O.P. JINDAL SCHOOL, SAVITRI NAGAR

Half Yearly Exam 2024 – 25

(SET-B)

Class/Section : VII / _____   **MM : 80**

Subject : Mathematics   **Time : 3 Hrs.**

Name: _____   Roll No. _____

**General Instructions:** All questions are compulsory.

i)   _**Section A**_ consists of 16 questions and each question carry _1 mark_.

ii)   _**Section B**_ consists of 8 questions and each question carry _2 marks_.

iii)   _**Section C**_ consists of 8 questions and each question carry _3 marks_.

iv)   _**Section D**_ consists of 4 questions and each question carry _4 marks_.

v)   _**Section E**_ consists of 2 questions and each question carry _4 marks_.

SECTION A

Multiple choice questions:

Q1. The quadrilateral that has line and rotational symmetry of order more than 2 is-

a) Rectangle   b) Square   c) Rhombus   d) Parallelogram

Q2. $(-12) + 0 = 0 + \underline{\hspace{1cm}} = -12$, what comes in blank?

a) -12   b) 12   c) 0   d) 10

Q3. $(a^b)^c = \underline{\hspace{2cm}}$.

a) $a^{b \times c}$ b) a^{b+c} c) a^{b-c} d) $c^{b \times a}$

Q4. $0.009 \times \underline{\hspace{1cm}} = 9$

a) 10   b) 100   c) 1000   d) 10000

Q5. How many integers lie between -4 and 4?

a) 6   b) 7   c) 8   d) 9

Q6. On adding $1 - z$ to $z - 1$, we get:

a) $2z$ b) $2z + 2$ c) 0   c) $2z - 2$

Q7. Sum of a rational number and its additive inverse is:

a) 0   b) 1   c) -1   d) none of these

Q8. $32 \div 3\frac{1}{5}$ when simplified gives:

a) $\frac{1}{10}$ b) $\frac{2}{3}$ c) $\frac{5}{2}$ d) 10

Q9. The value of $(-1)^{1000}$

    a) -1   b) 1000   c) 1   d) -1000

Q10. What will be the supplement of 79°?

    a) 11°   b) 180°   c) 90°   d) 101°

Q11. The coefficient of p in $-123pq^2$ is:

    a) $-123q^2$ b) $123q^2$ c) -123   d) 123

Q12. The value of the x in the equation $5x - 6 = 49$ will be:

    a) 5   b) 11   c) 55   d) 43

Q13. If two linear pair angles measure x° and 5x°, the angles are _____ and _____.

    a) 30°, 150°   b) 150°, 30°   c) 30°, 30°   d) 150°, 150°

Q14. $-\dfrac{25}{5} \times \dfrac{p}{q} = 1$, then $\dfrac{p}{q}$ is:

    a) $\dfrac{1}{5}$ b) $\dfrac{q}{p}$ c) 1   d) $-\dfrac{1}{5}$

Q15. **Assertion A:** $7 + 5 = 24 - 12$

Reason R: An equation is a statement in which value of the two mathematical expressions are not equal.

    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true and R is not the correct explanation of A.
    c) A is true but R is false.
    d) A is false but R is true.

Q16. **Assertion A: A semicircle has line symmetry but no rotational symmetry.**

Reason R: Every figure whose order of rotational symmetry is 1, is not considered to have rotational symmetry.

    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true and R is not the correct explanation of A.
    c) A is true but R is false.
    d) A is false but R is true

SECTION B

Q17. How many lines of symmetry do the following figures have?

    a) Scalene triangle
    b) Square
    c) Isosceles triangle
    d) Rectangle

Q18. Find the sum of $7x$, $-14x$ and $24x$.

OR

Subtract: $3a - 7b$ from $-2a - 5b$

Q19. Divide $\frac{-1}{8}$ by $\frac{3}{4}$.

Q20. Write equations for the following statements:

a) The product of 8 and a number is 72.
b) Three times the sum of a number and 5 is 45

Q21. Simplify: $9^2 + (-4)^3$

Q22. Find the sum by suitable re-arrangement:

$873 + (-57) + 27$

Q23. Find $\frac{2}{3}$ of 3 dozens.

Q24. Find an angle which is double of its complement.

OR

Find the value of $\angle z$, when $\angle z$ and $\angle w$ form a linear pair and $\angle w = 73°$.

SECTION C

Q25. Find the complement of $\frac{2}{5}$ of $\frac{1}{3}$ of a right angle.

Q26. Solve the equations: $\frac{3}{x+1} = \frac{4}{2x-1}$

Q27. Divide the sum of $\frac{65}{12}$ and $\frac{8}{3}$ by $\frac{97}{12}$.

OR

The product of two numbers is 253.134. If one of the numbers is 12.6, find the other number.

Q28. Verify $a \times (b - c) = a \times b - a \times c$, when $a = -2$, $b = 6$ and $c = -4$

Q29. Write three rational numbers between $\frac{4}{5}$ and $\frac{2}{3}$.

Q30. Simplify: $\dfrac{5^6 \times 10^3 \times 2^4}{8 \times 5^7 \times 4}$

Q31. Write number of lines of symmetry, order of rotation and angle of rotation for English alphabets – a) A   b) H
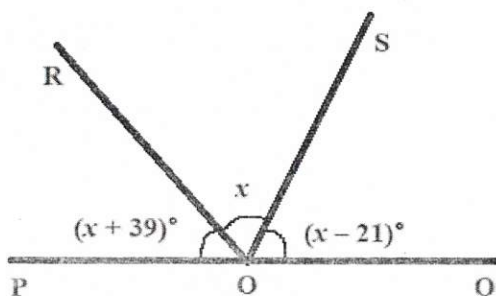
Q32. What should be the value of k if $7y^2 - 3y - k = 35$ when $y = -2$?

OR

Simplify: $(6xy - 4y^2 - x^2) - 2(x^2 - 3xy + 7y^2 - 2)$

SECTION D

Q33. Find ∠POR, ∠ROS and ∠QOS.

Q34. Divide the sum of $-1\frac{1}{4}$ and $3\frac{2}{3}$ by the product of $1\frac{1}{2}$ and $1\frac{5}{6}$.

OR

What should be added to $\left(\frac{1}{2} + \frac{1}{3} + \frac{1}{5}\right)$ to get 8?

Q35. Simplify the expressions and then find the value if x = 2 and y = -2.

$2x - 3y + 4xy - 3x + 2$

Q36. Solve the given questions as per directed:

a) Simplify and express in exponential form:

$$\frac{(5^0 + 20^0) \times 100^0}{72^0 + 99^0}$$

b) Which is greater?

2^5 or 5^2

SECTION E

Case Study based questions.

Q37. A group of 20 people went to a restaurant. 9 of them ordered a meal of Rs. 42.20 each and 7 of them ordered a meal of Rs. 47.60 each and rest ordered a meal of Rs. 50 each?

i) How much money is spent by 9 people who ordered same meal?
ii) How much money is spent by 4 people who ordered same meal?
iii) How much money is spent by 7 people who ordered same meal?
iv) Total money spent by 20 people?

Q38. In a test (+5) marks are given for every correct answer and (-3) Marks are given for every incorrect answers and no marks for not attempting any question. Daksh scored 16 marks, while Riya scores (−8) marks Manu scored 10 marks.

Answer the following questions:

i) What is the total score of Daksh, Riya and Manu?

ii) Product of marks scored by all of them is _____.

iii) Who scored highest marks?

iv) What is the sum of highest marks and lowest marks?

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