Test = 30 questions

Section 1: Ratios, Averages, (12 marks)

2. Kumar purchased two-dozen bananas at Rs. 6/dozen, another dozen at Rs. 8/dozen and 48 more bananas at Rs. 7.25/dozen. What is the average cost per dozen of the bananas that Kumar purchased?

1] Rs. 6 2] Rs. 6.50 3] Rs. 7 4] Rs. 8

4. The strength of a liquor is determined by the percentage of the alcohol content in it. If 20 litres of liquor A of strength 15% is mixed with 30 litres of liquor B of strength 18%, what is the strength of the resulting mixture?

1] 16% 2] 16.80% 3] 18.60% 4] 17.50%

5. The average marks secured by 36 students is determined as 52. But it is later discovered that the mark 64 was wrongly entered as 46. What is the correct average of marks of the 36 students?

1] 52.5 2] 52 3] 57 4] 51.5

7. A toy plane flies along the four sides of a square at speeds of 100, 200, 300, 400 km/hr on each side respectively. Find its average speed.

1] 250 km/hr 2] 190 km/hr 3] 192 km/hr 4] 200 km/hr

8. Ramesh mixed 8 kg of sugar costing Rs. 9/kg and 4kg of sugar costing Rs. 12/kg. Find the price per kg of the mixture.

1] Rs. 9.50 2] Rs. 10.50 3] Rs. 11 4] Rs. 10

answers

2-3 4-2 5-1 7-3 8-4

5. The salaries of A and B are in the ratio 7 : 4 and the sum of their salaries is 121000. Find the difference in their salaries.

1] Rs. 33000 2] Rs. 77000 3] Rs. 44000 4] Rs. 32000

6. Rs. 525 is divided between A, B and C such that A gets double of what B get and B gets double of C. How much more does A get than C?

1] Rs. 300 2] Rs. 150 3] Rs. 75 4] Rs. 225

answers

5-1 6-4

12. The cost of precious stone is directly proportional to the cube of its weight. A 10 gm stone cost Rs. 25000. The stone falls and breaks in to three pieces, whose weights are in the ratio 1: 1: 3. What is the difference in cost between the largest of the three pieces and the smallest?

1] Rs. 700 2] Rs. 5200 3] Rs. 650 4] Rs. 3200

answers

12-2

3. Rs. 275 is divided among three friends A, B and C such that nine times what A gets equals to six times what B gets equals three times what C gets. How much does B get more than A?

1] 50 2] 75 3] 100 4] 25

4. When there are no wagons attached to an engine, the speed of the train is 120 kmph. The speed of the train is decreased by a quantity which is directly proportional to the square root of the number of wagons attached to it. When 16 wagons are attached to the engine, the speed of the train is 80 kmph. What is the maximum number of wagons that can be attached to the engine so that the engine moves?

1] 144 2] 72 3] 80 4] None of these

answers

3-4 4-4

6. 10 men and 6 boys do a piece of work in 20 days while 12 men and 4 boys can do this work in 18 days. How many days will 8 men and 8 boys take to do the work?

1] 35 2] 45 3] 22.5 4] 27.5

7. A garrison of 3300 men has provisions for 32 days when each eats 850 grams of ration per day. At the end of 7 days, reinforcement arrive and it is found that now the provisions will last 8 days less, even if each were to eat 825 grams per day. How many men comprised the reinforcement team?

1] 1325 2] 1700 3] 1625 4] 5000

answers

6-3 7-2

Section 1: Time and Work (10 marks)

1. A alone can do a piece of work in 15 days and B alone can do the same piece of work in 10 days. How long will they take to do the work together?

1] 5 days 2] 6 days 3] 12.5 days 4] 25 days

2. A and B undertook to do a piece of work for Rs. 7500. A alone could do it in 4 days and B in 6 days; with the assistance of C they finish the work in 2 days. Find the share of each (in Rs.).

1] 3750, 2500, 1250 2] 3600, 2400, 1500

3] 3000, 2000, 2500 4] 4500, 2500, 500

3. A can do as much work in 2 days as B can do in 3 days and B can do as much in 4 days as C can in 5 days. A piece of work takes 20 days if all work together. How long would B take to do all the work by himself?

1] 82.5 days 2] 44 days 3] 66 days 4] 100 days

4. A and B can do a piece of work in 40 days. After working for 10 days they are assisted by C and the work is finished in 20 more days. If C does as much work in 2 days as B does in 3 days, then in how many days could A alone do the same work?

1] 65 2] 80 3] 120 4] 60

5. A tap can fill a cistern in 10 minutes, while the other can empty it in 15 minutes. The cistern being empty and if both the taps are opened together, in how many minutes will the cistern be full?

1] 20 2] 30 3] 6 4] 60

7. A full tank is emptied in 8 hours by an outlet pipe. However, if an inlet pipe pumping in water at the rate of 5 litres per minute is opened. When the tank is full, the outlet pipe takes 12 hours to empty the tank. What is the capacity (in litres) of the tank?

1] 700 2] 4000 3] 60 4] 7200

8. A worm can climb up a burrow at 3 ft per minute but due to the slipperiness of the burrow, slips down 2 ft before it starts climbing the next minute. If the depth of the well is 30 ft, how much time will the worm take to reach the top?

1] 27 min 2] 28 min 3] 29 min 4] 30 min

9. 3 men with 5 boys can do a piece of work in 2 days and 4 men and 16 boys complete the same work in one day. How much time will it take for 1 boy together with a woman who can work twice as fast as the boy, to complete a wrok that is 3 times as time consuming?

1] 7.33days 2] 8 days 3] 9.33 days 4] 28 days

10. A piece of work can be done by 10 men and 5 women together in 6 days. The same work can be done by 11 men and 8 women in 5 days. In how many days can 25 women do the same work?

1] 5 2] 6 3] 22 4] 11

12. 8 monkeys can eat 8 bananas in 8 minutes. In how many minutes will 2 monkeys eat 2 bananas?

1] 8 2] 2 3] 1 4] 4

answers

1-2 2-1 3-3 4-4 5-2 7-4 8-2 9-4 10-2 12-1

Section 1: Venn Diagram (8 marks)

1. In Catland School 100 students study finance and 120 students study marketing. 40 students study both and 20 study neither. What is the total number of students?

1] 180 2] 200 3] 240 4] 260

2. In a batch at Catland, only 3 specialisations were offered: Marketing; Finance; and HR. Each of the 300 students are required to take at least one. 97 students took HR only and 73 took Finance only. How many took marketing or a combination of more than one specialisations?

1] 130 2] 154 3] 170 4]Indeterminate

3. If of an outgoing batch in Catland, everyone has taken either or both of two specialisations: Finance and Marketing, and 70% have taken Finance and 60% Marketing; what percentage have taken both?

1] 20% 2] 30% 3] 40% 4] None of these

4. In Bangalore, everyone reads at least one paper and no one reads more than two. If 85% read Indian Express and 65% read the Hindu, what is the maximum possible percentage of people that read only Financial Express? Assume that there are only three publications in Bangalore?

1] 15% 2] 25% 3] 35% 4] 20%

5. In a social gathering, 100 people wore yellow pants, 120 people green shirts, and 80 people red shoes. 30 people wore both yellow pants and green shirts, 20 people wore both green shirts and red shoes, and 25 people wore both red shoes and yellow pants. 10 people wore all the three. How many people wore yellow pants and green shirts but not red shoes?

1] 30 2] 25 3] 20 4] 15

6. In a social gathering, 100 people wore yellow pants, 120 people green shirts, and 80 people red shoes. 30 people wore both yellow pants and green shirts, 20 people wore both green shirts and red shoes, and 25 people wore both red shoes and yellow pants. 10 people wore all the three. How many people wore yellow pants but not green shirts or red shoes?

1] 45 2] 50 3] 55 4] 60

7. In a social gathering, 100 people wore yellow pants, 120 people green shirts, and 80 people red shoes. 30 people wore both yellow pants and green shirts, 20 people wore both green shirts and red shoes, and 25 people wore both red shoes and yellow pants. 10 people wore all the three. What was the total number of people in the gathering if everyone wore either red shoes, yellow pants, or green shirts?

1] 300 2] 225 3] 245 4] 235

8. In a class of 70 students, one could learn table, sarod, or sitar. The enrolment for each of these classes was 4x each. Those who were taking both sitar and sarod, or sarod and tabla, or sitar and tabla were 2x in each case. x people took all three. Find the number of people who took only two classes.

1] 30 2] 40 3] 50 4] None of these

answers

1-2 2-1 3-2 4-1 5-4 6-3 7-3 8-1