QUANTITATIVE

REASONING

CHAPTER – 1

NUMBER SYSTEM

1. Which one of the following numbers is exactly divisible by 11? [**D**]

   (A) 235641 (B) 245642 (C) 315624 (D) 415624

2. The sum of the first 45 natural numbers is: [**A**]

   (A) 1035 (B) 1280 (C) 2070 (D) 2140

3. $\frac{753 \times 753 + 247 \times 247 - 753 \times 247}{753 \times 753 \times 753 + 247 \times 247 \times 247} = ?$ [**A**]

   (A) 1/1000 (B) 1/506 (C) 253/500 (D) None of these

4. If the number 481*673 is completely divisible by 9, then the smallest whole number in place of * will be: [**D**]

   (A) 2 (B) 5 (C) 6 (D) 7

5. A 3-digit number 4a3 is added to another 3-digit number 984 to give a 4-digit number 13b7, which is divisible by 11. Then, (a + b) =? [**A**]

   (A) 10 (B) 11 (C) 12 (D) 15

6. What decimal of an hour is a second? [**C**]

   (A) 0.0028 (B) 0.0027 (C) 0.00027 (D) 0.0025

7. 9 + ¾ + 7 + 2/17 – (9+1/15) =? [**D**]

   (A) 7 + 719/1020 (B) 9 + 817/1020 (C) 9 + 719/1020 (D) 7 + 817/1020

8. If 144/0.144 = 14.4/x, then x =? [**B**]

   (A) 0.144 (B) 0.0144 (C) 0.00144 (D) 1.44

9. (800 ÷ 64) x (1296 ÷ 36) =? [**B**]

   (A) 420 (B) 450 (C) 500 (D) 540

10. Which of the following numbers is divisible by each one of 3, 7, 9 and 11? [**B**]

(A) 639 (B) 2079 (C) 3791 (D) 37911

11. 18800 / 470 / 20 [**B**]

(A) 1 (B) 2 (C) 3 (D) 4

12. The sum of the two numbers is 12 and their product is 35. What is the sum of the reciprocals of these numbers? [**A**]

(A) 12/35 (B) 1/35 (C) 35/8 (D) 7/32

13. The price of commodity P increases by 40 paise every year, while the price of commodity Q increases by 15 paise every year. If in 2001, the price of commodity P was Rs. 4.20 and that of Q was Rs. 6.30, in which year commodity P will cost 40 paise more than the commodity Q? [**B**]

(A) 2010 (B) 2011 (C) 2012 (D) 2013

14. The correct expression of 6.46 in the fractional form is: [**A**]

(A) 646/99 (B) 64640/1000 (C) 640/100 (D) 640/99

15. If $(64)^2 - (36)^2 = 20 \times Z$, then Z=? [**D**]

(A) 70 (B) 120 (C) 180 (D) 140

CHAPTER – 2

SIMPLE EQUATIONS

1. The product of two consecutive odd numbers is 4623. Which is the greater of the two numbers?
(A) 66 (B) 69 (C) 68 (D) 67 (E) None of these [**B**]

2. If the numerator of a fraction is increased by 500% and the denominator is increased by 300%, the resultant fraction is 1(1/17). What was the original fraction? [**E**]

(A) 12/17 (B) 13/17 (C) 3/7 (D) 4/11 (E) None of these

3. The cost of 10 kg of apples is equal to the cost of 24 kg of rice. The cost of 6 kg of flour equals the cost of 2 kg of rice. The cost of each kg of flour is Rs. 20.50. Find the total cost of 4 kg of apples, 3 kg of rice and 5 kg of flour? [**B**]

(A) Rs. 849.40 (B) Rs. 877.40 (C) Rs. 901.60 (D) Rs. 815.20 (E) None of these

4. The cost of 2 chairs and 3 tables is Rs. 1300. The cost of 3 chairs and 2 tables is Rs. 1200. The cost of each table is more than that of each chair by? [**E**]

(A) Rs. 70 (B) Rs. 75 (C) Rs. 50 (D) Rs. 60 (E) None of these

5. A man has some hens and cows. If the number of heads be 48 and the number of feet equals 140, then the number of hens will be: [**D**]

(A) 22 (B) 23 (C) 24 (D) 26

6. In an examination, a student scores 4 marks for every correct answer and loses 1 mark for every wrong answer. If he attempts in all 60 questions and secures 130 marks, the number of questions he attempted correctly is [**B**]

(A) 35 (B) 38 (C) 40 (D) 42

7. A certain number of two digits is three times the sum of its digits and if 45 be added to it, the digits are reversed. The number is: [**B**]

(A) 23 (B) 27 (C) 32 (D) 72

8. 54 is to be divided into two parts such that the sum of 10 times the first and 22 times the second is 780. The bigger part is: [**B**]

(A) 24 (B) 34 (C) 30 (D) 32

9. The sum of four numbers is 64. If you add 3 to the first number, 3 are subtracted from the second number, the third is multiplied by 3 and the fourth is divided by 3, then all the results are equal. What is the difference between the largest and the smallest of the original numbers? [**C**]

(A) 21 (B) 27 (C) 32 (D) cannot be determined (E) None of these

10. The sum of three numbers is 136. If the ratio between first and second be 2 : 3 and that between second and third is 5 : 3, then the second number is: [**C**]

(A) 40 (B) 48 (C) 60 (D) 72

11. Among three numbers, the sum of the first two is 45, the sum of the second and the third is 55 and the sum of the third and thrice the first is 90. The third number is [**C**]

(A) 20 (B) 25 (C) 30 (D) 3

12. A number is as much greater than 36 as is less than 86. Find the number? [**B**]

(A) 60 (B) 61 (C) 62 (D) 63

13. Anamika thought of a number. She multiplied it by 2, added five to the product and obtained 17 as the result. What is the number she thought of? [**A**]

(A) 6 (B) 8 (C) 15 (D) 20

14. If $a - b = 3$ and $a^2 + b^2 = 29$, find the value of ab. [**A**]

(A) 10 (B) 12 (C) 15 (D) 18

15. A farm contains horses and chickens. 116 heads and 282 legs. How many chickens are there?
(A) 91 (B) 100 (C) 37 (D) 26 [**D**]

CHAPTER – 3

AVERAGES

1. The average of first five multiples of 3 is: [**B**]

(A) 8 (B) 9 (C) 10 (D) 11

2. Three are two sections A and B of a class, consisting of 36 and 44 students' respectively. If the average weight of section A is 40 kg and that of section B is 35 kg. Find the average weight of the whole class. [**C**]

(A) 30.00 kg (B) 35.00 kg (C) 37.25 kg (D) 42.50 kg

3. The average of 50 numbers is 30. If two numbers, 35 and 40 are discarded, then the average of the remaining numbers is nearly: [**B**]

(A) 28.32 (B) 29.68 (C) 28.78 (D) 29.27

4. The average score of a cricketer for ten matches is 38.9 runs. If the average for the first six matches is 42, then find the average for the last four matches. [**C**]

(A) 33.25 (B) 33.5 (C) 34.25 (D) 35

5. The average of four consecutive odd numbers is 24. Find the largest number [**B**]

(A) 25 (B) 27 (C) 29 (D) 31

6. Average weight of 10 people increased by 1.5 kg when one person of 45 kg is replaced by a new man. Then weight of the new man is [**C**]

(A) 50 (B) 55 (C) 60 (D) 65

7. A library has an average of 510 visitors on Sundays and 240 on other day. The average number of visitors in a month of 30 days starting with Sunday is [**B**]

(A) 280 (B) 285 (C) 290 (D) 295

8. A motorist travel to a place 150 km away at an average speed of 50 km/hr and returns at 30 km/hr. His average speed for the whole journey in km/hr is [**B**]

(A) 36.5 km/hr (B) 37.5 km/hr (C) 35.5 km/hr (D) 34.5 km/hr

9. Present age of Sameer and Anand are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11:9 respectively. What is Anand's present age in years? [**A**]

(A) 24 (B) 27 (C) 40 (D) cannot be determined

10. Marks of a student were wrongly entered in computer as 83; actual marks of that student were 63. Due to this mistake average marks of whole class got increased by half (1/2). Find the total number of students in that class. [**D**]

(A) 25 (B) 30 (C) 35 (D) 40 (E) 45

11. When a student weighing 45 kg left a class, the average weight of the remaining 59 students increased by 200 g. What is the average weight of the remaining 59 students? [**A**]

(A) 57 (B) 56.8 (C) 58.2 (D) 52.2

12. The average age of husband, wife and their child 3 years ago was 27 years and that of wife and the child 5 years ago was 20 years. The present age of the husband is [**A**]

(A) 40 (B) 35 (C) 45 (D) 55

13. The average of runs of a cricket player of 10 innings was 32. How many runs must he make in his next innings so as to increase his average of runs by 4? [**A**]

(A) 76 (B) 79 (C) 85 (D) 89

14. 40% of the employees in a factory are workers. All the remaining employees are executives. The annual income of each worker is Rs. 390. The annual income of each executive is Rs. 420. What is the average annual income of all the employees in the factory together? [**C**]

(A) 390 (B) 405 (C) 408 (D) 415

15. In a set of three numbers, the average of first two numbers is 2, the average of the last two numbers is 3, and the average of the first and the last numbers is 4. What is the average of three numbers? [**C**]

(A) 2 (B) 2.5 (C) 3 (D) 3.5

CHAPTER – 4

PROBLEMS ON NUMBERS

1. Find the number, when 15 is subt5racted from 7 times the number; the result is 10 more than twice of the number. [**A**]

   (A) 5 (B) 15 (C) 7.5 (D) 4

2. Sum of a rational number and its reciprocal is 13/6. Find the number [**B**]

   (A) 2 (B) 3/2 (C) 4/2 (D) 5/2

3. Find the number, difference between number and its 3/5 is 50. [**D**]

   (A) 120 (B) 123 (C) 124 (D) 125

4. The sum of the squares of three numbers is 138, while the sum of their products taken two at a time is 131. Their sum is [**B**]

   (A) 15 (B) 20 (C) 25 (D) 35

5. If one third of one fourth of number is 15, then three tenth of number is [**C**]

   (A) 34 (B) 44 (C) 54 (D) 64

6. A number is doubled and 9 is added. If resultant is tripled, if becomes 75. What is that number
   (A) 8 (B) 10 (C) 12 (D) 14 [**A**]

7. Find a positive number which when increased by 17 is equal to 60 times the reciprocal of the number [**D**]

   (A) 17 (B) 15 (C) 8 (D) 3

8. The product of two numbers is 120 and the sum of their squares is 289. The sum of the number is [**B**]

   (A) 20 (B) 23 (C) 27 (D) 150

9. Three times the first of three consecutive odd integers is 3 more than twice the third. The third integer is [**B**]

   (A) 12 (B) 13 (C) 15 (D) 17

10. Find the number, If 50 is subtracted from two-third of number, the result is equal to sum of 40 and one-fourth of that number. [**B**]

    (A) 214 (B) 216 (C) 114 (D) 116

11. Sum of three numbers 264, If the first number be twice then second and third number be one third of the first, then the second number is [**C**]

(A) 70 (B) 71 (C) 72 (D) 73

12. Sum of two numbers is 25 and their difference is 13. Find their product. [**C**]

(A) 104 (B) 108 (C) 114 (D) 124

13. Difference between a two-digit number and the number obtained by interchanging the two digits is 36, what is the difference between two numbers [**C**]

(A) 2 (B) 4 (C) 8 (D) 12

14. Two numbers differ by 5. If their product is 336, then sum of two number is [**D**]

(A) 33 (B) 34 (C) 36 (D) 37

15. Sum of two numbers is 40 and their difference is 4. The ratio of the numbers is [**C**]

(A) 10:3 (B) 5:9 (C) 11:9 (D) 13:9

CHAPTER – 5

PROBLEMS ON AGES

1. Raju's age after 15 years will be 5 times his age 5 years back, what is the present age of Raju?
(A) 15 (B) 14 (C) 10 (D) 8 [**C**]

2. Sachin is younger than Rahul by 7 years. If the ratio of their ages is 7:9, find the age of Sachin.

(A) 23.5 (B) 24.5 (C) 12.5 (D) 14.5 [**B**]

3. The ratio between the present ages of P and Q is 6:7. If Q is 4 years old than P, what will be the ratio of the ages of P and Q after 4 years? [**A**]

(A) 7 : 8 (B) 7 : 9 (C) 3 : 8 (D) 5 : 8

4. Ages of two persons differ by 16 years. If 6 year ago, the elder one be 3 times as old the younger one, find their present age. [**B**]

(A) 12, 28 (B) 14, 30 (C) 16, 32 (D) 18, 34

5. The sum of the ages of a father and son is 45 years. Five years ago, the product of their ages was four times the father's age at that time. The present age of father and son [**C**]

(A) 35, 11 (B) 35, 10 (C) 36, 9 (D) 40, 5

6. Ten years ago, P was half of Q in age. If the ratio of their present ages is 3:4, what will be the total of their present ages? [**A**]

(A) 35 (B) 34 (C) 45 (D) 25

7. The total age of A and B is 12 years more than the total age of B and C. C is how many year younger than A. [**B**]

(A) 11 (B) 12 (C) 13 (D) 14

8. The ages of two persons differ by 16 years. 6 years ago, the elder one was 3 times as old as the younger one. Find the sum of their ages? [**D**]

(A) 15 (B) 20 (C) 25 (D) 30

9. The ages of two persons differ by 20 years. If 5 years ago, the elder one be 5 times as old as the younger one, their present ages (in years) are respectively [**D**]

(A) 20, 20 (B) 20, 10 (C) 25, 15 (D) 30, 10

10. Ratio between Rahul and Deepak is 4:3, After 6 years Rahul age will be 26 years. What is Deepak present age? [**B**]

(A) 14 (B) 15 (C) 20 (D) 22

11. Sachin was twice as old as Ajay 10 years back. How old is Ajay today if Sachin will be 40 years old 10 years hence. [**D**]

(A) 18 (B) 25 (C) 15 (D) 20

12. In 10 years, A will be twice as old as B was 10 years ago. If A is now 9 years older than B, the present age of B is [**C**]

(A) 35 (B) 37 (C) 39 (D) 41

13. A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, then how old is B? [**D**]

(A) 7 (B) 8 (C) 9 (D) 10

14. Sushil was thrice as old as Snehal 6 years back. Sushil will be 5/3 times as old as Snehal 6 years hence. How old is Snehal today? [**A**]

(A) 12 (B) 16 (C) 18 (D) 24

15. Six years ago, the ratio of the ages of Kunal and Sagar was 6:5, Four years hence, the ratio of their ages will be 11:10. What is sagar age at present? [**D**]

(A) 10 years (B) 12 years (C) 14 years (D) 16 years

CHAPTER – 6

PERCENTAGES

1. Evaluate 28% OF 450 + 45% OF 280 [**C**]

   (A) 232 (B) 242 (C) 252 (D) 262

2. A fruit seller had some apples. He sells 40% apples and still has 420 apples. Originally, he had:
   (A) 588 (B) 600 (C) 672 (D) 700 [**D**]

3. If 15% of A is equal to 20% of B, then 25% of A is equal to what per cent of B? [**B**]

   (A) 30% (B) 33 1/3% (C) 35% (D) 25%

4. A person's salary has increased from Rs. 7200 to Rs. 8100. What is the percentage increase in his salary? [**D**]

   (A) 25% (B) 18% (C) 16 2/3% (D)12 ½ %

5. A batsman scored 120 runs which included 3 boundaries and 8 sixes. What percent of his total score did he make by running between the wickets? [**B**]

   (A) 40% (B) 50% (C) 60% (D) 70%

6. Three candidates contested an election and received 1136, 7636 and 11628 votes respectively. What percentage of the total votes did the winning candidate got? [**C**]

   (A) 55% (B) 56% (C) 57% (D) 58%

7. One fourth of one third of two fifth of a number is 15. What will be 40% of that number? [**C**]

   (A) 140 (B) 150 (C) 180 (D) 200

8. 10% of inhabitants of a village having died of cholera, a panic set in, during which 25% of the remaining inhabitants left the village. The population is then reduced to 4050. Find the original inhabitants. [**B**]

   (A) 5500 (B) 6000 (C) 6500 (D) 7000

9. Suresh gets 98 marks in his exams. This amounts to 56% of the total marks. What are the maximum marks? [**A**]

   (A) 175 (B) 200 (C) 150 (D) 250

10. 72% of 25 students are good at Mathematics. How many are not good at it? [**B**]

    (A) 18 (B) 7 (C) 12 (D) 15

11. Raman's salary was decreased by 50% and subsequently increased by 50%. How much percent did he lose? [**D**]

(A) 75 (B) 65 (C) 45 (D) 25

12. If x% of y is 100 and y% of z is 200, then find the relation between x and z. [**C**]

(A) z=x (B) 2z=x (C) z=2x (D) None of above

13. Total number of boys and girls in a school are 150. If the number of boys is x, then girls become x% of the total number of students. The number of boys is [**B**]

(A) 50 (B) 60 (C) 70 (D) 80

14. Rishi requires 40% to pass. If he gets 185 marks, falls short by 15 marks, what was the maximum marks he could have got? [**D**]

(A) 400 (B) 450 (C) 475 (D) 500

15. Find the percent of pure gold in 22-carat gold, if 24-carat gold is hundred percent pure gold. [**B**]

(A) 71 5/6% (B) 91 2/3 % (C) 84 7/8% (D) None

CHAPTER – 7

PROFIT & LOSS

1. A man buys an article for Rs. 27.50 and sells it for Rs 28.60. Find his gain percent. [**D**]

(A) 1% (B) 2% (C) 3% (D) 4%

2. A TV is purchased at Rs. 5000 and sold at Rs. 4000, find the lost percent. [**B**]

(A) 10% (B) 20% (C) 25% (D) 28%

3. In terms of percentage profit, which among following the best transaction. [**D**]

(A) C.P = Rs 36, Profit = Rs 17 (B) C.P = Rs 50, Profit = Rs 24

(C) C.P = Rs 40, Profit = Rs 19 (D) C.P = Rs 60, Profit = Rs 29

4. A person incurs a loss of 5% by selling a watch for Rs. 1140. At what price should the watch be sold to earn 5% profit. [**C**]

(A) Rs. 1200 (B) Rs. 1230 (C) Rs. 1260 (D) Rs. 1290

5. A book was sold for Rs 27.50 with a profit of 10%. If it was sold for Rs. 25.75, then what would have been profit % or loss %? [**B**]

(A) 2% Profit (B) 3% Profit (C) 2% Loss (D) 3% Loss

6. If the C.P of 25 chairs is equal to the S.P of 30 chairs, find the loss percent. [**A**]

(A) 16 2/3% (B) 12.5% (C) 6 2/3% (D) 15.75%

7. If the cost price is 25% of selling price. Then what is the profit percent. [**C**]

(A) 150% (B) 200% (C) 300% (D) 350%

8. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, find out the value of x. [**D**]

(A) 13 (B) 14 (C) 15 (D) 16

9. By selling a towel for Rs. 126.90, a draper loses 6%. For how much should he sell the towel to gain 4%? [**B**]

(A) 150.50 (B) 140.40 (C) 186.20 (D) 160.45

10. 100 oranges are bought at the rate of Rs. 350 and sold at the rate of 48 per dozen. The percentage of profit is [**C**]

(A) 12.27% (B) 13.27% (C) 14.28% (D) 15.27%

11. A man buys an item for Rs. 1200 and sells it at the loss of 20 percent. Then what is the selling price of that item [**D**]

(A) Rs. 660 (B) Rs. 760 (C) Rs. 860 (D) Rs. 960

12. Sahil purchased a machine for Rs 10000, and got it repaired at Rs 5000. Then gave its transportation charges Rs 1000. Then he sold it with 50% of profit. At what price he actually sold it. [**B**]

(A) Rs. 22,000 (B) Rs. 24,000 (C) Rs. 26,000 (D) Rs. 28,000

13. A shopkeeper expects a gain of 45/2 % on his C.P. If his sale was Rs. 392, then find his profit.
(A) Rs. 70 (B) Rs. 72 (C) Rs. 74 (D) Rs. 76 [**B**]

14. A plot is sold for Rs. 18,700 with a loss of 15%. At what price it should be sold to get profit of 15%. [**A**]

(A) Rs. 25300 (B) Rs. 22300 (C) Rs.24300 (D) Rs. 21300

15. A man gains 20% by selling an article for a certain price. If he sells it at double the price, the percentage of profit will be. [**B**]

(A) 130% (B) 140% (C) 150% (D) 160%

CHAPTER – 8

RATIO & PROPORTION

1. If x:y = 1:3, then find the value of (7x+3y):2x+y) [**C**]

   (A) 14 : 5 (B) 15 : 5 (C) 16 : 5 (D) 17 : 5

2. The salaries of A, B and C are of ratio 2:3:5. If the increments of 15%, 10% and 20% are done to their respective salaries, then find the new ratio of their salaries. [**D**]

   (A) 20 : 33 : 60 (B) 21 : 33 : 60 (C) 22 : 33 : 60 (D) 23 : 33 : 60

3. Rs. 120 is divided among A, B, C such that A's share is Rs. 20 more than B's and Rs. 20 less than C's. What is B's share? [**B**]

   (A) Rs. 10 (B) Rs. 20 (C) Rs. 24 (D) Rs. 28

4. In a college, the ratio of number of boys to girls is 8 : 5. If there are 200 girls, the total number or students in the college is [**A**]

   (A) 420 (B) 520 (C) 620 (D) 720

5. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is [**C**]

   (A) 2 : 5 (B) 3 : 5 (C) 4 : 5 (D) 6: 5

6. If three numbers in the ratio 3 : 2 : 5 be such that the sum of their squares is 1862, the middle number will be [**B**]

   (A) 10 (B) 14 (C) 18 (D) 22

7. The least whole number which when subtracted from both the terms of the ratio 6 : 7 to give a ratio less than 16 : 21 is [**A**]

   (A) 3 (B) 4 (C) 5 (D) 6

8. The sum o three numbers is 98. If the ratio of the first to the second is 2:3 and that of the second to the third is 5:8, then the second number is [**D**]

   (A) 10 (B) 17 (C) 25 (D) 30

9. Salaries of Ravi and Sumit are in the ratio 2:3. If the salary of each is increased by Rs 4000, the new ratio becomes 40:57. What is Sumit's present salary? [**C**]

   (A) 32000 (B) 34000 (C) 38000 (D) 40000

10. A and B together have Rs. 1210. If 4/15 of A's amount is equal to 2/5 of B's amount. How much amount B have. [**A**]

(A) Rs. 484 (B) Rs. 480 (C) Rs. 478 (D) Rs. 470

11. If 40% of a number is equal to two-third of another number, what is the ratio of first number to the second number? [**D**]

(A) 2 : 5 (B) 2 : 7 (C) 5 : 7 (D) 5 : 3

12. If A:B = 2:3, B:C = 4:5 and C:D = 6:7, then find the value of A:B:C:D [**B**]

(A) 15:24:30:35 (B) 16:24:30:35 (C) 17:24:30:35 (D) 18:24:30:35

13. If 2 : 9 :: x : 18, then find the value of x [**C**]

(A) 2 (B) 3 (C) 4 (D) 6

14. If a:b = 2:3 and b:c = 4:3 then find a:b:c [**A**]

(A) 8 : 12 : 9 (B) 2 : 3 : 8 (C) 2 : 3 : 9 (D) 2 : 3 : 12

15. Find the fourth proportion to 2, 3, 6 [**C**]

(A) 18 (B) 12 (C) 9 (D) 4