (b) 1   (c) 4   (d) 3

Q9. Which regular polygon has a rotational symmetry of order 8?

(a) hexagon   (b) pentagon   (c) octagon   (d) None of these

Q10. Which letter of English Alphabet does not have a line symmetry but has a rotational symmetry of order more than 1

(a) H   (b) I   (c) Z   (d) X

Q11. What is the coefficient of 'm' in the term $-5mnp$?

(a) – 5p   (b) −5   (c) 5np   (d) −5np

Q12. If you add 4 to eight times a number then you will get 60, find the number?

(a) 7   (b) 9   (c) 3   (d) 2

Q13. The range of the following data is: 4, 55, 15, 40, 29, 45, 81, and 51.

(a) 80   (b) 77   (c) 85   (d) 66

Q14. The complement of angle 19° is

(a) 71°   (b) 180°   (c) 90°   (d) 161°

Q15. The multiplicative identity for integers is ____.

(a) 10   (b) -1   (c) 0   (d) 1

Q16. Number of terms in the expression $-2y^2 - 5y+14$ is

(a) 1   (b) 2   (c) 3   (d) 4

Q17. $(-4+9) + (-4 \times 6) \div 2 =$ ___

(a) – 9   (b) 8   (c) −7   (d) 7

Q18. The solution of the equation $2x - 5x = 18$ is

(a) −6   (b) 21   (c) 3   (d) 15

Q19. **Assertion**: Multiplying a fraction by its reciprocal is always 1.
  Reasoning: Reciprocal of a fraction is obtained by flipping the numerator and denominator.
  (a) Both Assertion and Reasoning is true and reason is the correct explanation of assertion.
  (b) Both Assertion and Reasoning is true but Reason is not the correct explanation of assertion.
  (c) Assertion is true and Reasoning is false.
 (d) Assertion is false but Reasoning is true.

Q20. **Assertion**: The mean of a dataset is always greater than the median.
  Reasoning: The mean is affected by extreme values while the median is not.
  (a) Both Assertion and Reasoning is true and reason is the correct explanation of assertion.
  (b) Both Assertion and Reasoning is true but Reason is not the correct explanation of assertion.
  (c) Assertion is true and Reasoning is false.
  (d) Assertion is false but Reasoning is true.

SECTION-B

Q21. Write the equation from the following statement:

"one-fourth of a number x minus 7 gives 5."

Q22. If l ∥ m, what is ∠ x?
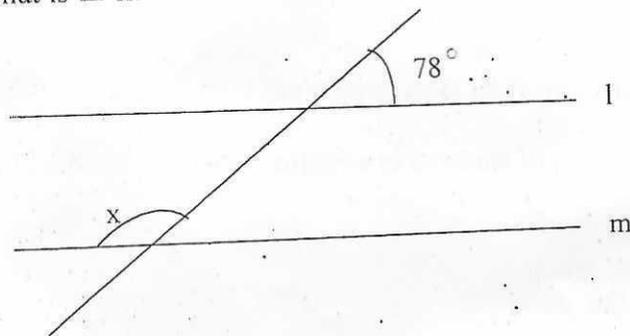
Q23. Give the steps you will use to separate the variable and then solve the equation:
$$\frac{m}{5} = \frac{7}{15}$$

OR

Give the steps you will use to separate the variable and then solve the equation:
$$3t - 4 = -4$$

Q24. Find: 10.05×1.05

OR

Find: $2.16 \div 0.5$

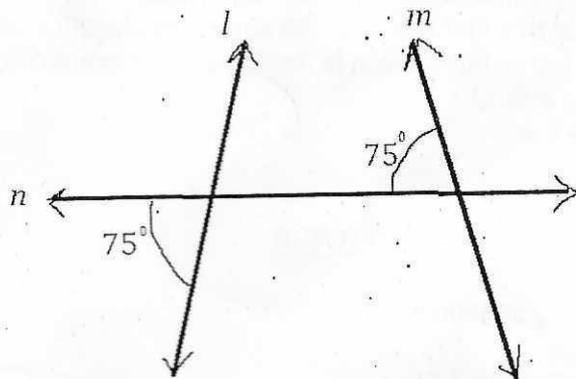Q25. Find: (a) $-25-(-12+15)$

  (b) Write a negative integer and a positive integer whose difference is -3.

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SECTION-C

Q26. What letters of English alphabet have reflection symmetry about?
    (e) A vertical mirror (Any two)
    (f) A horizontal mirror (Any two)
    (g) Both horizontal and vertical mirror (Any two)

Q27. In the given figure below, decide whether l is parallel to m.

Q28. Rohit Sharma scored thrice as many runs as Hardik. Together, their runs fell four short of 4 times a century?

OR

Sizuka's father is 49 years old. He is 4 years older than three times laxmi's age.

Q29. The marks (out of 100) obtained by a group of students in a Mathematics test are 85, 76, 91, 85, 39, 48, 58, 95, 85, 77 and 75. Find the:
    (i)   Range of the marks obtained.
    (ii)   Mean marks obtained by the group.
    (iii)   Median marks obtained by the group

Q30. Saili plants 4 saplings, in a row, in her garden. The distance between two adjacent saplings is $\frac{3}{4}$. Find the distance between the first and the last sapling.
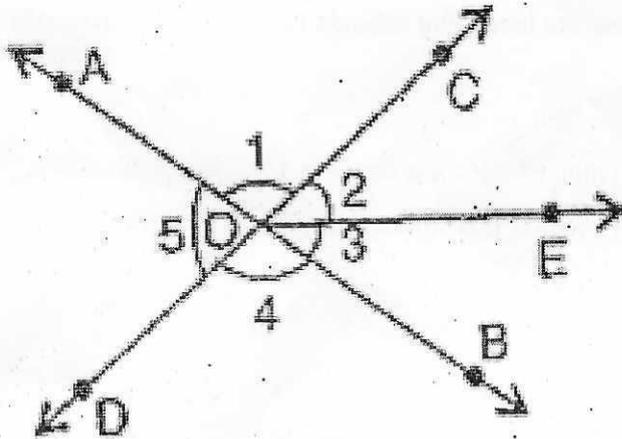
OR

A bus runs 18km in 1 litre of petrol. How much distance will it cover in $3\frac{3}{4}$ litres of petrol?

Q31. (i) Classify into monomial, binomial and trinomial: $8x^3 + 6x^2 - 4x, 4a^2$
    (ii) Identify the like terms: $6x^2$, x, xy, -x²y, -x², -89a, 9ab

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SECTION-D

Q32. In the figure below, AB and CD are straight lines intersecting at O.

- (i)   Name the pair of adjacent complementary angle?
- (ii) Name the pair of vertically opposite angle?
- (iii) If $\angle 5 = 65°$, then the sum of $\angle 2$ and $\angle 3$ is?
- (iv) What is the sum of $\angle 1$, $\angle 2$ and $\angle 3$?
- (v)   Is $\angle AOC$ and $\angle AOE$ adjacent to each other?

Q33. The given table shows the marks of two students in different subjects in a Mid Term Examination.

Subject →	Mathematics	Science	English	Hindi	Social Science
Karn	75	80	90	70	85
Arjun	90	85	80	95	85

- (i)   Represent the given data on a double bar graph by selecting a suitable scale.
- (ii) In which subject did Karn score higher than Arjun?
- (iii) What is the difference in the total marks scored by both students?   (3+1+1)

Q34. (a) A shopkeeper earns a profit of Rs. 5 by selling one pen and incurs a loss of Rs.2 per pencil while selling pencils of old stock.
In a particular month she earns neither profit nor loss. If she sold 70 pens, how many pencils did she sell?

(b) Verify: $(5 \times (2+(-3)) = 5 \times 2 + 5 \times (-3)$ (3+2)

OR

5

(a) In a class test (+ 5) marks are given for every correct answer and (-2) marks are given for every incorrect answer and no marks for not attempting any question. Bholu scored 30 marks. If he got equal correct and incorrect answers, How many questions has he attempted incorrectly?

(b) A diver is at a depth of 25 meters below sea level. She ascends 10 meters, then descends another 5 meters. What is her final depth?

Q35. (a) What should be the value of a if the value of $2x^2 - x - a$ equal to 15, when x=1

(b) Check whether the value given in the bracket is a solution to the equation or not :

$7n-5=19$ (n= -2) $\qquad$ (3+2)

<div align="center">OR</div>

(a) Solve the riddle:

I am a number,

Tell my identity!

Take me seven times over

And add a fifty!

To reach a triple century

You still need forty

(b) Write equations from the following statements.

"If you take away 6 from 6 times y, you get 60"

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SECTION-E

(CASE-STUDY QUESTIONS)

Q36. The annual school fair is a big event, and this year the students are in charge of planning it. They need to use their math skills to manage the different stalls and activities

The "Ring Toss" game has a target divided into sections. To win prize, a player must land a ring on a section with a value of 20 points or more.

➤ The total area of the target is 10 square feet.
➤ The section for 10 points is 1/2 of the target's total area.
➤ The section for 20 points is 1/4 of the target's total area.
➤ The section for 30 points is 1/8 of the target's total area.
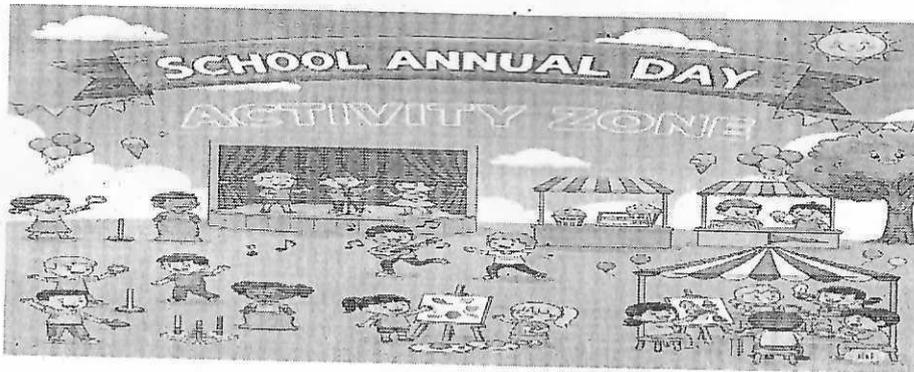
1. What is the area of the section worth 10 points?
2. What is the total area of the sections that win a prize of 20-point and 30-point?
3. What is the product of area of 20-points and 30-points(in decimals)? (1+1+ 2)

Q37. The teacher tells the class that the lowest marks obtained by a student in his class is half the highest marks plus 5. The lowest score is 45.

(a) Find the marks which is 20 more than the lowest score.
(b) Just to pass in the examination, the student has to score 12 marks less than the lowest score. What are the passing marks?
(c) What is the highest score?

(1+1+2)

Q38. A man popularly known as IRONMAN wants to cross a river the other side. He is crossing the river by the path that intersects two parallel riverbanks. The path acts as a transversal, forming several angles with riverbanks. If it is given that ∠a is 29 degrees.

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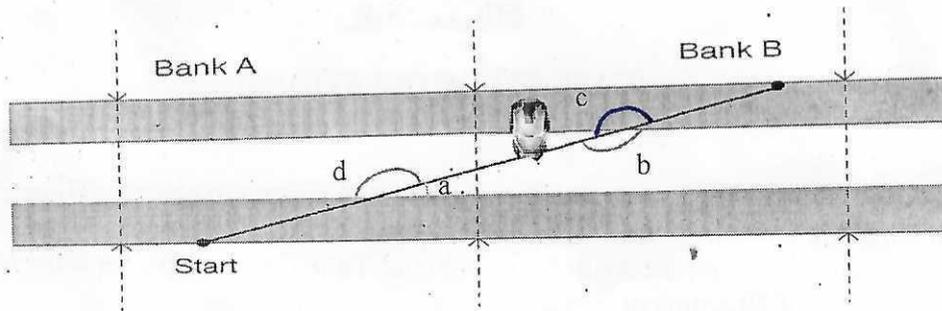
(a) What is the measure of ∠d?
(b) What is the measure of ∠ c?
(c) What is the sum of ∠ a and ∠ b and how are they related?   (1+1+2)