Assignment-1
Chapter - Integers

1. Start with an integer -8. Add -12 to it, subtract 10 from the result. Divide the result by +3 and multiply the answer by -2. What do you get?
2. Simplify: 54357 + (-90873) - (231001) + (-405)
3. Subtract the sum of (-93) and (-572) from the difference of (-531) and (-721).
4. Multiply (-9) by(-1) and state whether the product is additive inverse of 9 or not?
5. Simplify: {(-13) -(-27)} + {(-25)-(40)}
6. If a = -9 and b = -6,show that (a-b) $\neq$ (b-a)
7. Arrange the following integers in ascending order:
   -8,-4,0,-11,9,4,6,13,-27,19
8. Arrange the following integers in descending order:
   6,-11,12,-32,-23,14,0,32,16,-19,-18.
9. Find the smallest integer n so that 5 × 12 × n is the product of three consecutive integers.
10. A watch is getting slow by 2 minutes for each hour in a day. If it shows 10 a.m. now, what shall be the time after 12 hours?
11. The sum of two integers is -11 and their product is -80. What are the two integers?
12. To conduct a science experiment , it is required to decrease the temperature from 36° C at the rate of 4° C every hour. What will be the temperature 10 hours after the process begins?
13. If I divide my house number by 2 and then add 6,I get 24. What is my house number?
14. In an ice cream factory, ice is freezed at -10° C in a room. If the room temperature is 25° C which can be lowered by 5° C every hour, find the total time required to freeze the ice.
15. A shopkeeper earns a profit of Rs. 6 by selling 1 notebook and incurs a loss of Rs. 4 by selling a pen from his old stock.

a. In a particular week, he suffered a loss of Rs.100. If he sold 30 notebooks, then how many pens did he sell?

b. In the next week, he earns neither profit nor does he incur any loss. If he sold 40 notebooks, then how many pens did he sell?

Assignment-2

Chapter - Fractions and Decimals

1. Write a pair of proper fractions, whose product is $\frac{8}{15}$.
2. A media research survey showed that one evening ,$\frac{2}{3}$ of all Indian households had their T.V.s on, and $\frac{3}{8}$ of them were watching cricket world cup match. What fraction of India households were watching the match?
3. A giant tortoise can travel about one-tenth of a kilometre in an hour. At this speed, how far can it travel in $1\frac{3}{4}$ hours?
4. Komodo dragons are the largest lizards in the world. A 250 pounds komodo dragon can eat enough at one time to increase its weight by $\frac{3}{4}$. Determine how much weight a Komodo dragon could gain after eating.
5. A female angerfish is approximately $2\frac{1}{2}$ inches long, and a male about $\frac{2}{5}$ inches long. How much longer (in centimetres)is the female fish than the male fish? [1 inch=$\frac{254}{100}$ cm]
6. The side of an equilateral triangle measures $7\frac{3}{8}$ cm . Find $\frac{1}{2}$ of the perimeter of the triangle.
7. The quotient of two numbers is 2. If the denominator is $7\frac{2}{5}$, find the numerator.
8. In a hostel, 250 kg rice is bought every week. Each student consumes $\frac{5}{2}$ kg rice per week, Find the number of students in the hostel.
9. Simplify: 65.7 - 34.55 + 76.4 -28.83.
10. Find the following products:

    a. 0.4 × 0.4 × 0.04 b. 0.1 × 0.01 × 0.0001 c. 2.5× 0.25 × 5 d. 0.8 × 3.5 × 0.05

Fill in the blanks:

11. 8.3 exceeds its one-tenth by_____
12. The decimal number 50.09 is written in expanded form as _____.
13. If $\frac{169}{0.169} = \frac{16.9}{x}$, the value of x is_____.
14. The number of digits after the decimal in 82.74 ÷1000 is_____
15. 0.000099 should be multiplied by _____ to make it the greatest two-digit number.

Assignment -3

Chapter - Rational Numbers

Q1. Arrange the following in descending order.

(a) $\frac{3}{-4}, \frac{1}{2}, \frac{-5}{6}, \frac{7}{5}$ (b) $\frac{-5}{-6}, \frac{7}{-12}, \frac{-2}{9}, \frac{13}{24}$

Q2. Find five rational numbers between $\frac{-5}{7}$ and $\frac{-3}{8}$.

Q3. List six rational numbers between -4 and -2.

Q4. A dragonfly flies from a point P, $\frac{2}{3}$ km towards east and then $1\frac{5}{7}$ km towards west. At what distance and in which direction will it be now from the point P?

Q5. What should be added to $(\frac{1}{2} + \frac{1}{3} + \frac{1}{4})$ to get 2?

Q6. What should be added to $\frac{4}{5} + \frac{3}{7}$ to get $\frac{-4}{15}$?

Q7. Simplify.

$-\frac{3}{5} - (-\frac{3}{4}) + (-\frac{2}{5})$

Q8. Using suitable properties, simplify:

$\frac{4}{9} \times (\frac{-3}{7}) + \frac{3}{14} + (\frac{-3}{7}) \times \frac{2}{9}$

Q9. Additive inverse of x is same as multiplicative inverse of $\frac{3}{7}$. Find the value of x.

Q10. Find a rational number between $(a + b)^{-1}$ and $(a^{-1} + b^{-1})$, given that $a = \frac{1}{3}$, $b = \frac{2}{7}$.

Q11. From a rope 44m long, as many pieces as possible are cut off each $5\frac{1}{6}$ m long. Find the number of pieces and the length of the remaining rope.

Q12. If the price of 12 tables is Rs. $3600\frac{2}{5}$ and the price of 6 chairs is Rs. $3000\frac{3}{4}$, find the total price of 4 tables and 4 chairs.

Q13. Find ten rational numbers between -9 and 9.

Q14. Using mean method, find a rational number between $-\frac{8}{9}$ and $\frac{9}{8}$.

Q15. The cost of $2\frac{3}{4}$ meters of cloth is Rs. $150\frac{2}{3}$. Find the cost of cloth per meter.

Assignment-4

Chapter - Exponents and Powers.

1. Simplify: $(-7)^0 + (8)^0 + (5)^0$

2. Simplify: $(\frac{1}{6} + \frac{2}{3}) \times 2$

3. Simplify: $(\frac{1}{2} - \frac{1}{4})^3 \times (8)^2$

4. Simplify: $(12 + 22 - 32) \div (-4)^0$

5. Simplify: $(33 - 23) \div (5)^3$

6. Write $\left(\frac{-4}{5}\right)^{-6}$ with positive exponent.

7. By what number should $(3)^6$ be multiplied so that the product is equal to $(-3)^{48}$?

8. By what number should $(-3)^{-3}$ be multiplied so that the product is $(-15)^{-1}$?

9. By what number should $(-9)^{-1}$ be divided so that the quotient is $(-7)^{-1}$?

10. Find the value of x in $-(-5) \times x = -125$

11. Find the reciprocal of $\left(\frac{2}{5}\right)^{-3}$

12. Distinguish between the rational numbers $\left(\frac{2}{3}\right)^3$ and $\left(\frac{3}{2}\right)^2$.

13. If $\left(\frac{p}{q}\right) = \left(\frac{-2}{3}\right)^9 \div \left(\frac{-2}{3}\right)^8$, find the value of $\left(\frac{p}{q}\right)^2$

14. Write the following numbers in usual form:

    a. 7.23189×10^5 b. 1.3×10^8

15. Write the following numbers in standard form and then arrange in descending order:

    36.5×10^4 , 420×10^3 , 0.073×10^5