O. P. JINDAL SCHOOL, SAVITRI NAGAR

Half Yearly Examination - (2023 – 2024)

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

Subject: Mathematics **Time: 3:00 Hrs.**

Name: _____ Roll No:_____

(Fifteen Minutes Extra will be given for reading the Question Paper.)

General Instructions:

i) *This question paper contains 44 questions. All questions are compulsory.*
ii) *This question paper consist of four sections – A, B, C and D.*
iii) *Section A comprises 20 questions (Q 1 to 20) of 1 marks each.*
iv) *Section B consists 8 questions (Q21 to 28) of 2 marks each.*
v) *Section C comprises 8 questions (Q29 to 36) of 3 marks each.*
vi) *Section D comprises 6 questions (Q 37 to 40) of 4 marks each and Case study based questions (Q41 to 44) of 1 marks each*

(SECTION – A)

Multiple choice questions.

Q1. The mean of first four prime number is.

a) 4 b) 4.5 c) 3.75 d) 4.25

OR

The median of first five odd number is.

a) 3 b) 4 c) 5 d) 6

Q2. If the sum of two consecutive even number is 102, then the larger number is.

a) 50 b) 48 c) 52 d) 46

Q3. Two vertically opposite angles cannot be

a) Obtuse b) acute c) right d) unequal

OR

The sum of two angles whose sum is 180° is called _____ angle.

a) Adjacent b) supplementary c) complementary d) reflex

Q4. The lines of symmetry in a rhombus are

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

Q5. **Assertion:** $(-8) + (-4) < (-8) - (-4)$.

Reason: $-12 < -4$.

a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion
b) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.
c) assertion is true but the reason is false.
d) both assertion and reason are false.

Q6. **Assertion:** 2/7 is an improper fraction.

Reason: In improper fraction numerator is greater than denominator.

a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion

b) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.
c) assertion is true but the reason is false.
d) both assertion and reason are false.

Fill in the blanks

Q7. The additive inverse of -7 is _____.

OR

The multiplicative identity of an integers is _____.

Q8. If $\frac{p}{-3} = 1$, then the value of $4p + 17$ = _____.

Q9. The product of 1.3 and 1.3 equals to _____.

OR

The product of 2.5 and 4 is _____.

Q10. Two angles forming a linear pair are _____ to each other.

Q11. The product of a fraction and its reciprocal is _____.

Q12. The angle of rotation for rotational symmetry of letter "S" is _____.

Write True / False.

Q13. If each observation of the data is increased by 3 then their mean is increased by 3.

Q14. $x = 2$ is a solution of $x + 11 = 13$.

OR

In the equation 7k -7 = 7, the variable is 7.

Q15. $\frac{5}{7}$ is a fraction whose numerator is 7 and denominator is 5.

Q16. The angle of rotation of an equilateral triangle is 120°.

OR

The lines of symmetry of a letter 'N' is 2.

Very short answer type question.

Q17. What is the value of (-8) x (-5) x 3?

Q18. Write two equivalent fractions of $\frac{7}{9}$?

OR

Write $\frac{144}{256}$ in simplest form.

Q19. Find the median of the digits 3,1,5,4,2.

OR

Find the mode of 3, 5, 8, 4, 2, 4, 1, 5, 4.

Q20. Write in equation form-

"7 times 'n' added to 10 gives 101"

(SECTION – B)

Short answer type question.

Q21. Find the difference of $3\frac{1}{2}$ and $2\frac{1}{5}$

Q22. Evaluate: $45 \div [(-2) + (-1)]$

OR

$(-3454) \div (-11)$

Q23. Find the mode of the following data.

26,41,8,30,26,20,26,24,13,17,24

Q24. Two complementary angles are in the ratio 3:7. Find the angles.

Q25. Find the order of rotational symmetry of-

a) Regular pentagon

b) Rectangle

OR

Draw the shapes and lines of symmetry of given figures and write the number of lines of symmetry of - a) Square

b) Equilateral tringle

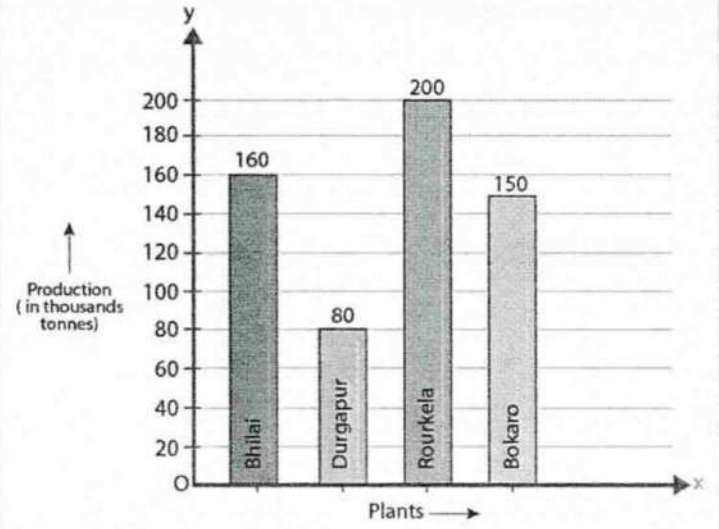
Q26. Solve for q: $\frac{15q}{2} = \frac{15}{4}$

Q27. Find the measure of an angle which is equal to its supplement.

Q28. Simplify: $\frac{2}{5} \times \frac{15}{6} \times \frac{8}{12}$

(SECTION – C)

Q29. Read the given bar graph and answer the following questions-



i) Which plant has done the highest production?

ii) What was the total production of all plants?

iii) Name the plant whose production is greater than 150 thousand tonnes.

Q30. The temperature of a hot metallic rod is 278°C. If it is made to cool off at the rate of 5°C every minute, then what will be its temperature after 15 minutes?

Q31. One-third of a number when decreased by 2 equals one-fifth of the number increased by 8. Find the Number

OR

The length of a rectangle is 5 cm more than its breadth. If the perimeter of the rectangle is 38 cm, find its length and breadth.

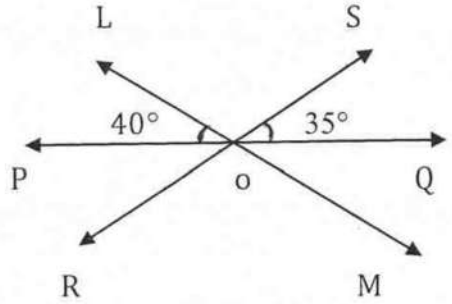
Q32. Which is greater –

$\frac{3}{4}$ of $\frac{5}{6}$ or $\frac{5}{9}$ of $\frac{3}{7}$

OR

Find the area of rectangle whose length is 27cm and breadth is 7.3?

Q33. Find the measures of ∠POR, ∠ROM and ∠LOS.



Q34. Draw and write down the number of line(s) of symmetry for each letter.

i) A ii) I iii) H

Q35. The mean of $x + 8$, $x + 6$, $x + 4$, $x + 2$ and x is 24. Find the value of x.

OR

A total of 15 students secured the following marks in a test in Statistics.

35, 29, 23, 11, 30, 17, 18, 10, 29, 19, 20, 13, 28, 25, 17

Find the median marks.

Q36. Express the following as mentioned.

i) 37g as kg

ii) 30 minutes as an hour

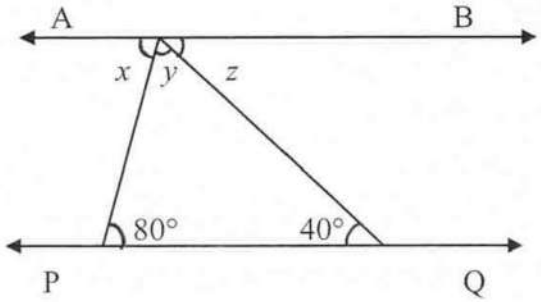
iii) 2.7 mm as cm

(SECTION – D)

Q37. Solve-

$\left(\frac{2}{3}\text{ of }\frac{6}{5}\right) + \left(\frac{4}{5} - \frac{3}{5} \div \frac{3}{2}\right)$

Q38. In the given figure, AB || PQ. Determine the values of x, y and z.



Q39. A rectangular plot is fenced with 150 m long wire. Find the dimensions of the plot if its length is twice its breadth.

OR

Solve for x and verify the result.

$7(x - 2) - 8(4 - 3x) = 47$

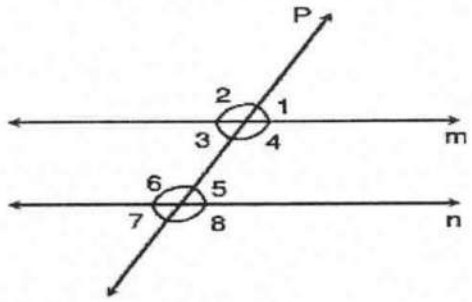
Q40. The following table shows the number of books which are meant for only reference in the library.

Subjects	Languages	Mathematics	Science	Commerce	History
Number of books	300	450	500	250	150

Draw a bar graph for the above data.

(CASE STUDY BASED)

In the given figure, $m \parallel n$ and p is transversal then answer the following questions as per diagram.



Q41. If $\angle 1 = 55°$, then what is the value of $\angle 7$?

a) 25° b) 35° c) 45° d) 55°

Q42. Which angle is corresponding pair of $\angle 4$?

a) $\angle 3$ b) $\angle 5$ c) $\angle 6$ d) $\angle 8$

Q43. Which one pair of angles form co-interior angle according to the above diagram?

a) $\angle 3$ and $\angle 6$ b) $\angle 5$ and $\angle 6$ c) $\angle 1$ and $\angle 3$ d) $\angle 7$ and $\angle 8$

Q44. If $\angle 2 = 75°$, then what is the value of $\angle 1$?

a) 15° b) 105° c) 25° d) 95°

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