# DAV PUBLIC SCHOOLS, ODISHA ZONE
# QUESTION BANK
## SUB:MATHEMATICS CLASS-VII (2023-24)
## TEXT BOOKS:SECONDARY MATHEMATICS

## EXAM SCHEDULE 2023-24

| NAME OF THE EXAM | DATE | FULL MARKS |
|---|---|---|
| PERIODIC ASSESSMENT-I | 24 July 2023to 31July 2023 | 40 |

## SYLLABUS

## PERIODIC ASSESSMENT- I

| CHAPTER - NO | CHAPTER NAME | Marks (40 Marks) |
|---|---|---|
| CHAPTER 1 | RATIONAL NUMBERS | 10 |
| CHAPTER 2 | OPERATIONS ON RATIONAL NUMBERS | 17 |
| CHAPTER 3 | RATIONAL NUMBERS AS DECIMALS | 13 |

## TYPOLOGOGY OF QUESTIONS

| 1 | MCQ | 1 MARK |
|---|---|---|
| 2 | FILL IN THE BLANKS | 1 MARK |
| 3 | WRITE ONLY THE ANSWER: (VSA) | 1 MARK |
| 4 | SHORT ANSWER TYPE QUESTION-I | 2 MARKS |
| 5 | SHORT ANSWER TYPE QUESTION-II | 3 MARKS |
| 6 | LONG ANSWER TYPE QUESTION | 4 MARKS |

# CHAPTER- 1

## RATIONAL NUMBERS

## MCQ QUESTIONS

## CHOOSE THE APPROPRIATE ANSWER FROM THE GIVEN OPTIONS:

1) What is the value of 1/2 of 2/3 of 3/4 of 4/5 of 5/6 of 6/7 of 7/8 of 8/9 of 9/10 of 1000?
   
   a. 1/10                b. 1/100                c. 1/1000                d. 1/10000

2) Consider the statements.

Statement 1: All natural numbers are rational numbers.

Statement 2: All whole numbers are rational numbers.

Statement 3: All integers are rational numbers.

Which of these statements is/are correct

   a. All three statements
   
   b. Neither of the statements
   
   c. Only Statement 1 and Statement 2
   
   d. Only Statement 2 and Statement3

3) Siddhartha writes a rational number as 4/m. What is the smallest possible value of m, if 4/m is apositive rational number?
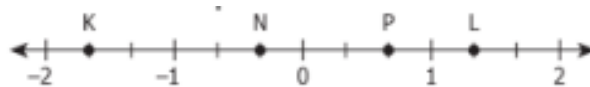
   (a)  0                (b) 1           (c) -2           (d) 3

4) Which of the following is the standard form of -6/8

   (a)  - 3/4                (b) 3/4           (c) – 6/8           (d) 6/8

5) The alphabets on the number line below represent rational numbers.

 Which option shows the correct comparison of the rational numbers?



   (a) K > N > P > L    (b) L > P > N > K    (c) K > L >P>N      (d) N>P> L > K


## FILL IN THE BLANKS

6)  (-6/-22) = (3/ _____ ) = (  __  / 55  )

7)  If  (3/5) =(x/-25)  then x= _____

8)  p/q = r / s if    _____ = _____

9)  7/ -8 _____ -8/9 (put > or < sign)

10)  If the integers p and q have no common divisor other than 1 and q is positive, then the rational number (p/q) is said to be in the _____


## WRITE ONLY THE ANSWER: (VSA)

11) Express $\frac{9}{-8}$ as rational number with denominator - 56?

12) On the number line, the rational number -5/ -8 lies on which side of zero

13) Between (-6/-13) and (7/13) which is smaller?

14)  The rational number (- 3/-5) is on the right of (- 4/7) on the number line (T/F)

15) Rational nos 2/3 and – 2/3 are at equal distances from zero (T/F)

# SA-I QUESTIONS (2MARKS)

## SOLVE THE FOLLOWING QUESTIONS:

16) Write all rational nos whose absolute value is 4/5
17) Express  -128 / 144 in standard form.
18) Show that 4/ -7 and -16/ 28 are equivalent rational nos.
19) Find the positive rational nos among the following.
    -3/4,  -3/-4, 3/-4,  0 / -1 , 1/ -1
20)  Write two rational numbers equivalent to -2/5

# SA-II QUESTIONS (3 MARKS)

## ANSWER THE FOLLOWING QUESTIONS

21)  Represent -5/6on number line.
22)  Compare -4/5 and 7/-9
23)  Find the average of 1/3, 2/9, 5/18
24)  Express (-192/108) as a rational no with numerator
     i) -48ii) – 16
25)  Write down the rational no whose numerator is $(-3)^2$ x $1^{100}$ and denominator is (-3 -4) x $(-1)^{27}$

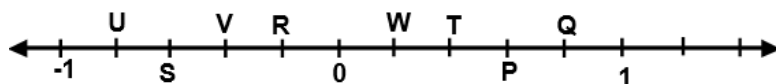# LA QUESTIONS (4 MARKS)

## SOLVE AND FIND A SOLUTION:

26)  Arrange **(-3/10), (17/-30), (7/-15), (-11/20) in descending order.**
27)  Ramu, a farmer had a son and a daughter. He decided to divide his property among his children. He gave 2/5 of the property to his son and 4/10 to his daughter and rest to the charitable trust .Now, Ramu since illiterate wants to know whether he gave equal parts to both son and daughter or not ?Explain

28)  In the fig what value does the circle represent? Explain with steps.



29)  Select those rational numbers which can be written as a rational number with numerator 6 with reason.
          (1/22), (2/3), (3/4), (4/-5), (5/6), (-6/7), (-7/8)
30)  ThepointsP,Q,R,S,T,UandVonthe numberline aresuchthat,US=SV= VR,andWT= TP=PQ.Find the value of U, V, T and P

## CHAPTER- 2
## OPERATIONS ON RATIONAL NUMBERS

### MCQ QUESTIONS
### CHOOSE THE APPROPRIATE ANSWER FROM THE GIVEN OPTIONS:

1) Which of the following rational numbers is greatest?

   (a) $|\frac{-3}{11} + \frac{1}{11}|$      (b) $|\frac{-8}{11} + \frac{-1}{11}|$      (c) $|\frac{11}{11} + \frac{-4}{11}|$      (d) $|\frac{6}{11} + \frac{4}{11}|$

2) The numbers _____ and _____ are their own reciprocals.

   (a) 1 and 0      (b) -1 and 0      (c) 1 and -1      (d) None of these

3) The reciprocal of -6 is _____

   (a) 6      (b) 1      (c)$\frac{1}{6}$      (d)$-\frac{1}{6}$

4) ASSERTION: $-(\frac{4}{-5}) = \frac{4}{5}$

   REASON: Negative of a negative rational number is negative.

   a) Both assertion and reason are correct and reason is the correct explanation for assertion

   b) Both assertion and reason are correct but reason is not correct explanation for assertion

   c) Assertion is correct but reason is false.

   d) Both assertion and reason are false.

5) What number should be added to $\frac{-3}{9}$ so as to get the identity element under multiplication?

   (a) $-\frac{12}{9}$      (b) $\frac{12}{9}$      (c)$\frac{6}{9}$      (d) $-\frac{6}{9}$

### FILL IN THE BLANKS

6) $\frac{-5}{-7}$ is the _____ inverse of$-\frac{5}{7}$

7) _____ is a rational number whose reciprocal does not exist.

8) There are _____ rational numbers between any two rational numbers.

9) Sum of a number and its additive inverse is equal to _____

10) $\frac{-3}{14}$ x (_____) $= \frac{12}{5}$

### WRITE ONLY THE ANSWER: (VSA)

11) Subtract zero from $-\frac{7}{16}$

12) Divide $\frac{3}{7}$ by -8

13) Find the multiplicative inverse of $-3\frac{2}{9}$

14) Does the identity element for multiplication of a rational number exists? Show an example using the rational number $\frac{4}{13}$

15) Give an example for commutative property of multiplication of rational numbers.

## SA-I QUESTIONS (2MARKS)

### SOLVE THE FOLLOWING QUESTIONS:

16) Write the following rations numbers in ascending order. $\frac{3}{7}, \frac{3}{2}, \frac{3}{4}$

17) By what number $\frac{4}{15}$ should be multiplied to get $\frac{-7}{2}$?

18) Find the sum of additive inverse and multiplicative inverse of 7.

19) If 24 pairs of trousers of equal size can be prepared with 54m of cloth, what length of cloth is required for each pair of trousers?

20) Find all rational numbers whose absolute value is $\frac{2}{7}$

## SA-II QUESTIONS (3 MARKS)

### ANSWER THE FOLLOWING QUESTIONS:

21)  Find any 3 rational numbers between  3 and -1

22) Write a pair of fraction whose sum is $\frac{7}{11}$ and the difference is $\frac{2}{11}$

23)  Find the reciprocal of $\left(6\frac{1}{5} + \frac{3}{8} \div \frac{3}{4} - 4\right)$

24)  Verify $x + y = y + x$ for $x = 5$ and $y = \frac{3}{2}$

25)  The sum of two rational numbers is $-8$. If one of the numbers is $\left(-\frac{15}{7}\right)$, find the other.

## LA QUESTIONS (4 MARKS)

### SOLVE AND FIND A SOLUTION:

26)  What should be added to $(\frac{1}{2} - \frac{3}{4} of -\frac{8}{5})$ so that the sum  is the product of $\frac{-7}{50}$ and $1\frac{1}{14}$?

27)  For $x = \frac{3}{4}$ and $y = -\frac{9}{8}$ insert a rational number between $(x + y)^{-1}$ and $(x^{-1} + y^{-1})$

28)  Represent $2\frac{1}{3}$ and $3\frac{1}{2}$ on a number line.

29)  CASE STUDY BASED QUESTION: Jinal planted 3 mango seeds in 3 different transparent pots to observe the growth. All 3 seeds have rooted well. The first seed

has $(-2\frac{1}{2})$ cm root, the second one has $(-5\frac{2}{6})$ cm and the third seed has $(-\frac{30}{4})$ cm root.

    (i)    Simplify: $(-2\frac{1}{2}) \times (-5\frac{2}{6}) \times (-\frac{30}{4})$

    (ii)    How much deeper is the third seed's root grown from the first seed?

30)  Divide the sum of (65/12) and (8/3) by their difference.

# CHAPTER -3
## RATIONAL NUMBERS AS DECIMALS

## MCQ QUESTIONS
## CHOOSE THE APPROPRIATE ANSWER FROM THE GIVEN OPTIONS:

1) The value of $0.05 \times 5 - 0.005 \times 5$ equals to
    (a) 2.250       (b)0.225       (c) 0.0225       (d) 0.275

2) The product of $(0.04)^2 \times 0.016$ is
    (a) 0.0000256 (b) 0.000256   (c) 0.00256     (d) 0.0256

3) Which of the following has largestvalue
    (a)$\frac{1}{1000} \times 10^{-1}$     (b)$\frac{1}{10000}$     (c)$\frac{1}{10^6}$     (d)$\frac{1}{10^6} \div 0.1$

4) The value of $16.016 \div 0.4 + 15.07$ is
    (a) 56.11       (b)55.12       (c) 55.11   (d) 56.12

5) The product whose product with 0.05 is 0.0465. Required number is
    1) 0.928       (b) 0.85       (c) 0.93       (d) 0.925

## FILL IN THE BLANKS

6) The value of $3 \times 0.3 \times 0.03 \times 0.003 \times 3000$ equals to ----------------- .

7) The decimal 0.3125 expressed as a rational number is ----------------- .

8) The decimal form of $\frac{139}{625}$ is ------------------- .

9) The value of $(\frac{0.1}{0.01} + \frac{0.01}{0.1}) + 100$ is ------------- .

10)  The quotient when 0.6 is divided by 0.000012 is --------------.

## WRITE ONLY THE ANSWER: (VSA)

11) If $213 \times 16 = 3408$ then find the value of $1.6 \times 2.13$.

12)  Write the decimal form of $-90\frac{5}{1000}$ .

13)  Find the sum of $25\frac{67}{1000}$ and $-57\frac{21}{1000}$ in decimal form.

14)  Express -0.0375 as $\frac{p}{q}$ in standard form.

15) Find the value of $-5.7 + 13.20 - 15.009$ .

## SA-I QUESTIONS (2MARKS)

### SOLVE THE FOLLOWING QUESTIONS:

16) The product of two decimals is 42.987 . If one of them is 12.46. Find the other.
17) Evaluate : 68.72 – 4.5÷0.15
18) Find the decimal representation of $\frac{-16}{45}$
19) Express 8.0025 in the form $\frac{p}{q}$ form.
20) What should be added to 38.65 to get the sum of 29.35 and 16.78.

## SA-II QUESTIONS (3 MARKS)

### ANSWER THE FOLLOWING QUESTIONS:

21) Evaluate: 98.56 – 27 – 32.079 + 15. 309 ÷ 3
22) Simplify and express as decimals
   {(156. 25 ÷0.025) ×0.08 }÷7.5
23) Simplify and express as $\frac{p}{q} \text{ form}$ in its lowest form.
   1.44× (36÷1.2) – 0.225 +4.672
24) Raju spends 0.75 of his salary every month. If she earns Rs. 12000 per month . In how many months will he save Rs.39000?
25) The thickness of 54 sheets of paper is 15.12mm .What is the thickness of 32 of such sheets in cm ?

## LA QUESTIONS (4 MARKS)

### SOLVE AND FIND A SOLUTION:

26) A party of 20 people went to a restaurant. They ordered a meal of Rs. 165.75 each .but 5 of them had forgotten to bring money. In order to settle the bill, how much more did the other 15 people have to pay?
27) Simplify and express in $\frac{p}{q}$ form in lowest form.
   $\frac{0.6 \times 0.06 \times 0.006}{0.1 \times 10 \times 0.001} - \frac{1}{4} + \frac{1}{5}$
28) A grocery shop mixes 20.25 kg of green tea with 35.10kg of special tea and repacks all tea in 45 packets of equal weight. How much does each packet of tea weigh?
29) Perimeter of a rectangle is 2.4m less than $\frac{2}{5}$ of the perimeter of a square.
   If the perimeter of the square is 40m, find the length and breadth of the rectangle if length is one third of the length.
30) Simplify and express the result as $\frac{p}{q}$ form in its lowest forms.
   $\frac{1}{5} \times 0.03125 + \frac{3}{8} - \frac{7}{20}$