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Most Important Quantitative Aptitude Questions

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1. A woman sold a wrist watch for Rs.3200 at a loss of twenty per cent. At what rate should he have sold the wristwatch to earn a profit of twenty - five per cent?

(A) Rs. 4400 (B) Rs. 5000

(C) Rs. 4800 (D) Rs. 5500

(E) Rs. 4000

2. Kritika is 7 years younger than Alok. Three years before, the ratio of their ages was 7 : 8 years. Calculate Kritika's present age?

(A) 18 (B) 25

(C) 35 (D) 52

(E) 38

3. 210 liters of milk contains 3/7th water in it. How much milk should be added so that the ratio of water and milk is 5 : 7?

(A) 1 litre (B) 3 litre

(C) 5 litre (D) 6 litre

(E) 8 litre

4. Rs. 42482, are divided between A and B in the ratio 7 : 4. What is the difference between twice the share of A and thrice the share of B?

(A) Rs. 16,699 (B) Rs. 9,893

(C) Rs. 10,097 (D) Rs. 6,796

(E) Rs. 7,724

5. Find the greatest number of 4 digits that has 100 as it's HCF ?

(A) 9000 (B) 3300

(C) 9900 (D) 10000

(E) 9996

6. A Truck crosses a man who is walking at a speed of 12 km/hr. The man has a visibility range of 800m. If the man can see the Truck in his direction for 4 more minutes then calculate the speed of the Truck.

(A) 15 km/hr (B) 17 km/hr

(C) 20.6 km/hr (D) 24 km/hr

(E) 30.5 km/hr

7. A contractor undertakes a contract to complete a building in 50 days with 30 men. He worked 20 days with 30 men. With how many men, he should work to complete the remaining contract in 10 days early?

(A) 54 (B) 45

(C) 47 (D) 49

(E) None of these

8. Ram purchased 450 Apples of 3 types such that he earned a profit 9%, 10% and 12% respectively on each type. He earned a profit of $9\frac{3}{7}$ % on first two types and 10% overall profit on all the types. Find the number of Apples in all the three types.

(A) 200,150 and 100 (B) 300,150 and 156

(C) 100,200 and 250 (D) 100,300 and 150

(E) None of these

9. A shopkeeper buys an article for Rs. 2000. He marks to sell the article at such a price as to get 80% profit on his cost. Now, he provides a discount of 15%, find the actual profit% made by the shopkeeper.

(A) 62% (B) 63%

(C) 52% (D) 53%

(E) 54%

10. In a 500 metre race, A runs at 5 m/s. 'B' is already 128 meters ahead of 'A' when the race starts. If 'B' beats A by 7 seconds then what is B's speed?

(A) 3 m/s (B) 2.5 m/s

(C) 3.5 m/s (D) 2 m/s

(E) 4 m/s

11. A shopkeeper is marketing his goods 20% above the cost price of the goods. He gives 20% discount on cash payment, find his gain or loss percent ?

(A) 4% (B) 8%

(C) 3% (D) 18%

(E) None of these

12. A man while sailing his boat downstream takes 3 hours for 48 km while sailing upstream takes 6 hours for same distance. What is the speed of boat?

(A) 18 kmph (B) 14 kmph

(C) 20 kmph (D) 15 kmph

(E) 22 kmph

13. A is 45.45% more efficient than B. B can do a certain work in 54 days. In how much time both of them can complete the same work?

(A) 51 days (B) 38 days

(C) 22 days (D) 15.6 days

(E) None of these

14. Heights of two persons Komal and Kamal are in ratio 1 : 2. Komal's height increases by 10% and the total height of Komal and Kamal together increases by 20%. By what percentage did the weight of Kamal increase?

(A) 10 (B) 0.645

(C) 27.5 (D) 14.75

(E) 15

15. Supreme % discount that Varinder can provide on his marked price such that Varinder ends up vending at no gain or loss, if he had at beginning tagged his articles up by 28% is

(A) 21.88 (B) 35.76

(C) 17.67 (D) 27.86

(E) 19.07

16. Efficiency of Anil is 80% more than Gulshan and Gulshan takes 45 days to complete a piece of work. Anil started work alone and then Gulshan joined him 9 days before actual completion of work. For how many days Anil worked alone?

(A) 20 (B) 15

(C) 11 (D) 17

(E) 12

17. If area of a semi circle reduces by 64%, then the radius of a circle

(A) Increased by 60% (B) Increased by 40%

(C) Decreased by 36% (D) Decreased by 60%

(E) Decreased by 40%

18. Two flasks hold rum and water mixed respectively in the ratios of 4 : 5 and 7 : 3. Calculate the ratio in which these are to be mixed to get a new mixture in which the ratio of rum to water is 3 : 1

(A) 2 : 1 (B) 3 : 11

(C) 9 : 55 (D) 11 : 3

(E) 55 : 9

19. If a/b = 1, c/d = 2 and e/f = 1/2. Find the value of df/ce + bf/ae + bd/ac?

(A) 3/2 (B) 5/2

(C) 7/2 (D) 9/2

(E) 1/2

20. The altitude of trapezium is 10 cm and the area of the trapezium is 195 cm^2. If the parallel sides are in the ratio of 5 : 8, find the length of longer side?

(A) 15 (B) 25

(C) 29 (D) 23

(E) 24

21. Anupriya rows 1200 m in 900 seconds against the stream and while returning he takes 10 minutes. What is the speed of current?

(A) 6 m/s (B) 5/3 m/s

(C) 39/5 m/s (D) 9 m/s

(E) 15 m/s

22. Ram has a total of 30000 in notes of denomination 100, 200 and 500. The number of 200 notes is 3 times the number of 500 notes.

The total number of notes is 160. In what ratio are the notes of each denomination are with him?

(A) 2 : 6 : 8 (B) 6 : 8 : 2

(C) 8 : 6 : 2 (D) 2 : 16 : 8

(E) 2 : 6 : 18

23. Five bells commence ringing together and rings at intervals of 3, 6, 9, 12 and 15 seconds respectively. In 30 minutes, how many times do they ring together including the first ring?

(A) 10 times (B) 15 times

(C) 11 times (D) 12 times

(E) 13 times

24. 'P', 'Q' and 'R' invested in a business with Rs. 5000, Rs. 4000 and Rs. 4500 respectively. P and Q invested for 8 months and 5 months respectively whereas R invested for 'x' months. If 'P' earned Rs.3200 more profit than 'Q' out of total profit of Rs.13920, then find the time for which 'R' invested?

(A) 6 months (B) 4 months

(C) 3 months (D) 8 months

(E) 5 months

25. Mr. 'X' purchased two shops 'A' and 'B' in total `. 80,000. He sold shop 'A' at 16% profit and shop 'B' at 32% profit thereby gaining 20% profit on whole transaction. Find the Selling Price of shop 'A'?

(A) 60,000 (B) 72,800

(C) 79,200 (D) 76,500

(E) 69,600

26. A boat takes total 34 hours in travelling downstream from point A to B and then returns to point C which is situated somewhere between A and B. Ratio of distance between point A and point C to distance between point C and B is 1:4. If speed of current is 3 kmph and speed of boat is 6 km/h, then find time taken to travel from point B to point C?

(A) 28 hours (B) 25 hours

(C) 24 hours (D) 18 hours

(E) 17 hours

27. A man wants to gain 20% profit by selling milk at its cost price. So, in what ratio water should be added with milk to earn this profit?

(A) 1 : 5 (B) 2 : 3

(C) 4 : 1 (D) 5 : 2

(E) 2 : 7

28. Find probability of selecting two face cards of same color from a well shuffled pack of 52 cards?

(A) 5/166 (B) 2/183

(C) 2/167 (D) 5/221

(E) 7/176

29. Mr. John invested equal sum on 2 schemes first at simple interest and second at compound interest at the rate of 15% p.a. and 20% p.a. respectively. If simple interest of third year is 1818 less than compound interest of second year. Find total sum invested by Mr. John in both schemes?

(A) 20200 (B) 40000

(C) 40200 (D) 40400

(E) 20400

30. Ritu and Anu together can do a work in 16 days where as Anu alone can do it in 24 days. If Neha alone can do the same work in 30 days, then find the ratio of efficiency of Neha to efficiency of Ritu?

(A) 5 : 8 (B) 8 : 5

(C) 5 : 3 (D) 2 : 3

(E) 7 : 8

31. A mixture contain Iron and copper in the ratio of 7 : 12. When 30 kg Iron and 40 kg copper mixed into the mixture the ratio becomes 5 : 8. Find the ratio of the initial quantity of Iron to the final quantity of copper.

(A) 9 : 8 (B) 5 : 3

(C) 3 : 16 (D) 7 : 16

(E) 8 : 7

32. A shopkeeper have 800 kg of Sugar, a part of which he sells at 10% profit and remaining at 15% loss thus, he incurred overall loss of 5.625%. What would be the profit/loss percentage, if he interchanges the quantity he sold initially.

(A) 1.5% (B) 0.375%

(C) 1.125% (D) 2.125%

(E) 0.625%

33. Difference between the compound interest and simple interest earned on a certain amount in 2 years at the rate of 12 % p.a. is Rs 144. If same amount is invested in scheme 'P' which offer simple interest at the rate of 15% p.a. for 4 years then, find the simple interest earned from scheme 'P'.

(A) 4000 (B) 6000

(C) 14400 (D) 4500

(E) 4800

34. Ram is 2 years older than Shyam while Shyam is 4 years older than Akshay. If ratio of Ram's age 6 year hence to Shyam's age 2 year ago is 17 : 12 then, find Akshay's age 8 years hence ?

(A) 34 (B) 36

(C) 32 (D) 28

(E) 30

35. A merchant marks his goods up by 80% above his cost price. What is the maximum % discount that he can offer so that he ends up selling at no profit or loss?

(A) 44.44% (B) 55.55%

(C) 66.67% (D) 79.85%

(E) None of these

36. Two trains A and B are running in the same direction at 36 km/h and 54 km/h, respectively. It takes 2 minutes for train B to completely overtake train A. If the length of train A is 250 m, find the length of the other train.

(A) 300 metres (B) 450 metres

(C) 400 metres (D) 350 metres

(E) None of these

37. A part of Rs.12000 is lent to Sam at 7% per annum and the rest was lent to Sandy at 3% per annum. If the total simple interest received from both parts in 5 years was Rs. 2000. How much amount was lent to Sam?

(A) 3500 (B) 1000

(C) 2000 (D) 3000

(E) 2500

38. Mandy is twice as good as Jollie and together they complete a piece of work in 20 days. In how many days will Mandy alone finish the work?

(A) 10 days (B) 13 days

(C) 17 days (D) 30 days

(E) 32 days

39. A large cube is formed from the material obtained by melting three smaller cubes of 3, 4 and 5 cms side. Total Surface area of smaller cubes is how much percentage more than the bigger one?

(A) 27% (B) 30%

(C) 39% (D) 20%

(E) 48%

40. There are three pipes A, B and C which can fill a water tank in 4 hours, 8 hours and 12 hours respectively. Arun starts recording the time of filling the water tank. At start pipe B and C were run together for 24 minutes and for filling the rest of the tank the three pipes were turned on together. What is the time recorded in the timer?

(A) 2 hours (B) 3 hours

(C) 2.5 hours (D) 2 hours 24 minutes

(E) None of the above

41. Two items A and B are sold at a profit of 20% and 15% respectively. If the amount of profit received is the same, then the cost price A and B may be in ratio?

(A) 2:3 (B) 3:4

(C) 4:3 (D) 3:2

(E) None of these

42. Ayush covers a total distance of 25 km on bicycle. At the starting of the journey he travels at a speed of 8kmph for 45minutes, next 2 hours he travels at a speed of 4.5kmph and the rest of the journey he covers at a speed of 5kmph. Find the average speed of the whole journey.

(A) 5.5 kmph (B) 5 kmph

(C) $5\frac{5}{19}$kmph (D) 6 kmph

(E) 4.8 kmph

43. Quantity 1: A alone can do a work in 20 days and B alone can do the same work in 15 days. B and C together can do a work in 10 days. In how many days A and C together can complete the work?

Quantity 2: C alone can do the work in 10 days

(A) Quantity 1 > Quantity 2

(B) Quantity 1 ≤ Quantity 2

(C) Quantity 1 > Quantity 2

(D) Quantity 1 < Quantity 2

(E) Quantity 1= Quantity 2 or No relation

44. Hemanta can row to a place at a distance of 70 km and come back to the origin in 27 hours and 30 minutes. He can row 42 km downstream and 24 km upstream in equal time. Find the rate of the stream.

(A) 1.8 km/hr (B) 2.2 km/hr

(C) 1.5 km/hr (D) 2.4 km/hr

(E) None of these

45. Two pipes together can fill a cistern in 36 hours. If another draining pipe attached to the tank, it takes 9 hours longer to fill the tank. Find in how much time can the drain pipe alone can empty a half full tank.

(A) 180 hours (B) 90 hours

(C) 315 hours (D) Can't be determined

(E) None of these

46. During the sale, a shopkeeper offers a discount of 40%. But after Christmas, he offers an additional discount of 25%. If the original price of an article be 'P', find the selling price after Christmas ?

(A) 55 X P/100 (B) 45 X P/100

(C) 35 X P/100 (D) 85 X P/100

(E) 32.5 X P/100

47. If Ashley, Aslam and Atif invested their money in the ratio 3:4:3 for time periods in the ratio 1:3:2 and the profit at the end of the year is Rs 28,000, what is the difference between Aslam's and Ashley's share?

(A) Rs 10,000 (B) Rs 12,000

(C) Rs 15,000 (D) Rs 18,000

(E) Rs 8,000

48. If ratio of 25% of A to 50% of B to 75% of C to D is 4:3:2:1 and the half of their sum is equal to 77, what is the value of (A - B + 30)/(C - D −1)?

(A) 4 (B) 6

(C) 8 (D) 10

(E) 2

49. Volumes of milk and water in two vessels A and B of equal volume are in the ratio of 4:3 and 2:3 respectively. In what ratio both the liquids should be mixed to obtain a new mixture in which the ratio of milk to that of the total water is 1:1?

(A) 7:5 (B) 1:2

(C) 1:1 (D) 1:3

(E) 4:3

50. Komal borrowed Rs 50000 from Federal bank @ 12% per annum for two years at simple interest and lends the same money to Manu at rate of 15% for two years but he charged compound interest. What is the overall gain made by Komal?

(A) Rs 3850 (B) Rs 4450

(C) Rs 4125 (D) Rs 4700

(E) None of These

51. 4 Men and 8 Women can complete a piece of work in 10 days. 3 Men can complete the same work in 20 days. Then find in how many days 6 Men and 8 Women can complete the work?

(A) 17/2 days (B) 15/2 days

(C) 7/2 days (D) 18 days

(E) 37/2 days

52. Rony invested certain sum of money for 3 years in a scheme which offers 4% interest annually but after completion of the term he lent the amount received to his friend Akhilesh for 8 years and 6% rate of simple interest, then find the initial investment (approx.) of Rony if he gets Rs 40320 from Akhilesh after 8 years?

(A) 24120 (B) 27324

(C) 24324 (D) 14324

(E) 20324

53. A can do 50% more work as B can do in the same time. B alone can do a piece of work in 30 hours. A, with help of B, can finish the same work in how many hours?

(A) 12 (B) 8

(C) 13 (D) 15

(E) 11

54. The cost to fill a square playground with sand at the rate of Rs. 160 per hectare is Rs. 1440. The cost of putting a fence around it at the rate of 50 paise per meter is?

(A) Rs. 900 (B) Rs. 1800

(C) Rs. 360 (D) Rs. 810

(E) None of these

55. The LCM of two numbers is 2436 and their ratio is 4 : 3. What is the sum of these numbers?

(A) 8703 (B) 1431

(C) 1809 (D) Cannot be determined

(E) None of these

56. If 40% of m = n and 60% of n = 180 then, find the value of 33.33% of (m + n)?

(A) 405 (B) 450

(C) 835 (D) 658.5

(E) 350

57. When 7350 is divided by the square of a number and the answer so obtained is multiplied by 37, the final answer obtained is 5550. What is the number?

(A) 7 (B) 36

(C) ±49 (D) ±7

(E) None of these

58. A bottle full of Brandy contains 10% alcohol. A part of this Brandy was replaced by another one having 30% alcohol and the percentage now became 25%. What was the quantity of Brandy replaced?

(A) ¾ (B) 1/3

(C) ½ (D) 5/6

(E) 4/7

59. Efficiency of Q is two times more than efficiency of P. Both started working alternatively, starting with Q and completed the work in total 37 days. If R alone complete the same work in 25 days then find in how many days P and R together will complete the work?

(A) 75/2 days (B) 75/4 days

(C) 36 days (D) 48 days

(E) 18 days

60. Kamal and Abhinav entered into partnership. Kamal invested Rs.3x for first four month and Rs.5x for next six months and Abhinav invested Rs.1800 for 12 months. If Kamal and Abhinav got profit share in the ratio of 7 : 9 then, find the value of '5x' ?

(A) 2000 Rs. (B) 1600 Rs.

(C) 2400 Rs. (D) 3600 Rs.

(E) 4000 Rs.

61. A vessel contains mixture of tin and copper in the ratio of 2 : 3. Some amount of mixture is taken out and 28 gm copper is added to the remaining mixture so that amount of copper becomes $66\frac{2}{3}\%$ in the new mixture. If $12\frac{1}{2}\%$ of initial mixture is 22.5 gm then, find what amount of tin was taken out from the initial mixture?

(A) 16gm (B) 14gm

(C) 12gm (D) 10gm

(E) 18gm

62. There are 48 students in a classroom, in which some are girls and rest are boys. One student is chosen at random for being monitor in class. If probability of monitor being a girl is 3/8 then find number of boys in the classroom?

(A) 32 (B) 36

(C) 20 (D) 24

(E) 30

63. Four year ago average age of A, B and C is 33 years. At present, age of C is three year less than B and A is three year older than B. then find the age of A one year hence?

(A) 36 years (B) 38 years

(C) 40 years (D) 41 years

(E) 36 years

64. If n is natural number, then $(6n^2 + 6n)$ is always divisible by?

(A) 6 only (B) 6 and 12 both

(C) 12 only (D) 18 only

(E) None of these

65. In a partnership, X invests 1/6 of the capital for 1/6 of the time, Y invests 1/3 of the capital for 1/3 of the time and Z, the rest of the capital for whole time. Find X's share of the total profit of Rs. 2,300.

(A) Rs. 100 (B) Rs. 200

(C) Rs. 300 (D) Rs. 400

(E) None of these

66. Two men A and B are walking in a circular path, whose circumference is 781 meters. Both A and B start from the same point and walk in opposite directions at 3.705 km/h and 4.815 km/h respectively. When will they meet for the first time?

(A) 5.5 minutes (B) 6.0 minutes

(C) 5.28 minutes (D) 4.9 minutes

(E) 6.2 minutes

67. Aron, Brooke and Canny can do a piece of work in 24, 30 and 40 days respectively. They start the work together but Canny leaves 4 days before the completion of the work. In how many days is the work done?

(A) 15 days (B) 14 days

(C) 9 days (D) 11 days

(E) 7 days

68. What will be the compound interest on a sum of Rs. 25,000 after 1.5 years at the rate of 24% half yearly?

(A) Rs. 10123.20 (B) Rs. 9000.30

(C) Rs. 10483.20 (D) Rs. 9720

(E) Rs. 10000

69. How many one rupee coins, 50 paise coins and 25 paise coins, of which the numbers are proportional to 4, 5 and 6 are together worth Rs. 64 (in the same order)?

(A) 32, 40, 48 (B) 16, 10, 6

(C) 16, 10, 24 (D) 16, 20, 6

(E) 20, 20, 24

70. A and B invest 75000 and 45000 respectively in a business and agree that 80% of the profit should be divided equally between them and the remaining profit is to be divided into ratio of their capitals. If one partner gets 280 more than the other. Find the total profit made in the business at the end of the year.

(A) 5600 (B) 5400

(C) 5500 (D) 5300

(E) None of these

71. A goes 35 km in 5 hours down-stream and returns up-stream in 7 hours. Find the speed of the boat in still water?

(A) 6 km/h (B) 2 km/h

(C) 3 km/h (D) 4 km/h

(E) None of these

72. The ratio of ages of P, Q and R is 5 : 7 : 8. After 2 years, the sum of ages of Q and R will be 109 years. What will be the ratio of ages of P and Q after 3 years?

(A) 1 : 1 (B) 11 : 23

(C) 19 : 26 (D) 17 : 31

(E) Cannot be determined

73. A can hit a target 2 times out of 3, B 3 times out of 7, and C 4 times out of 9. What is the probability that a target will be hit by at least 2 persons when all three fire together?

(A) 149/189 (B) 164/250

(C) 74/189 (D) 81/189

(E) 146/189

74. A and B can complete a work alone in 18 days and 24 days respectively. If B started work alone and after 3 days A also joined then in how many days whole work will be completed.

(A) 6 days (B) 12 days

(C) 8 days (D) 10 days

(E) 15 days

75. A sum on simple interest becomes 7/2 times of itself in ten years, find the rate of interest ?

(A) 20% (B) 16%

(C) 30% (D) 25%

(E) 12%

76. The ratio of milk and water in a vessel is 5 : 8. If 6 liter of milk added in it ratio of milk to water becomes 7 : 8. Find the initial quantity of mixture in the vessel.

(A) 28 liter (B) 39 liter

(C) 42 liter (D) 24 liter

(E) 36 liter

77. A boat can travel with the speed of 17 kmph in upstream. If the speed of river is 3 kmph, then find the speed of boat in downstream in the same river.

(A) 23 kmph (B) 20 kmph

(C) 25 kmph (D) 19 kmph

(E) 21 kmph

78. Area of a circular ring is 1386 cm^2. If this ring is folded in square form, then find the length of diagonal of square.

(A) 25 cm (B) $33\sqrt{2}$ cm

(C) 28 cm (D) $35\sqrt{3}$ cm

(E) $32\sqrt{3}$ cm

79. Average of ages of 5 persons A, B, C, D, E is 37 years. If the average age of A and B is 34 years and average of C and D is 40 years then find the age of E.

(A) 34 years (B) 41 years

(C) 43 years (D) 35 years

(E) 37 years

80. If the rate of interest is 20% p.a. then find the compound interest earned on 2000 in $1\frac{1}{2}$ years. If interest is charged half yearly?

(A) 500 (B) 961

(C) 662 (D) 463

(E) 460

81. In an exam Noureen scored 222 marks and failed by 8% marks. In the same exam Pallavi scored 204 marks and failed by 11% marks. Find the passing marks of the exam?

(A) 240 (B) 360

(C) 300 (D) 270

(E) 180

82. A 570 m long train can cross a pole in 38 sec. In how much time it can cross a 660 m long platform?

(A) 82 sec (B) 64 sec

(C) 90 sec (D) 120 sec

(E) 72 sec

83. In how many ways can the letters of word 'NOUVEAU' can be arranged?

(A) 1840 (B) 1260

(C) 5040 (D) 2520

(E) None of these

84. The average of 15 numbers is 12. If 5 more numbers are added twice, the average becomes 18.4. Find the average of the 5 numbers that were added?

(A) 22 (B) 28

(C) 30 (D) 36

(E) 44

85. Two Pipes of equal capacity together can fill a tank in 20 minutes. Two otherof equal capacity pipes together can empty the tank in 30 minutes. Find the time taken to fill the tank if one of both type of pipe is opened?

(A) 2 hours (B) 3 hours

(C) 1 hour (D) 1.5 hours

(E) None of these

86. Two Trains of equal length of 280 meters are running in same direction at the speed of 36 km/hr and 43 km/hr. How much time will it take to cross the slow train?

(A) 144 sec (B) 288 sec

(C) 282 sec (D) 188 sec

(E) None of these

87. A sum becomes 10935 in 3 years at 12.5% per annum compound interest. Find the simple interest at 8% per annum for 3 years on the same amount?

(A) 1843.2 (B) 1834.2

(C) 1847.2 (D) 1837.2

(E) None of these

88. The LCM of the numbers is 260 and their HCF is 13. If the sum of the numbers is 117. Then their difference is ?

(A) 13 (B) 53

(C) 44 (D) 36

(E) 31

89. Three glasses A, B and C with their capacities in the ratio 1 : 3 : 4 are filled with a mixture of spirit and water. The ratio of spirit to water in A, B and C is 1 : 5, 3 : 5 and 5 : 7 respectively. If the contents of these glasses are mixed together, find the ratio of spirit to water in the mixture?

(A) 71 : 121 (B) 24 : 27

(C) 23 : 40 (D) 29 : 91

(E) None of these

90. Three men started a cafe together. They invested Rs 20000, Rs 16000 and Rs 28000 in the beginning. After 2 months, man B took out Rs 4000 and man C took out Rs 8000. They received a total profit of Rs 8100 from cafe at the end of first year. Calculate the share of man B in profit?

(A) Rs 3000 (B) Rs 1900

(C) Rs 3200 (D) Rs 2800

(E) Rs 2700

91. A sum becomes 10935 in 3 years at 12.5% per annum compound interest. Find the simple interest at 8% per annum for 4 years on the same amount?

(A) Rs. 2457.6 (B) Rs. 1834.2

(C) Rs. 1847.2 (D) Rs. 2257.6

(E) None of these

92. A man had to travel a distance of 90 km to reach his destination. He travels by bus for 2.5 hours at a speed of 34 km/hr and covers the remaining distance on foot. If he reached his destination in 3 hours, at what speed did he travelled by foot?

(A) 5 km/hr (B) 6 km/hr

(C) 8 km/hr (D) 10 km/hr

(E) 12 km/hr

93. Four bells ring at intervals of 8, 12, 16 and 28 seconds. They start ringing simultaneously at 2.00 AM. At what time will they again ring simultaneously?

(A) 2 hrs 3 minutes 23 seconds

(B) 2 hours 2 minutes 36 seconds

(C) 2 hours 5 minutes 36 seconds

(D) 1 hours 5 minutes 48 seconds

(E) None of the above

94. In first 20 overs of cricket game, the run rate of India was 5.4. What should be the run rate in the remaining 30 overs to reach the target of 384?

(A) 9.2 (B) 8.3

(C) 6.8 (D) 4.5

(E) 5.9

95. The compounded ratio of (1, 5), (6, 7), (8, 9)?

(A) 16 : 121 (B) 69 : 123

(C) 16 : 105 (D) 55 : 127

(E) 61 : 125

96. A sum of 10000 is borrowed at 8% pa compound interest and paid back in 4 equal annual installments. Calculate the amount of each annual installment?

(A) 2980.70 (B) 3045.80

(C) 2090.45 (D) 3019.20

(E) 3089.56

97. The marked price of a top is 4500. A retailer offers 15% discount on this top and again offers 40% discount on the new price, and then and then again offers 60% discount on the new price. How much customer has to pay finally?

(A)1090 (B)928

(C) 860 (D)918

(E)898

98. The ratio of third proportional of A & B and fourth proportional of A, B & C is 8 : 13. Then the ratio C : B = ?

(A) 64/169 (B) 8/13

(C) 13/8 (D) 1

(E) None of these

99. Find the least number that should be added to 3527 to make it exactly divisible by 42, 49, 56 and 63 ?

(A) 15 (B) 20

(C) 1 (D) 5

(E) 18

100. In what ratio should a seller mix oil of Rs. 100 per litre with oil at Rs. 90 per litre, so that the mixture would worth Rs. 92.50 per litre?

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

(C) 4 : 7 (D) 1: 3

(E) None of these

Solution:

1.(B)

80% – 3200
125% – x
x = 5000

2.(D)

Kritika's age = x

Alok's age = x + 7
According to question

$$\frac{x-3}{x+7-3} = \frac{7}{8}$$

=x = 52

3.(D)

Water = $\frac{3}{7} \times 210 = 90$

milk = 210 – 90 = 120

According to Question

Let x litre milk added

$$\frac{90}{120+x} = \frac{5}{7}$$

x = 6

4.(E)

total amount = 42482

7x + 4x = 42482

11x = 42482

x = 3862

Twice the share A = 14x

Thrice the share of B = 12x

Difference = 2x = 2 × 3862 = 7724

5.(C)

Required number should be multiples of 100

Greatest number = 9999

on dividing by 100, we get 99 as remainder

So required greatest number of 4 digits = 9999 – 99= 9900

6.(D)

ATQ, $\frac{800}{1000(x-12)} = \frac{4}{60}$

∴ The speed of Truck (x) = 24kmph

7.(B)

Total units = 50 × 30 = 1500 units

According to question =20 × 30 = 600

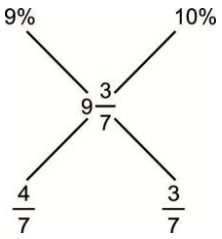
Remaining units = 1500 – 600 = 900

So, remaining work should be completed in 20 day

So = $\frac{900}{20}$ = 45

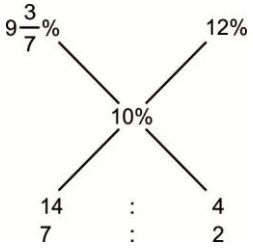
8.(A)

Let three types of apple A, B, C



Ratio = 4 : 3 ...(i)

using mixture allegation



7 : 2

A type Apple = $450 \times \frac{4}{9} = 200$

B type Apple = $450 \times \frac{3}{9} = 150$

C type Apple = $450 \times \frac{2}{9} = 100$

9.(D)

CP = 2000

MP = 3600

Discount = 15%

SP = 3600 – 15% of 3600

Profit % = $\frac{3060-2000}{2000} \times 100$

= 53%

10.(E)

A's speed = 5 m/s

Distance to be covered by A = 500 m

Let B' speed = B

Distance covered by B = 500 – 128 = 372 meter

Distance = Speed/Time

'A' take 7 seconds less than 'B' to cover his respective distance

$\therefore \frac{500}{5} - \frac{372}{Y} = 7$

$\therefore$ Y = 4m/s

11.(A)

Let CP = 100

MP = 120

Discount = 20%

SP = $120 * \frac{80}{100} = 96$

loss% = 4%

12.(C)

Downstream speed = $\frac{48}{3} = 16$

upstream speed = $\frac{48}{2}$ = 24

speed of boat = ½*(16+24) = 20

13.(C)

45.45%=5/11

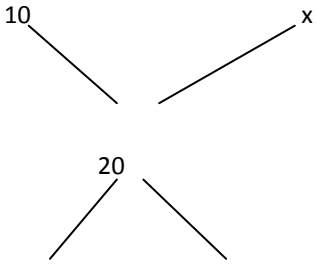
A = 16, B = 11

total unit of work = 11 × 54 unit

So A can complete in = $11 * \frac{54}{27} = 22\ days$

14.(C)

Komal Kamal



x-20 20 – 10 = 10

Therefore, $\frac{x-20}{10} = \frac{3}{4}$

x = 27.5

15.(A)

Let CP = 100

MP = 128

He finally sold on so gain no loss which is 100.

At the end the offers a discount of 28 on 128.

D%=$\frac{28}{128} * 100 = 21.88$

16.(C)

Anil : Gulshan

9 : 5

Total units of work = 5 × 45 = 225units

They together work for 9 days

9 × 14 = 126units

Remaining unit = 225 – 126 = 99units

Anil work alone for = $\frac{99}{9}$ = 11 days

17.(E)

Old area/new area=100/36

In case of circle, ratio of area's is equal to the ratio of their respective radii.

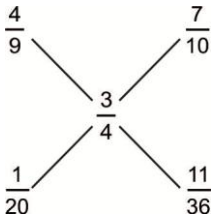
So, Old radius= 10 (As 10*10=100)

New radius= 6

decreased in area $= \frac{4}{10} * 100$ =40%

18.(C)

By allegation rule,



Required ratio = 9 : 55

19.(C)

Compound ratio

$\frac{a}{b}, \frac{c}{d} and \frac{e}{g} = \frac{ace}{bdf} = 1 \times 2 \times \frac{1}{2} = 1$

Required answer = df/ce + bf/ae + bd/ac = 1 (A) + 2

(A) + $\frac{1}{2} \times (1) = \frac{7}{2}$

22.(A)

Area of trapezium= (sum of parallel side) × $\frac{h}{2}$

345 = $S \times \frac{10}{2}$

S = 39 cm

5x + 8x = 39

13x = 39

x = 3

Shorter side=5*3=15

21.(B)

Speed in upstream

x – y = $\frac{1200}{900} = \frac{4}{3}$ ...(i)

speed in downstream

x + y = $\frac{1200}{600}$ = 2 ...(ii)

solving eq (i) and (ii) we get the value of y

y = $\frac{1}{3}$ m/s

22.(C)

Let number of 500 rs note = x

number of 200 rs note = 3x

total number of Anotes = 160

number of 100 Rs. note

= 160 – (x + 3x) = 160 – 4x

500 (x) + 200 (3x) + 100 (160 – 4x)=30000

x = 20

number of notes of

500 rs = 20

200 Rs = 60

100 Rs = 80

Ratio = 80 : 60 : 20 = 8 : 6 : 2

23.(C)

L.C.M. of 3, 6, 9, 12, 15 is 180 sec

i.e Bell will ring after 3 minutes.

So in 30 min = $\frac{30}{3}+1$ = 10 + 1 = 11 times the will toll together.

24.(A)

P Q R

5000 × 8 : 4000 × 5 : 4500 × y

8 : 4 : 0.9y

According to Question

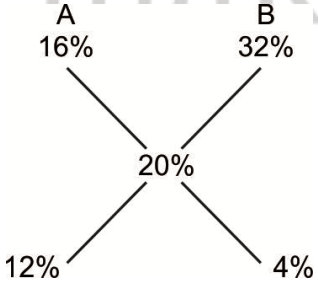
8z – 4z = 3200

z = 800

8z + 4z + 0.9 × 800 = 13920

y = 6 month

25.(E)



$\Rightarrow$ 3 : 1

Let total Quantity 3x + 1x

4x = 80,000

x = 20,000

CP of shop 'A' = 60,000

SP of Shop 'A' = $60,000\times\frac{116}{100}$

= 69600

26.(C)

Let the total distance between A and B be 5x

Distance between B and C = 4x

According to Question

$\frac{5x}{6+3}+\frac{4x}{6-3}$ = 34

x = 2 × 9 = 18

Required time $\frac{4\times18}{6-3}$ = $\frac{4\times18}{3}$

= 24 hrs.

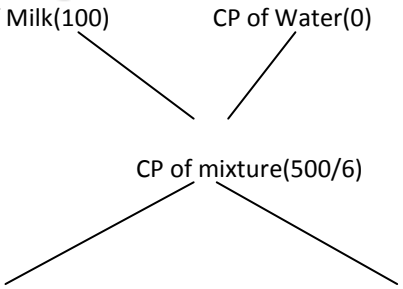
27.(A)

Let CP of 100 litre milk = 100

SP of 100 litre mixture = 100

CP of 100 litre mixture = $100*\frac{100}{120}=500/6$

By allegation,



500 : 100

5 : 1

28.(D)

No. of way of choosing face cards of red or black color= ${}^6C_2+{}^6C_2$

$= \frac{6\times5}{2}+\frac{6\times5}{2}$ = 15 + 15 = 30

Required Probability

$= \frac{30}{{}^{52}C_2} = \frac{30}{\frac{52\times51}{2}} = \frac{5}{221}$

29.(D)

Let Mr. John invested Rs. P on S.I. and Rs. P on C.I.

Simple interest received for third year

$= P\times\frac{15}{100} = \frac{15P}{100}$

C.I. received for second years= $\left(P+P\times\frac{20}{100}\right)\times\frac{20}{100}$ = Rs. $\frac{24P}{100}$

According to Question

$\frac{24P}{100}-\frac{15P}{100}$ = 1818

$\frac{24P-15P}{100}$ = 1818

9 P = 1818*100

P = 20200 Rs.

total sum invested by Mr. John = 2P = 20200 × 2 =

Rs. 40400

30.(B)

ratio of their efficiencey

Ritu : Anu : Neha

10 : 24 : 16

Ratio of neha: ritu

16 : 10

8 : 5

31.(D)

Let initial quantity 7x and 12x

According to Question

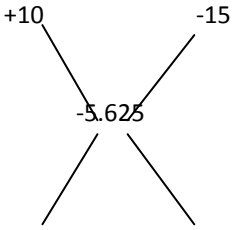
$\frac{7x+30}{12x+40} = \frac{5}{8}$

x = 10

Required ratio = $\frac{7\times10}{12\times10+40}$ = 7 : 16

32.(E)

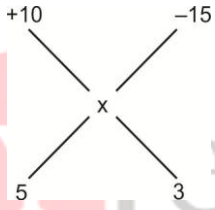
According to Question using allegation



3 : 4

Now Quantity interchanged

so ratio could also change



$\frac{10-x}{x+15} = \frac{3}{5}$

8x = 5

x = $\frac{5}{8}$

% change = $\frac{5}{8}$ = 0.625

33.(B)

Let amount = P

D = $P\left(\frac{R}{100}\right)^2$

144 = $\frac{P\times12\times12}{100\times100}$

P = 10,000

According to question

Now

SI = $\frac{10,000\times15\times4}{100}$ = 6000

34.(E)

Let age of shyam = x

then Ram's age = x + 2

Akshay's age = x – 4

According to question

$$\frac{x+2+6}{x-2} = \frac{17}{12}$$

x = 26

Akshay's age 8 year hence = 30

35.(A)

Let the CP of the Article = Rs. 100

∴The merchant would have marked it to Rs. 100 +80% of Rs. 100

= 100 + 80 = Rs. 180

If he sells it at no. profit or loss, he sells it at the cost Price.

i.e. he offers a discount of Rs. 80 on his SP of Rs. 180

= His % Discount = $\frac{80}{180} * 100 = 44.44\%$

36.(D)

Relative speed = 54 – 36 = 18

Let the length of train B = x

According to Question

We know that speed = $\frac{\text{Distance}}{\text{Time}}$

$$\Rightarrow 18 \times \frac{5}{18} = \frac{250+x}{120}$$

x = 350

37.(B)

Total amount lent = Rs. 12000

Rate of interest for Sam = 7%

Rate of interest for Sandy = 3%

T = 5 years

Total SI received = Rs. 2000

Let the amount lent to Sam be Rs. x

Amount lent to Sandy = Rs. (12000- x)

= (x × 7 × 5)/100 + [{(12000 – x) × 3 × 5}/100]

= 35x + 180000 – 15x = 200000

= 20x = 20000

= x = Rs. 1000

∴The amount lent to Sam = Rs. 1000

38.(D)

Let take Jollie can finish the work alone in x days

∴Mandy can alone finish the work in $\frac{x}{2}$ days

In 1 Day Jollie can do work = $\frac{1}{x}$

In 1 day Mandy can do work = = $\frac{2}{x}$

$$\frac{1}{x} + \frac{2}{x} = \frac{1}{20}$$

$$\frac{3}{x} = \frac{1}{20}$$

⇒x = 60

Mandy alone can finish the work in $\frac{60}{2}$

$\Rightarrow$30 days.

39.(C)

Surface area of the smaller Cubes = 6 (9 + 16 + 25)

= 6 × 50

= 300 cm^2

The large cube is obtained by melting the three smaller cubes,

Volume of larger cube = sum of volumes of three smaller cubes

$3^3 + 4^3 + 5^3$ cm^3= 27 + 64 + 125 = 216 cm^3

Side of larger cube a = $\sqrt[3]{216}$ cm = 6 cm

Surface are of larger cube = 6 × a^2 cm^2= 6 × 6^2 = 216 cm^2

$\therefore \frac{\text{Surface area of smaller cubes}}{\text{Surface areaof largecube}} = \frac{300}{216}$

Required % = $\frac{84}{216} * 100 = 39\%$

40.(A)

Capacity of the water tank = LCM (4, 8, 12) = 24 units

Pipe A's rate to fill the tank = $\frac{24}{4}$ = 6 units/hour

Similarly, for B = 3 units/Hours and for C = 2 units/hour

For 24 minutes the pipe B and C can fill = $(3+2)\times\frac{24}{60}$ = 2 units

The remaining = 24 – 2 = 22 units

The remaining will be filled by three pipe together in $\frac{22}{6+3+2}$ = 2 Hours

41.(B)

Let same profit be Rs. 15

20% = Rs. 15 for item A

CP of item A = 75 Rs.

15% = Rs. 15 for item B

CP of item B = 100 Rs.

Ratio = 75 : 100

3 : 4

42.(C)

Average speed = $\frac{\text{Total distance}}{\text{Total time taken to cover the whole distance}}$

Total Distance = 25 km

At 8 kmph in 45 min the distance covered

= $8\times\frac{45}{60}$ = 6 km

At 4.5 kmph in 2 Hours the distance covered = 4.5 × 2 = 9km

The Remaining distance = 25 – (6 + 9) = 10 km

The time taken to cover the rest of the Journey = $\frac{10}{5}$ = 2 hours

The total time taken to cover the whole distance

= $\frac{3}{4}+2+2$

= $\frac{19}{4}$ Hours

The Required is = $\frac{25}{\frac{19}{4}} = \frac{100}{19}$ Kmph

$5\frac{5}{19}$

43.(C)

Quantity 1:

B alone can do the same work in 15 days

B and C together can do a work in 10 days

So one day work of C = $\frac{1}{10}-\frac{1}{15}=\frac{3-2}{30}=\frac{1}{30}$

⇒C alone can do the work in 30 days

A alone can do a work in 20 days

One day work of A and C = $\frac{1}{20}+\frac{1}{30}=\frac{3+2}{60}=\frac{5}{60}$

⇒A and C can do the work = 12 days

Quantity 1 = 12 days

Quantity 2 = 10 days

So, Quantity 1> Quantity 2

44.(C)

Let the time taken by Hemanta to row 70 km be x hours

He can row 42 km in downstream and 24 km in upstream in equal time

So, speed in downstream = $\frac{42}{x}$ km/h

And, the speed of upstream = $\frac{24}{x}$ km/h

Hemanta can row to a place distance of 70 km and come back to origin in 27 hours and 30 minutes.

So, we can

$\frac{70}{\frac{42}{x}}+\frac{70}{\frac{24}{x}}$ = 27.5

$x\left(\frac{5}{3}+\frac{35}{12}\right)$ = 27.5

x × (55/12) = 27.5

x = 27.5 × (12/55)

x = 6

So, the speed in downstream = $\left(\frac{42}{6}\right)$ = 7km/hr

And, speed in upstream = $\frac{24}{6}$ = 4 km/hr

∴The rate of the stream = ½ × (speed of downstream - speed of upstream)

= ½ × (7 – 4) km/hr

= ½ × 3 km/hr

⇒1.5 km/hr

45.(B)

Pipes	Units of water = 180 (LCM of 36 & 45)
A+B = 36	5
A+B+C 45	4
C	(–1)

C drains out one unit of water in one hour.

Capacity of the tank = 180

Half the capacity of the tank = 90

∴Time required to empty the half filled tank = $\frac{90}{1}$

= 90 hours.

46. (B)

Single equivalent discount = a + b – $\frac{ab}{100}$

⇒ $40+25-40\times\frac{25}{100}$

⇒55%

⇒Selling Price = $\left(\frac{45}{100}\right)\times P$

47.(B)

Profit will be shared in the Ratio (3 × 1): (4 × 3) : (3 × 2) or 1 : 4 : 2

Difference of Aslam's and Ashley's share

= (4/7) × 28000 – (1/7) × 28000

⇒Rs. 12,000

48.(D)

25% of A : 50% of B : 75% of C: D = 4 : 3 : 2 : 1

$\Rightarrow\left(\frac{25A}{100}\right):\left(\frac{50B}{100}\right):\left(\frac{75C}{100}\right):D$ = 4 : 3 : 2 : 1

⇒A : 2 B : 3 C : 4D = 4 : 3 : 2 : 1

Let them be 4k, 2k, 2k and k

⇒A = 4K, B = $\frac{3k}{2}$, C = $\frac{2k}{3}$, D = $\frac{k}{4}$,

⇒(1/2) × (A + B + C + D) = 77

⇒4k + $\frac{3k}{2}+\frac{2k}{3}+\frac{k}{4}$ = 154

Multiply both sides by 12

48k + 18k + 8k + 3k = 154 × 12

⇒77k = 154 × 12

⇒k = 24

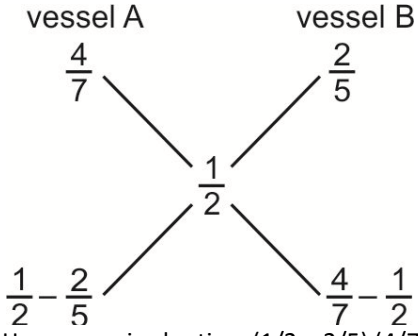
⇒A = 96, B = 36, C = 16 and D = 6

⇒(A – B + 30) (C – D – 1) = (96 – 36 + 30)/(16 – 6 – 1)

= $\frac{90}{9}\Rightarrow 10$

49. (A)

In the final mixture ratio of milk and water = 1 : 1



Hence required ratio = (1/2 – 2/5) (4/7 – 1/2)

= (1/10) (1/14) = 7/5

50. (C)

The amount which Komal has to pay to federal bank after 2

years in order to close her debt

= [50000 + (50000 × 12 × 2)/100]

= 62000

Total amount that Komal will get from Manu after 2 years

= 50000 (1.15) = Rs. 66125

⇒total gain made by Komal = Rs. (66125 – 62000)

⇒Rs. 4125

51.(B)

(4M + 8W) 10 = 3M × 20

80W = 60M – 40M

W/M = 20/80

W/M = ¼

Total work = (4 × 4 + 8 × 1) 10 = 240

Time required to finish the work by men and 8 women = $\frac{240}{32}=\frac{15}{2}$ days

52.(C)

Let the sum of money invested by Rony be x

Interest received by Rony = $x\times 4\times\frac{3}{100}=\frac{12x}{100}$

Amount Received = $x+\frac{12x}{100}=\frac{112}{100}x$

Interest received by lending to Akhilesh = $\frac{112x}{100}\times 8\times\frac{6}{100}=\frac{53.76x}{100}$

So, $\frac{112x}{100}+\frac{53.76x}{100}$ = 40320

$\frac{165.76x}{100}$ = 40320

X = 40320 × 100/165.76

X = Rs. 24324

53.(A)

Time required to complete the work for B = 30 hrs

∴Work done by B in/hour = $\frac{1}{30}$

A is 50% more efficient than B

∴Work done by A in/hour = (3/2) ×1/30 = $\frac{1}{20}$

∴Work done by both A and B together in 1 hours

= $\frac{1}{30}+\frac{1}{20}=\frac{1}{12}$

Work done by

54.(E)

1 Hectare = 10000 sq meter total cost to fill it with s and = Rs. 1440

Cost to fill per hectare is Rs. 160

$\therefore$ Area of the filed = $\frac{1440}{160}$ hectare = 9 hectare 9 × 10000 sq meter

Length of playground is L meter then its area is L^2 square meter

$\therefore L^2 = 9 \times 10000$

= L = $\sqrt{(9 \times 10000)}$

= 300 meter

Perimeter of the square playground is 4L meter = 4 × 300 = 1200 meter

The cost of putting a fence around it at the rate of 50 paise per meter is

= Rs. (1200 × 0.50)

= Rs. 600

55.(E)

Let the numbers be x and y
Let 4x, 3x be the two numbers
12x be the LCM
Therefore 12x = 2436
x = 203
Sum = 7x =1421

56.(E)

40% of m = n

$\frac{40}{100}$ m = n

$\frac{2m}{5}$ = n

2m = 5n

60% of n = 180

$\frac{60}{100} \times n = 180$

$\frac{3n}{5} = 180$

3n = 900

N = 300

2m = 5 × 300

m = $\frac{1500}{2}$ = 750

33.33% of (m + n) = $\frac{1}{3} * (1050) = 350$

57.(D)

Let the number is = x

According to Question

= $(7350/x)^2 \times 37 = 5550$

$\frac{3675}{x^2} = 75$

$x^2 = 49$

x = 7

58.(A)

Concentration of Alcohol in the first Bottle = 10%

Concentration of Alcohol in the second bottle = 30%

$\frac{\text{Cost price of unit quantity of cheaper substance}}{\text{Cost price of unit quantity of dearer substance}} = \frac{\text{mean price} - C}{d - \text{mean price}}$

First bottle

30 – 25 = 5

Second bottle

25 – 10 = 15

Ratio is 1 : 3

The part of Brandy replaced = $\frac{3}{4}$

59.(B)

Let efficiency of P is x unit/day and Q's efficiency is 3x unit/day

Q work for 19 days and P work for 18 days

ATQ,

Total work = 19 × 3x + 18 × x = 75x

efficiency of R = $\frac{75X}{25} = 3X$ unit/day

(P + R) together = $\frac{75X}{X+3X}$ =75/4 days

60.(A)

Ratio= (3x × 4 + 5x × 6) : (1800 × 12)

42x : 21600

ATQ

$\frac{42x}{21600} = \frac{7}{9}$

$x = \frac{2400}{6}$

x = 400

Value of '5x' = 400 × 5

= Rs.2000

61.(A)

Total amount of initial mixture

22.5 × 8

= 180 gm

Let total y gm of Mixture taken

ATQ

$$\frac{180\times\frac{2}{5}-\frac{2y}{5}}{180\times\frac{3}{5}-\frac{3y}{5}+28}=\frac{1}{2}$$

$$\frac{72-\frac{2y}{5}}{108-\frac{3y}{5}+28}=\frac{1}{2}$$

$$\frac{360-2y}{680-3y}=\frac{1}{2}$$

2(360 – 2y) = 680 – 3y

4y – 3y = 720 – 680

y = 40 gm

tin taken out = 40 × $\frac{2}{5}$ = 16 gm

62.(E)

Let total number of girls in classroom = x

ATQ

$$\frac{{}^{x}C_1}{{}^{48}C_1}=\frac{3}{8}$$

$$\frac{x}{48}=\frac{3}{8}$$

x = 18

Total no. of boys in class

= 48 – 18

= 30

63.(D)

Let present age B be 'x'

Present Age of A = x + 3

Present Age of C = x – 3

ATQ

$$\frac{(x+3+x+x-3)-4\times3}{3}=33$$

x – 4 = 33

x = 37 years

Age of A After 1 year

= 37 + 3 + 1 = 41 years

64.(B)

$6n^2 + 6n = 6n (n + 1)$

n (n + 1) will always be even

∴ $6n^2 + 6n$ will be divisible by both 6 and 12.

65.(A)

X's Profit = $\frac{x}{6}\times\frac{1}{6}=\frac{x}{36}$

Y's Profit = $\frac{x}{3}\times\frac{1}{3}=\frac{x}{9}$

Z's Profit = $\frac{x}{2}$

Total Profit of all three = $\frac{x}{36}+\frac{x}{9}+\frac{x}{2}=\frac{23x}{36}$

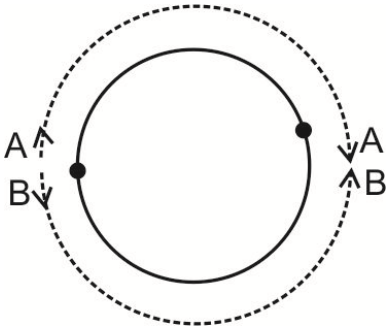
ATQ

$\therefore \frac{23x}{36} = 2300$

x = 3600

A's Profit = $\frac{x}{36}$ = Rs. 100

66.(A)

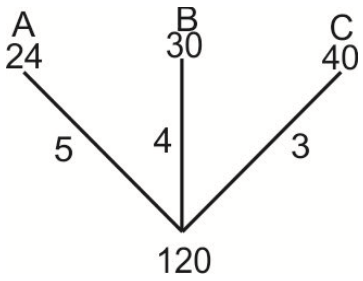


∴ Relative speed = (3.705+4.815)*1000/60
= 142m/min

Time Taken to cover 781 meters = $\frac{781}{142}$

= 5.5 minutes

67.(D)



If canny have worked for another 4 days = 3 × 4 = 12 units

Now total work = 120 + 12 = 132 unit

Time required to complete work = $\frac{132}{12}$ = 11 days

68. (A)

$A = P\left(1+\frac{r}{100}\right)^t$

ATQ,

P = 25000, r =12%, t = 3years

$\therefore A = 25000\left(1+\frac{12}{100}\right)^3$

= Rs. 35123.20

∴ Interest = A - P

= Rs. [35123.20 – 25000]

= Rs. 10123.20

69.(A)

Ratio of Given currency Rs. 100p : 50p : 25p

Now, Ratio of value of coins

4x*1+5x*1/2+6x*1/4=64 Rs.

x=8

No. of one Rupee coins = 4 ×8 = 32

No. of 50 paise coins = 5 × 8 = 40

No. of 25 paise coins = 6 × 8 = 48

70.(A)

A : B

75000 × 12 : 45000 × 12

= 5 : 3

Let total profit be = 100x

80% profit distributed equally.

Remaining profit = 100x – 80x

= 20x

ATQ, Difference between there show

$\Rightarrow \frac{20x \times 2}{8}$ = 280

x = 56

Now, total profit = 100 × 56

= Rs. 5600

71.(A)

Let the. speed of boat = x

speed of water = y

Downstream = x + y

speed = $\frac{\text{Distanc}}{\text{time}}$

$\Rightarrow$ x + y = $\frac{35}{5}$

$\Rightarrow$ x + y = 7 ...(i)

Similarly when it goes in upstream x – y = $\frac{35}{7}$

$\Rightarrow$ x – y = 5 ...(ii)

from (i) and (ii) we gt

2x = 12

$\Rightarrow$ x = 6

72.(C)

The ratio of ages of P, Q, R is 5 : 7 : 8

Let the ages of P, Q and R be 5x, 7x, 8x of years resp.

After 2 years,

Q + R = 109

⇒ 7x + 2 + 8x + 2 = 109

15x + 4 = 109

15x = 105

x = 7

Then, ratio of P and Q after B after 3 years

⇒ 5x + 3 : 7x + 3

⇒ 5 × 7 + 3 : 7 × 3 + 3

⇒ 38 : 52

⇒ 19 : 26

73.(D)

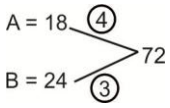
P(A) = $\frac{2}{3}$

P(B) = $\frac{3}{7}$

P(C) = $\frac{4}{9}$

At least two person hit target = $\frac{2}{3}\times\frac{3}{7}\times\frac{5}{9}+\frac{3}{7}\times\frac{4}{9}\times\frac{1}{3}+\frac{2}{3}\times\frac{4}{9}\times\frac{4}{7}$ = $\frac{81}{189}$

74.(B)



B work fro 3 day, So work done B in 3 days = 3 × 3 = 9

Remaining work = 72 – 9 = 63

So all work completed in = $3+\frac{63}{7}$ = 3 + 9 = 12 days

75.(D)

Let principle is Rs. x

So Interest = $\frac{7x}{2}-x=\frac{5}{2}x$

Time = 10 years

I = $\frac{P\times T\times R}{100}$

5x = $\frac{x\times 10\times R}{100}$

R = 25 %

76.(B)

Let initial quantity of water = 8x letter

So, Initial Quantity of milk = 5x letter

According to Question

$\frac{5x+6}{8x}=\frac{7}{8}$

⇒ x = 3

So, Initial quantity mixture= (5 + 8) × 3 = 39 *l*

77.(A)

Speed of boat in upstream = 17 kmph

speed of water = 3 kmph

So, speed of boat in still water

= 17 + 3 = 20 kmph

So speed of boat in down stream

= 20 + 3 = 23 kmph.

78.(B)

Area 22/7*r*r=1386cm^2

Radius = 21 cm

length of perimeter of circle = 2πr

= $\frac{2\times 22}{7}\times 21$ = 132 cm

So side if square = $\frac{132}{4}$

= 33 cm

⇒ Length of diagonal

= $\sqrt{(33)^2+(33)^2}$

= $33\sqrt{2}$ cm

79.(E)

Sum of ages of 5 person

= 37 × 5 = 185 years

sum of A and B = 34 × 2 = 68 years

sum of C and D = 40 × 2 = 80 years

So, age of E = 185 – 68 – 80= 37 years

80.(C)

Principal = Rs 2000

Amount = $2000\left(1+\frac{20}{2\times100}\right)^{\frac{3}{2}\times2}$

= $2000\left(1+\frac{1}{10}\right)^{3}$

= Rs. 2662

So, Interest, = 2662 – 2000= Rs. 662

81.(D)

Let the full marks of exam = x

According to Question

222 + 8% of x = 204 + 11%

18 = 3% of x

x = 600

So full marks = 600

So, passing marks = 222 + 8% of 600

= 270 marks.

82.(A)

Speed of train = $\frac{\text{Distance}}{\text{time}}$

speed = $\frac{570}{38}$ = 15 m /sec

Time required in crossing

= $\frac{570+660}{15}$ = 82 sec.

83.(D)

The letter NOUVEAU had 7 letter

In there 7 letter U occurs twice.

So, no of ways of arrangement = $\frac{7!}{2!}$

= 2520.

84.(B)

Sum of 15 number = 15 × 12 = 180

⇒ Sum of (15 + 5 + 5 = 25)

number = 18.4 × 25

= 460

⇒ Sum of 5 number that were added

= $\frac{(460-180)}{2}$ = $\frac{280}{2}$ = 140

Average = $\frac{140}{5}$ = 28

85.(A)

Two filling pipe fills the tank in 20 minutes

one pipe can = 20 × 2 = 40 min

Two pipes can empty the tank in = 30 min

one pipe can = 30 × 2 = 60 min

∴ Units of water filled in one minute

= 3 – 2 = 1

⇒ total units = 120

⇒ time taken = $\frac{120}{1}$ = 120 min

= 2 hours

86.(B)

Time = $\frac{\text{Distance}}{\text{Speed}}$

Let speed of both trains are S_{T1} and S_{T2}

⇒ $S_{T1} - S_{T2} = \frac{\text{Total Distance}}{\text{time}}$

⇒ $\frac{5}{18}(43-36) = \frac{280+280}{T}$

⇒ $\frac{5}{18}\times 7 = \frac{560}{T}$

⇒ $T = \frac{560\times 18}{5\times 7}$

= 16 × 18

= 288 sec.

87.(A)

Rate of 12.5% = $\frac{1}{8}$

Let ... original amount is P

⇒ $10935 = P\left(1+\frac{1}{8}\right)^3$

⇒ $10935 = P\times\frac{9}{8}\times\frac{9}{8}\times\frac{9}{8}$

⇒ $10935\times\frac{8}{9}\times\frac{8}{9}\times\frac{8}{9} = P$

⇒ $P = 10935\times\frac{512}{729}$

P = 15 × 512

P = Rs. 7680

⇒ SI = $\frac{P\times R\times T}{100} = \frac{7680\times 8\times 3}{100} = \frac{184320}{100}$

∴ S.I. = Rs. 1843.2

88.(A)

Let one of the number be 'x' we know that, product of two number

= LCM × HCF

x × (117 – x) = 260 × 13

⇒ x^2 – 117x + 3380 = 0

⇒ (x – 65) (x – 52) = 0

⇒ x = 65 or x = 52

∴ the difference = 65 – 52 = 13

89.(A)

When they are mixed together, the ratio of spirit to water

$(\frac{1}{6}+\frac{9}{8}+\frac{5}{3}) : (\frac{5}{6}+\frac{15}{8}+\frac{7}{3})$

$\frac{25}{8} : \frac{47}{8}$

∴ Ratio of spirit to water is 25 : 47

90. (B)

Share of man A in 12 months = 20000 × 12 = 240000

Share of man B in 12 months = 16000 × 2 + 12000 × 10 = 152000

Share of man C in 12 months = 28000 × 2 + 20000 × 10 = 256000

A : B : C = 240000 : 152000 : 256000 = 30 : 19 : 32
∴ B's share in profit = 19/(30 + 19 + 32) × 8100 = Rs 1900

91. (A)
Let the original amount is P
⇒ 10935 = P × 9/8 × 9/8 × 9/8
P = Rs. 7680
S.I.= $\frac{7680\times8\times4}{100}$
S.I. = Rs. 2457.6

92. (D)
Let the speed he travelled by foot be 'x' km/hr
Total distance travelled = 90 = 34 × 2.5 + x × (3 – 2.5)
⇒ x = 10 km/hr

93.(C)

LCM of 18, 12, 16 and 28

= 336 sec

That is 5 min and 36 sec

94.(A)

Required run rate = $\frac{384-(20\times5.4)}{30}$

= $\frac{384-108}{30}=\frac{276}{30}$

9.2

95.(C)

$\frac{1}{5}*\frac{6}{7}*\frac{8}{7}=\frac{16}{105}$

96.(D)

Each Installment =

$$\frac{10000}{\frac{100}{108}+\left(\frac{100}{108}\right)^2+\left(\frac{100}{108}\right)^3+\left(\frac{100}{108}\right)^4}$$

= 3019.20

97.(D)

MP = 4500

Now

$4500\times\frac{17}{20}\times\frac{3}{5}\times\frac{2}{5}$ = 918

98.(C)

third proportional of A & B = B^2/A

Forth proportional of A, B & C = BC/A

$(B^2/A)/(BC/A)$ = 8/13

= B/C = 8/ 13

C/ B = 13/8

99.(C)

LCM of 42, 49, 56 and 63 = 3528

= 3528 – 3527 1

Least number that should be added to 3527 is 1

100.(D)

Required rate = $\frac{Quantity\,of\ cheaper}{Quantity\,of\ Dearer}=\frac{d-m}{m-c}$

= $\frac{100-92.50}{92.50-90}=\frac{750}{250}=\frac{3}{1}$

The Ratio of mixture 1 : 3

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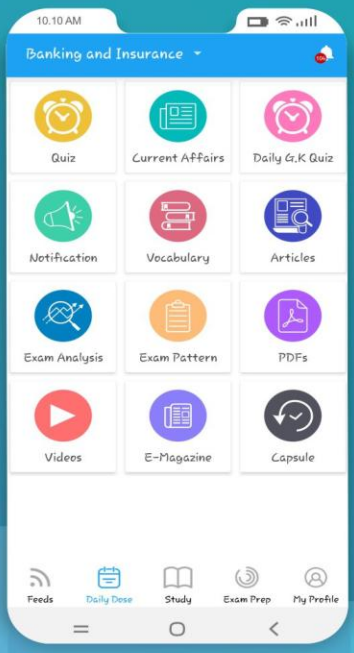

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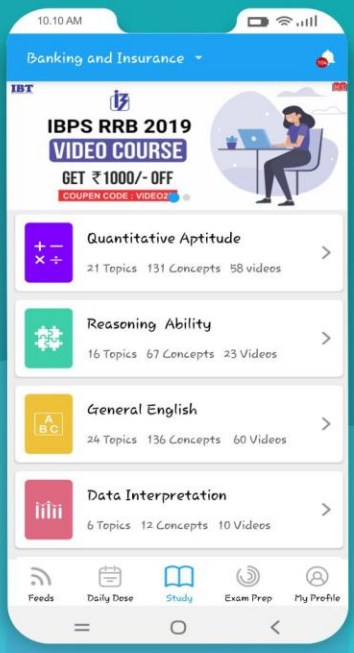

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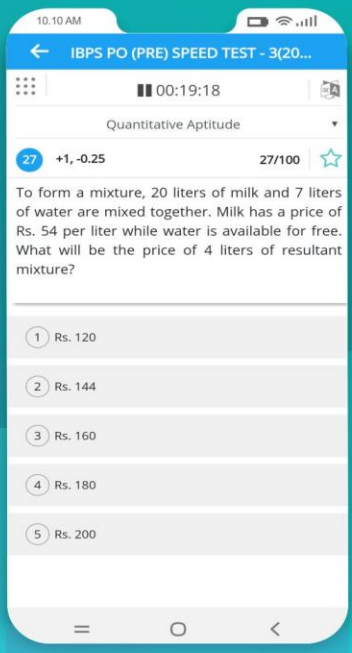

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