Section – A (1 Mark)

1. MULTIPLE CHOICE QUESTIONS:
   i) Identity element for subtraction of rational number is
      (a) 1   (b) 0   (c) -1   (d) does not exist
   ii) $-8\frac{7}{100}$ Expressed as a decimal number is
      (a) -8.700   (b) 8.007   (c) -8.007   (d) -8.07
   iii) In the given line, which of the following rational numbers does the point A represent ?
      (a) $\frac{2}{8}$ (b) $\frac{2}{3}$ (c) $\frac{7}{5}$ (d) $\frac{17}{5}$

2. State whether the following statements are True . If not then justify your answer.
   i) Every rational number is a fraction .
   ii) If $|x| = |y|$ then $x = y$.
   iii) On a number line number lying left to a given number is greater .

3. Fill in the blanks :
   i) $\frac{3}{5} = \frac{129}{[\ ]}$
   ii) The absolute value of $\frac{-4}{7}$ is _____
   iii) Decimal numbers having an infinite number of decimal places are known as _____ decimal number.

4. Convert $\frac{3}{5}$ in decimal form.

5. Express $\frac{16}{-24}$ in the simplest form with its denominator as positive.

6. Which of the following rational number is the smallest?

   (i) $\left|\frac{7}{5}\right|$ (ii) $\left|\frac{-8}{5}\right|$ (iii) $\left|\frac{-2}{5}\right|$

7. $-3\frac{9}{100}$ expressed as decimal is _____.

   (i) -3.09 (ii) -3.009 (iii) -3.9

8. The reciprocal of a negative rational number _____

9. 0.175 expressed as a rational number is _____

10. Find the rational number between 2 and 4.

Section – B (2 Marks)

11. Subtracting -5/6 from - 1/3

12. Represent $-\frac{2}{11}, \frac{-5}{11}$, and $\frac{-9}{11}$ on the number line.

13. Find the reciprocal of $\frac{4}{5} \times \frac{3}{-8}$

14. Add the rational Numbers -15/4 and 7/4

15. Express the $\frac{-21}{25}$ rational numbers as decimals.

16. Find the additive inverse of each of the following: (i) 1/3 (ii) - 23/9

17. Write down the rational number whose numerator is (-3) × 4, and whose denominator is (34 - 23) × (7 - 4).

18. Write down the rational number whose numerator is the smallest four digit number and denominator is the largest five digit number.

19. Write each of the following rational numbers in the standard form:
    (i) 3/15 (ii) -12/44

20. Express (-3)/5 as a rational number with denominator.
    (i) 20 (ii) -35

Section – C (3 Marks)

21. If the product of any two rational numbers is 2 and one of them is $\frac{1}{7}$, find the other?

22. Find the values of x, $\frac{23}{x} = \frac{2}{-8}$

23. Find the decimal representation of rational number $-\frac{15}{8}$

24. What should be added to (1/2 + 1/3 + 1/5) to get 3?

25. Express the $\frac{12}{5}$ rational numbers as decimals by using long division method.

Section – D (4 Marks)

26. Simplify (0.357 + 0.96) – (3.25 – 2.79)

27. Verify : -1 + (-2/3 + -3/4) = (-1 + -2/3) + -3/4

28. Divide : 32.768 by 8

29. Simplify 3/8 – (-2)/9 + (-5)/36

30. Arrange the numbers $\frac{1}{4}, \frac{13}{16}, \frac{5}{8}$ in the descending order.

Section – A (1 Mark)

1. The multiplicative inverse of 4/-5 is
   a) -4/5   b) 5/4   c) 5/-4   d) -5/-4

2. The value of -4/3 - -1/3 is
   a) -2   b) -3   c) 2   d) -1

3. When 0.36 is written as rational number in simplest form , the sum of the numerator and the denominator is
   a) 15   b) 45   c) 34   d) 136

4. Given that 268 × 74 = 19832, then the value of 2.68 × 0.74 = _____

5. Represent −3/5 on the number line.

Section – B (2 Marks)

6. Simplify 2/5 + 3/10 + 7/25 in the decimal form.

7. Divide: 59.049 ÷4.5.

8. Find the product : (-13)/15 × (-25)/26

9. Find three rational numbers equivalent to 3/5 and 4/-7

10. Find the value of x $\frac{-256}{x} = 4$

Section – C (3 Marks)

11. Convert 3/7 to decimals by long division methods.

12. The sum of two rational numbers is -3/5. If one of the numbers is -9/20, find the other.

13. Find an equivalent form of the rational numbers 2/9 and 5/6 having a common denominator.

14. Simplify 3.125 ÷ 0.125 + 0.50 − 0.225 and express the result as a rational number in its lowest form.

15. Find three rational number between $\frac{-3}{7} \; and \; \left|\frac{-3}{7}\right|$

Section – D (4 Marks)

16. The food we eat remains in the stomach for a maximum of 4 hours. For what fraction of a day, it does not remain there?

17. The perimeter of a rectangular field is 2.4m less than $\frac{2}{5}$ of the perimeter of a square. If the perimeter of the square is 40m, find the cost of fencing the rectangular field at Rs.3.50 per metre.

18. For $x = \frac{3}{4}$ and $y = \frac{-7}{8}$, insert a rational between $(x + y)^{-1}$ and $x^{-1} + y^{-1}$

19. A **$117\frac{1}{3}m$** long rope is cut into equal pieces measuring $7\frac{1}{3}m$ each. How many such small pieces are there?

20. Arrange in descending order : $\frac{7}{10}, \frac{-11}{-30}$ and $\frac{5}{-15}$

1. Subtract the sum of $\frac{-5}{6}$ **and** $\frac{3}{-15}$ from the sum of $2\frac{2}{3}$ **and** $-6\frac{2}{5}$

2. Simplify and express the rational number in its lowest form $\frac{0.144 \div 1.2}{0.016 \div 0.02} + \frac{7}{5} - \frac{21}{8}$

3. Convert the rational number into decimal form $\frac{-5}{13}$

4. $\frac{2}{5}$ of total number of students of a school come by car while $\frac{1}{4}$ of students come by bus to school. All the other students walk to school of which $\frac{1}{3}$ walk on their own and the rest escorted by their parents. If 224 students come to school walking on their own, how many students study in that school?

5. Find five rational number between $\frac{-7}{4}$ and $\left|\frac{-7}{4}\right|$

6. Simplify: $2.3 - [1.89 - \{3.6 - (2.7 \overline{- 0.8 - 0}.03)\}]$

7. Verify that $(x - y)^{-1} \neq x^{-1} - y^{-1}$ by taking $x = \frac{-2}{7}, y = \frac{4}{7}$

8. Evaluate : $\frac{-12}{-5} + \frac{7}{-3} + \frac{-5}{14} + \frac{22}{7}$

9. Area of square is 4 sq. in more than 2/3 of the area of a rectangle. If the area of square is 64 sq. m., then find the dimension of rectangle, given that breadth is 2/5 of length.

10. A train travels $\frac{1445}{2}$ km in $\frac{17}{2}$ hours. Find the speed of the train in km/h.

11. Find (m+n) ÷(m-n), if: m=$\frac{4}{5}$ and n=$\frac{-3}{10}$

12. The perimeter of a rectangular field is 2.4m less than $\frac{2}{5}$ of the perimeter of a square. If the perimeter of the square is 40m, find the cost of fencing the rectangular field at Rs.3.50 per metre.