

Most Important Previous Year Quant Questions

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1. A town with population of 4000 had food packets for 30 days. After 10 days 1000 people more are added. How long will the food packets last now?

- (A) 20 (B) 15
(C) 17 (D) 18
(E) 16

2. A raft is going at 10 km an hour in still water, it takes twice as long in going the same distance against the current in comparison to direction of current. How much time it will take to cover 40 km?

- (A) 5 h (B) 10 h
(C) 3 hr (D) 2 h
(E) None of the above

3. A train crosses a pole in 20 sec and a platform in 60 sec with half the speed with it crosses the pole. The length of train is 250 m. what is double of the length of platform?

- (A) 150 m (B) 128 m
(C) 250 m (D) 200 m
(E) 230 m

4. If the manufacturer gets 14%, wholesale dealer gets 15% and the retailer gets 18%, then find the cost price of the article whose retail price is 1546980?

- (A) 1340000 (B) 8760000
(C) 8900000 (D) 9340000
(E) None of the above

5. The cost of type 1 coffee is Rs. 18 per kg and type 2 coffee is Rs. 43 per kg. If both type 1 and type 2 are mixed in the ratio 3 : 2, then the price per kg of the mixed variety of coffee is ?

- (A) 28 (B) 31
(C) 19 (D) Cannot be determined
(E) None of these

6. A and B enter into a partnership with their respective capital of Rs 7500 and Rs 7800 for 2 years. B left the partnership '4 months' before completion of 2 years and they together earn Rs 14000 profit at end of 2 years out of which 12.5% was donated and remaining was distributed according to their investment and time. Find profit share of A?

- (A) 4225.50 (B) 6560.50
(C) 7525.50 (D) 6562.50

(E) None of these

7. A dishonest shopkeeper used false weights weighing 10% less and 20% more at the time of selling and purchasing of goods respectively and sold the goods at 20% above its cost price. Find his profit percentage?

- (A) 25% (B) 32%
(C) 60% (D) 50%
(E) 12.5%

8. Alok speaks the truth 3 out of 5 times, and Bharthi speaks the truth 5 out of 7 times. What is the probability that they will contradict each other in stating the same fact?

- (A) 21/35 (B) 16/35
(C) 35/67 (D) 1/61
(E) 14/37

9. A cylinder of height 56 cm and area of base $169\pi \text{ cm}^2$ is to be melted to cast 'n' hemispherical bowls of outer diameter 16 cm and inner diameter 14 cm. Find the value of 'n'?

- (A) 56 (B) 72
(C) 65 (D) 84
(E) 91

10. A man invested P at 10% p.a. at C.I and interest received in 2nd year is 330. Find P ?

- (A) 1625 (B) 1550
(C) 3000 (D) 1725
(E) 1950

11. A fruit seller consists 25 kg of apple. Some part of apple he sold at 15% profit & remaining with 10 % loss. In total transaction he gets profit of 10%, then find how much apple he sold at loss?

- (A) 5 kg (B) 8 kg
(C) 10 kg (D) 12 kg
(E) 19 kg

12. Two numbers are in the ratio of 3:5. If 6 is subtracted from each then they become 9:17. Find the numbers?

- (A) 21, 35 (B) 24, 40
(C) 18, 30 (D) 33, 55
(E) 30, 55

13. Ahilya has to walk 32 kms in a day and she decided to travel 12 kms in the morning and 12 kms in the evening to escape the heat. What is the percentage of distance she travelled in the noon assuming she is 4 kms short of the target by evening?

- (A) 8% (B) 12.5%
(C) 25% (D) 32%
(E) 19%

14. Babita's present age is $\frac{6}{5}$ times of her age at the time of her marriage and she got married 6 years ago. Age of her son is $\frac{1}{12}$ of her current age. Find the age of her son.

- (A) 3 years (B) 4 years
(C) 5 years (D) 6 years
(E) 9 years

15. LCM of two numbers is 120 and HCF of these two numbers is 20. If one number is 40, find the other.

- (A) 5 (B) 10
(C) 32 (D) 60
(E) 19

16. A shopkeeper sells Articles at a certain price and makes a profit of 20%. If he charges Rs. 15 higher per Article he would get a profit of 40%. Find the original cost price of an Article?

- (A) 60 (B) 64
(C) 72 (D) 75
(E) 90

17. Shipra sold a bike to Gita on a profit of 25% and Gita sold it to Ritu at a profit of 20%. If Shipra had sold the bike to Ritu at the same price as Gita sold it then how much profit would have she made if Ritu pays Rs.60000 for the bike.

- (A) 25% (B) 50%
(C) 22.5% (D) 75%
(E) 19%

18. A Bookseller allowed 15% discount on the books sold. Sunil purchased books worth Rs.1500. How much will he have to pay to Bookseller?

- (A) Rs.1200 (B) Rs.1250
(C) Rs.1275 (D) Rs.1300
(E) Rs. 1975 %

19. A person invested Rs. 1600 at certain interest rate and Rs. 2200 at 1% higher interest rate and total Simple interest from this investment after 3 years was Rs. 636. Find the rate% for the larger principal?

- (A) 3% (B) 4%
(C) 5% (D) 6%
(E) 7%

20. After giving an initial discount of 25% on the labeled price of a Fridge, a shopkeeper gives an additional discount of 17% while selling. What will be the labeled price of the Fridge, if its selling price is 747?

- (A) 944.80 (B) 1129.75
(C) 1000.00 (D) 1200.00
(E) None of these

21. How many kg of pulse at 62 per kg must be added to 100 kg of pulse at 78 per kg so that a profit of 30% is made by selling the mixture at 91 per kg?

- (A) 95 kg (B) 90 kg
(C) 70 kg (D) 80 kg
(E) 100 kg

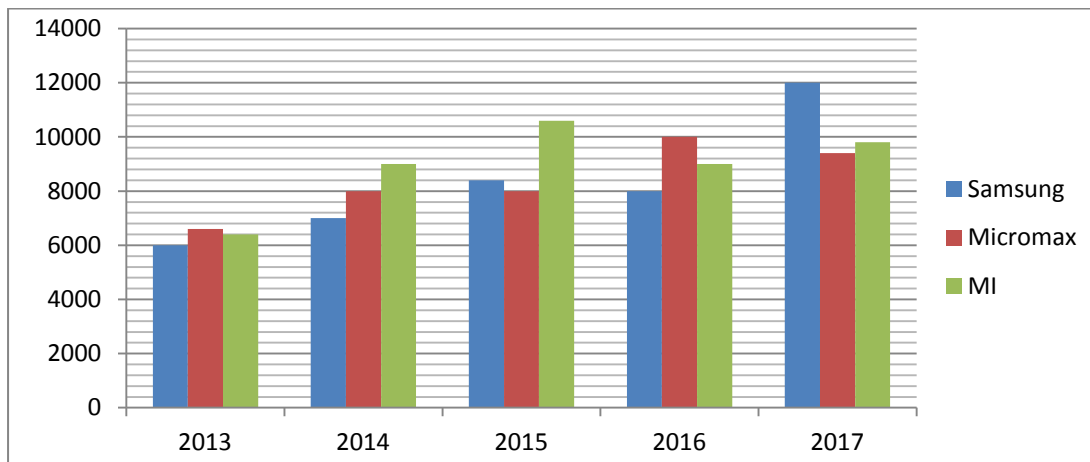
22. The average marks of Gulshan in 7 subjects is 42. If the mean of marks in first 3 subjects is 43 and the mean of marks in the last 3 is 40.5, what are Gulshan's marks in the 4th Subject?

- (A) 42 (B) 41.5
(C) 43 (D) 43.5
(E) 45

23. Third proportional of 12 and 18 is P, while that of 9 and 12 is Q. Find the third proportional of P and Q.

- (A) $\frac{64}{9}$ (B) $\frac{256}{27}$
(C) $\frac{16}{3}$ (D) $\frac{64}{27}$
(E) $\frac{80}{27}$

DIRECTION (Q. 24-28):- The given bar graph shows the number of phones (Samsung, Micromax and MI) sold by Mobile House in different 5 different years. Study the graph and answer the following questions



24. Samsung phones sold in 2014 and 2013 together is what percent more/loss then Micromax phones sold in 2016 ?

- (A) 137.5% (B) 75%
(C) 30% (D) 84%
(E) 80%

25. Find the difference between average number of Samsung phones sold to average number of MI mobile sold in given five years by Mobile House?

- (A) 680 (B) 820
(C) 908 (D) 536
(E) 625

26. If Samsung, Micromax and MI phones sold in 2017 is 20%, 100% and 0% respectively more than these mobiles sold in 2018 respectively, then, find (approx) average number of phones sold in 2018 of all three companies by Mobile House?

- (A) 4000 (B) 6275
(C) 5600 (D) 8167
(E) 5000

27. In 2013, MI phones sold to male customers and female customers is in the ratio 7 : 9. In 2014, MI phones sold to male customers and female customers in the ratio 4 : 5. Find the ratio of male customers to female customers who bought MI in 2013 and 2014 together?

- (A) 17 : 13 (B) 34 : 43
(C) 31 : 19 (D) 11 : 15

(E) None of these

28. If in 2013, 10.53 % customer of Mobile House are female and male customer to female customer ratio of Samsung and Mi in 2013 is 5 : 1 and 7 : 1 respectively then, find the female customers who bought Micromax phones in 2013.

- (A) 200 (B) 350
(C) 600 (D) 540
(E) 480

29. The probability of selection of three candidates A, B and C in an organization is $\frac{1}{5}$, $\frac{5}{7}$ and $\frac{2}{3}$ respectively. Find the probability that at least one of them get selected?

- (A) $\frac{107}{210}$ (B) $\frac{97}{210}$
(C) $\frac{97}{105}$ (D) $\frac{63}{70}$
(E) None of these

30. Marks scored by Santosh is 12.5% more than Shakur's marks. Rohit got $6\frac{2}{3}$ % more marks than Santosh's. If difference between marks scored by Rohit and Shakur is 40, then find the difference between the marks of Santosh and Shakur?

- (A) 25 (B) 40
(C) 55 (D) 75
(E) 65

31. The average salary of the entire staff in an office is 15000 per month. The average

salary of officers is 25000 and of non officers is 10000. If the number of officers is 15, then find the No of non-officers in the office?

- (A) 90 (B) 100
(C) 45 (D) 35

32. In how many ways a committee of 4 member can be formed from 6 men and 7 women in which at least 3 men should come?

- (A) 431 (B) 520
(C) 720 (D) 155
(E) 640

33. Bobby can do a work in 10 days while Deepak and Sagar together can do the same work in 5 days. If efficiency of Deepak is 50% more than Bobby, then find in how many days Sagar can complete the work alone?

- (A) $11\frac{1}{7}$ days (B) 13 days
(C) $11\frac{6}{7}$ days (D) 20 days
(E) $13\frac{1}{7}$ days

34. Two trains of length 225 m each, take $15\frac{1}{2}$ second to cross each other when they are travelling in opposite directions and take 45 seconds to cross each other when they are travelling in same direction. Find the speed of slower train in kmph?

- (A) 84 kmph (B) 95 kmph
(C) 96 kmp (D) 90 kmph
(E) None of these

35. After 9 years, Gulshan will be twice the age of Gulati. Three years back, the ratio of their ages was 10 : 3. If Gulmohar is 6 years elder to Gulati then find the average age of both?

- (A) 15 years (B) 12 years
(C) 33 years (D) 28 years
(E) 16 years

36. To form a mixture, 20 liters of milk and 7 liters of water are mixed together. Milk has a price of Rs. 54 per liter while water is available for free. What will be the cost price of 2 liters of resultant mixture?

- (A) Rs. 40 (B) Rs. 144
(C) Rs. 80 (D) Rs. 180
(E) Rs. 160

37. In a school, the student to teacher ratio is 50 : 1. However, as per rules, the ratio should be at most 20 : 1. If the minimum number of more teachers required to achieve desired ratio is 30, then how many students are there in the school?

- (A) 1200 (B) 1500
(C) 1800 (D) 1000
(E) 2400

38. The average height in a group of 300 persons is 170 cm. After one year, the height of some of them increased by 2 cm, and that of remaining increased by 5 cm. The average height now became 173 cm. Of how many persons the height has increased by 5 cm?

- (A) 100 (B) 175
(C) 250 (D) 200
(E) 180

39. 6 men can complete a piece of work in 16 days. 20 women can complete the same work in 24 days. In how many days will 6 men and 10 women can complete the same work?

- (A) 3 (B) 4.5
(C) 5.8 (D) 6.8
(E) None of the above

40. A metal box is in the form of cuboid with dimension 45cm × 15cm × 20cm. If the going to be filled by ball of radius 1.4 cm each. How many no. of balls the box can keep?

- (A) 3250 (B) 1173
(C) 4100 (D) 2500
(E) 2900

41. A train passes a station platform in $\frac{3}{5}$ minutes and a man standing on the platform in $\frac{1}{180}$ hours. If speed of train is 72km/hr, find the length of platform?

- (A) 240 m (B) 315 m
(C) 290 m (D) 250 m
(E) None of these

42. Blanca walks at 5 km/hr and Tranka cycles at 17 km/hr towards each other. What was the distance between them when they started if they meet after 45 minutes?

- (A) 16.5 kms (B) 20.6 kms
(C) 18.5 kms (D) 12.6 kms
(E) None

43 Kamal obtained an amount of Rs. 5364 as simple interest on a certain amount at 6% p.a. after 6 years. What is the amount invested by Kamal?

- (A) Rs.17,180 (B) Rs.14,900
(C) Rs.16,660 (D) Rs.17,450
(E) None of these

(Q. 44-48):- In the following questions two quantities are given for each question. Compare the numeric value of both the quantities and answers accordingly.

44. Quantity I : $2x^2 - 12x + 16 = 0$

Quantity II : $3y^2 + 6y - 24 = 0$

- (A) Quantity I > Quantity II (B) Quantity I < Quantity II
(C) Quantity I ≥ Quantity II (D) Quantity I ≤ Quantity II
(E) Quantity I = Quantity II or No relation

45. A man invested Rs. 4000 in scheme A for 2 years at Simple Interest which offers interest rate of 80% p.a and Rs. 7200 in scheme B for 6 years which offers 12.5% p.a at Simple interest.

Quantity I: Interest earned from scheme A

Quantity II Sum of interest earned from scheme 'B' and Rs. 600

- (A) Quantity I > Quantity II (B) Quantity I < Quantity II
(C) Quantity I ≥ Quantity II (D) Quantity I ≤ Quantity II
(E) Quantity I = Quantity II or No relation

46. Sum of speed of boat in downstream and in upstream is 24 km/hr while speed of boat in still water is 300% of the speed of stream.

Quantity I: Time taken to cover 96km downstream

Quantity II: Time taken to cover 64km upstream

- (A) Quantity I > Quantity II
(B) Quantity I ≤ Quantity II
(C) Quantity I ≥ Quantity II
(D) Quantity I = Quantity II or No relation
(E) Quantity I < Quantity II

47. Quantity I : Find the principal if the compound interest is charged on principal at the rate of $33\frac{1}{3}\%$ half yearly for one years and the sum becomes Rs 245.

Quantity II : A sum of Rs 500 amounts to Rs 60 in 2 yrs at simple interest. What will Rs 150 amount to if the rate of interest is same and time period is $\frac{5}{2}$ yrs.

- (A) Quantity I > Quantity II (B) Quantity II > Quantity I
(C) Quantity I >= Quantity II (D) Quantity II >= Quantity I
(E) Quantity I = Quantity II or relation can't be established

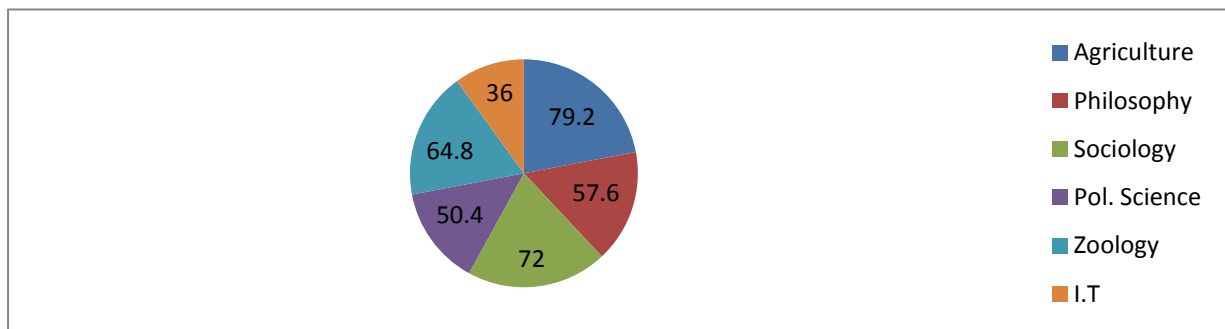
48. Quantity I : $5x^2 - 25x + 20 = 0$

Quantity II : $10y^2 + 30y + 20 = 0$

- (A) Quantity I > Quantity II (B) Quantity I < Quantity II
(C) Quantity I ≥ Quantity II (D) Quantity I ≤ Quantity II
(E) Quantity I = Quantity II or No relation

DIRECTION (Q. 49-53):- Study the pie chart given below and answer the following questions.

Pie chart shows the degree-wise distribution (in degrees) of the number of students enrolled for master degree in different subject.



49. If 23% of student who are doing master in Sociology is 1434 then, number of student

doing master in Zoology and Pol. Science together are (approx.) how % much

more/less than number of student doing master in Agriculture & Philosophy together?

- (A) 10% (B) 2%
(C) 7% (D) 15%
(E) 4%

50. Total number of males doing master in I.T is 360 and females doing masters in I.Ts are $33\frac{1}{3}\%$ more than males. If ratio of males to females doing master in Sociology is 4 : 1, then find the difference between the number of females who are pursuing Sociology and I.T?

- (A) 146 (B) 145
(C) 147 (D) 144
(E) 148

51. 40% of students doing master in Zoology failed and remaining completed the degree. If students who completed master in Zoology are 540 then find the ratio of students who failed in Zoology to the total student doing master in Philosophy?

- (A) 31 : 69 (B) 33 : 64
(C) 17 : 52 (D) 9 : 20
(E) 20 : 19

52. If average of number of male and female students who are enrolled for master degree in Philosophy is 576 then find the sum of number of students who are enrolled in Agriculture, Zoology and Sociology together?

- (A) 4560 (B) 4260
(C) 4320 (D) 4480
(E) 4620

53. If average of student doing master in all subject is 1800 and ratio of male to female pursuing masters in Sociology & Pol. Science are 2 : 3 and 1 : 2 respectively then find the ratio of females doing master in Pol. Science to the males pursuing master in Sociology?

- (A) 6 : 7 (B) 6 : 11
(C) 7 : 9 (D) 16 : 17
(E) 7 : 6

54. Sajan invest certain sum in scheme A on CI at the rate of 20% per annum for 2 years and in scheme B on SI at the rate of 12%

per annum for 2 years. If his investment in scheme A and scheme B are in the ratio 2 : 3 and difference between interest received from both the scheme is 416. Then find sum invested in scheme B?

- (A) 7400 (B) 7800
(C) 5000 (D) 7200
(E) 6400

55. If ratio of volume of sphere to volume of cylinder is 2 : 3 and radius of cylinder is equal to the side of circle whose area is 1386 cm^2 then find the curved surface area of cylinder (in cm^2). Given that radius of sphere is equal to radius of cylinder?

- (A) 24186 (B) 18184
(C) 21576 (D) 5544
(E) 20150

56. Rohit sold an article at 30% profit. If he had bought at 20% less and sold at Rs 60 less then he would have earned profit equal to $\frac{1}{4}$ th of the new cost price. If he want to make a profit of 85% at initial cost price then find the S.P. of the article?

- (A) 420 (B) 370
(C) 520 (D) 320
(E) 460

57. A, B and C started a business in which A invested $\frac{3}{10}$ th of the total capital, B invested $\frac{1}{5}$ th of the total capital & C invested the remaining of total capital. At the end of year total profit earned is Rs 3000 which is 30% of the capital invested by B. Find the of average of investment of A and C together in the business?

- (A) 32000 (B) 25000
(C) 35000 (D) 20000
(E) 27000

58. Sum of downstream speed and upstream speed is 36 km/hr and ratio of speed of boat to speed of current is 9:5. It covers 560 km in downstream and after that speed of boat increases by x kmph. It covers another 560km downstream with increased speed. If boat returns reaches to initial point of journey in upstream with increased speed and total time taken in covering distances in upstream and downstream is 90 hours, then find the value of x?

- (A) 12 km/hr (B) 16 km/hr
(C) 18 km/hr (D) 8 km/hr
(E) 20 km/hr

Directions (59-63):- Study the following information carefully to answer the questions that follow.

1000 customers visit a toy shop. The shop has a collection of soft toys featuring Lion, Tortoise and Fish. 30% of the customers like a Lion, 10% like Tortoise and rest 40% like Fishs. 6% of them like both Lion and Tortoise, 4% like both Tortoise and Fishs and 5% like Fishs and Lions. 1 % of customers like all the three soft toys.

59. Find the number of customers who like both Tortoise and Lion only?

- (A) 50 (B) 80
(C) 30 (D) 15
(E) 45

60. Find the number of customers who like Fishs only as soft toys?

- (A) 80 (B) 320
(C) 70 (D) 495
(E) 100

61. Find the number of customers who like both Lion and Fish ?

- (A) 80 (B) 75
(C) 50 (D) 70
(E) 68

62. Find the number of customers who like Lions only?

- (A) 150 (B) 600
(C) 300 (D) 200
(E) 210

63. Find the ratio of number of customers who like only tortoise to the number of customers who like lion?

- (A) $\frac{19}{52}$
(B) $\frac{21}{52}$
(C) $\frac{3}{52}$
(D) $\frac{1}{52}$
(E) $\frac{1}{30}$

64. A circular swimming pool is surrounded by a concrete wall 2m wide. If the area of the circular concrete wall surrounding the pool is $\frac{13}{36}$ that of the pool, then the radius (in m) of the pool?

- (A) 8 (B) 16
(C) 30 (D) 12

(E) None of these

65. Probability of choosing a boy from a group of 25 girls and some boys is $\frac{4}{9}$. Find the probability of choosing one boy and one girl from that group?

- (A) $\frac{19}{52}$ (B) $\frac{21}{52}$
(C) $\frac{50}{99}$ (D) $\frac{25}{52}$
(E) $\frac{27}{52}$

66. A beaker contains 30 litres of juice. From this beaker 4 litres of juice is taken out and replaced by water. This process was repeated further 1 more time. How much juice is now contained by the container?

- (A) 21 litres (B) 24.3 litres
(C) 22.54 litres (D) 24 litres
(E) 21.5 litres

Direction (67-68):- Each question below is followed by two statements I and II. You have to determine whether the data given is sufficient for answering the question. You should use the data and your knowledge of mathematics to choose the best possible answer.

67. What is the Principal amount?

I. A compound interest of 10% on his asset followed by a tax of 5% on the interest fetches him Rs. 1500.

II. The interest is compounded once every 6 months.

(A) if the data given in statement I alone is sufficient to answer the question whereas the data given in statement II alone is not sufficient to answer the question.

(B) if the data given in statement II alone is sufficient to answer the questions whereas the data given in statement I alone is not sufficient to answer the question.

(C) if the data in either statement I alone or in statement II alone is sufficient to answer the question.

(D) if the data in both the statements I and II are not sufficient to answer the question.

(E) if the data given in both the statement I and II are necessary to answer the question.

68. How many people are supposed to be working originally?

I. A certain number of peoples were supposed to complete the work in 15 days.

II. The work took 20 days to complete the work as 9 men were absent.

- (A) if the data given in statement I alone is sufficient to answer the question whereas the data given in statement II alone is not sufficient to answer the question.
 (B) if the data given in statement II alone is sufficient to answer the questions whereas the data given in statement I alone is not sufficient to answer the question.
 (C) if the data in either statement I alone or in statement II alone is sufficient to answer the question.
 (D) if the data in both the statements I and II are not sufficient to answer the question.
 (E) if the data given in both the statement I and II are necessary to answer the question.

69. Komal and Kamal can complete a work in 10 days and 30 days, respectively, when working alone. In an arrangement, Komal works for 2 days, and then Kamal works for a day. They keep on repeating this process till the work gets completed. On which day will the work gets completed?

- (A) 21st (B) 22nd
 (C) 13rd (D) 24th
 (E) 25th

70. Ratio between cost price and marked price of an article is 5 : 7 and shopkeeper allows two successive discounts of 15% and 12% on marked price. If shopkeeper made a profit of Rs.354, then find at what price shopkeeper should sold the article to make a profit of 30%?

- (A) 8400 Rs.
 (B) 9600 Rs.

- (C) 10200 Rs.
 (D) 9750 Rs.
 (E) 11600 Rs.

71. A man borrowed Rs. 10000 from his friend at the rate of 3% p.a. for five years at S.I. Out of total amount he borrowed, he invested $\frac{4}{5}$ of amount at the rate of R% p.a. on compound interest for three years and rest he spend. If after five years man still has to pay 852 as interest to his friend, then find 'R'?

- (A) 10%
 (B) 5%
 (C) 8%
 (D) 12%
 (E) 15%

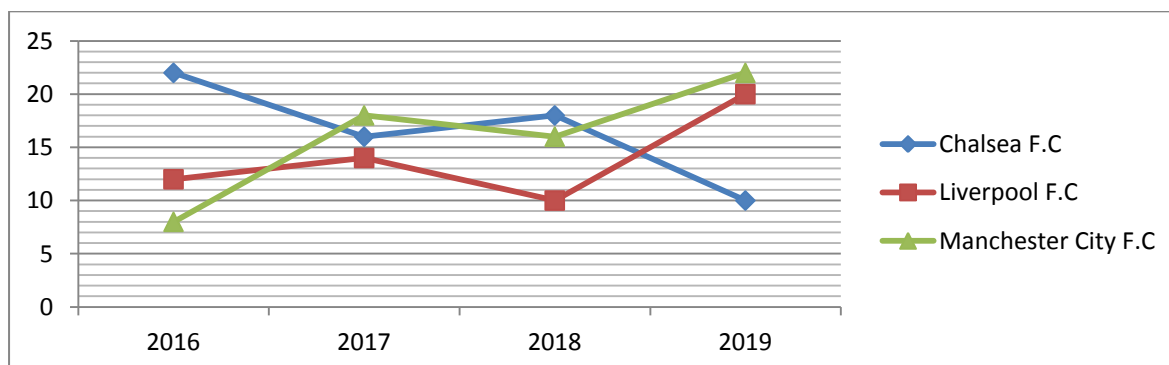
72. Rahul can do $\frac{1}{5}$ of the work in 4 days while Anchal can do $\frac{1}{6}$ of the work in 5 days. How long it will take for both of them to finish the work if Rahul started the work and they work on alternative days?

- (A) 15 days
 (B) 18 days
 (C) 21 days
 (D) 24 days
 (E) 27 days

73. Ratio of upstream speed to downstream speed is 1 : 11. If speed of boat in still water is 30 km/hr then find the distance covered in upstream in 2.5 hours ? (in km)

- (A) 66
 (B) 55.5
 (C) 12.5
 (D) 30
 (E) 40

Directions (Q. 74-78):- Given below is a line chart that shows number of goals scored by some football clubs over 4 years. Based on this information, answer the questions that follow.



74. For how many of the given clubs, the average number of goals scored over four years is not greater than 17?

- (A) 0 (B) 1
(C) 2 (D) 3
(E) Cannot be determined

75. If the number of goals scored by Liverpool F.C over four years are represented in a pie chart, then what would be the angle formed by sector representing goals scored by Liverpool F.C in 2019 (in°)?

- (A) 72 (B) 129
(C) 105 (D) 120
(E) 144

76. At least how many more goals Liverpool F.C should have scored, so that average number of goals scored by it would become greater than that of Chelsea F.C?

- (A) 0 (B) 9
(C) 8 (D) 10
(E) 2.5

77. Which of these quantities are equal ?

- (A) Goals scored by Chelsea F.C and Liverpool F.C in 2016
(B) Goals scored by Chelsea F.C in 2016 and 2019
(C) Total Goals scored by Chelsea F.C and Liverpool F.C in 2016 and 2018
(D) Total Goals scored by Chelsea F.C and Manchester City F.C in 2017 and 2018
(E) None of these

78. What is the ratio of total Goals scored by all three clubs over all years?

- (A) 28:31:33 (B) 15:32:33
(C) 28:32:38 (D) 28:32:33
(E) 18:32:33

79. 58.33% of 408 + 62.5% of 360 = $18 \times ?$

- (A) 15 (B) 20
(C) 26 (D) 32
(E) None of these

80. $\left(15\frac{2}{3} + 33\frac{1}{3}\right) + 18\frac{3}{4} \times 7\frac{3}{15} = ? + 34$

- (A) 150 (B) 164
(C) 175 (D) 210
(E) None of these

81. $544 \div 16 \times 32 - 766 + 224 = ?$

- (A) 342 (B) 424
(C) 546 (D) 625
(E) None of these

82. $333.33 + 33.33 + 13 + 0.33 + 0.03 = ?$

- (A) 380.2 (B) 399.3
(C) 423.3 (D) 455.4
(E) None of these

83. $525 - (13)^2 + 63 = (?)^2 + 95$

- (A) 16 (B) 17
(C) 18 (D) 19
(E) None of these

84. $(52.5 * 18 * 4) \div 9 + 92 = (?)^3$

- (A) 7 (B) 8
(C) 9 (D) 11
(E) None of these

85. $28 \times 2 \times 864 \div \sqrt{2916} = ? + 540$

- (A) 272 (B) 292
(C) 324 (D) 356
(E) None of these

(Direction Q.86-90) Find the approximate value of the following:

86. 339% of 803 + 77.8% of 1107 = ?

- (A) 3250 (B) 3580
(C) 3970 (D) 4260
(E) None of these

87. 32.88% of 1506 + 46.94% of 804 = ?

- (A) 870 (B) 950
(C) 1020 (D) 1120
(E) None of these

88. 58.5% of 4862 + ? % of 2748 = 3505

- (A) 18% (B) 24%
(C) 32% (D) 38%
(E) None of these

89. $1206 \div 47.92 + 40.11 \times 16.96 = ?$

- (A) 705 (B) 775
(C) 850 (D) 960
(E) None of these

90. 148% of $1212 - 11.99 \times 25.02 = ?$

- (A) 1420 (B) 1500
(C) 1550 (D) 1680
(E) 1800

Directions (Q. 91-95): In each of the following number series, a wrong number is given. Find out the wrong number.

91. 30, 210, 742, 1716, 3390, 5814

- (A) 210 (B) 742
(C) 1716 (D) 3390
(E) 5814

92. 14, 7, 15, 8, 16, 9, 18

- (A) 14 (B) 15
(C) 18 (D) 8
(E) 7

93. 18, 59, 187, 576, 1749, 5269

- (A) 59 (B) 187
(C) 576 (D) 1749
(E) 5269

94. 7, 22, 64, 216, 898, 4525, 27190

- (A) 64 (B) 216
(C) 898 (D) 4525
(E) 27190

95. 16, 9278, 15109, 18484, 20212, 20941, 21157

- (A) 9278 (B) 15109
(C) 18484 (D) 20212
(E) 20941

Directions (Q. 96-100) : In each of these questions a number (?) is missing. Find it by observing the pattern.

96. 1 7 49 343 (?)

- (A) 16807 (B) 1227
(C) 2058 (D) 2401
(E) None of these

97. 17, 52, 158, 477, ?, 4310

- (A) 1433 (B) 1432
(C) 1435 (D) 1434
(E) None of these

98. 5, 11, ?, 55, 117

- (A) 21 (B) 27
(C) 23 (D) 25
(E) None of these

99. 2, 6, 33, 49, 174, 210, ?

- (A) 553 (B) 259
(C) 426 (D) 274
(E) None of these

100. 286, 142, ?, 34, 16, 7

- (A) 72 (B) 70
(C) 66 (D) 64
(E) None of these

Solution:**1.(E)**

$$4000 \times 30 = 120,000$$

$$1\text{st } 10 \text{ days} = 4000 \times 10 = 40,000$$

1000 more added

$$\text{then total} = 1000 + 4000 = 5000$$

$$\text{food last for days} = \frac{80,000}{5000} = 16$$

2.(C)

$$\text{Speed downstream} = x + y$$

$$\text{speed upstream} = x - y$$

$$\text{Downstream rate} = 2 \times \text{upstream}$$

i.e Distance is equal.

$$\frac{1}{(10-y)} = \frac{2}{(10+y)}$$

$$y = \frac{10}{3}$$

$$\text{speed of current} = \frac{10}{3} \text{ k/h}$$

$$\text{time} = \frac{40}{10 + \frac{10}{3}} = 3 \text{ hr}$$

3.(C)

$$\text{speed of Train} = \frac{250}{20}$$

$$12.5 \text{ m/sec}$$

$$6.25 \times 60 = x + 250$$

$$x = 125$$

Required ans = 250

4.(E)

$$\text{CP} * \frac{114}{100} * \frac{115}{100} * \frac{118}{100} = 1546980$$

$$\text{CP} = 1000000$$

5.(A)

Required Answer

$$\frac{43-x}{3} = \frac{x-18}{2}$$

$$x = 28$$

6.(D)

A	B
7500×24	7800×20
15	13

$$\text{profit after donation} = 14000 - 14000 \times \frac{1}{8}$$

$$\Rightarrow 12250$$

$$\text{A's share in profit} = \frac{15}{28} * 12250 = 6562.5$$

7.(C)

$$\text{CP of } 1000\text{gr} - 100 \text{ Rs}$$

$$\text{CP} = 100/1200 \text{ rs/gram}$$

$$\text{SP} = 120/900 \text{ rs/gram}$$

$$\text{Profit} = \frac{\left(\frac{120}{900} - \frac{100}{1200}\right)}{\frac{100}{1200}} * 100 = 60$$

$$\text{profit} = 60\%$$

8.(B)

$$P(\text{Alok}) = \frac{3}{5}$$

$$P(\text{Bharthi}) = \frac{5}{7}$$

$$\text{Required probability} = \frac{3}{5} * \frac{2}{7} + \frac{2}{5} * \frac{5}{7} = \frac{16}{35}$$

9.(D)

$$\text{Volume of cylinder} = \pi r^2 h = \pi \times 169 \times 56$$

$$\text{Volume of hemispherical bowl}$$

$$\frac{2}{3} \pi (a^3 - b^3)$$

$$= \frac{2}{3} \pi \left[\left(\frac{16}{2}\right)^3 - \left(\frac{14}{2}\right)^3 \right]$$

$$= \frac{2}{3} \pi \times 169 \text{ cm}^3$$

According to Question

$$\pi \times 169 \times 56 = n \times \frac{2}{3} \pi \times 169$$

$$n = 84$$

10.(C)

$$P(110/100)^2 - P10/100 = 330$$

$$P = 3000$$

11.(A)

Let x kg of apple sold at 15% profit then,

$$\frac{115}{100}x + \frac{90}{100}(25-x) = 25 \times \frac{110}{100}$$

On solving we get x = 20 kg

Quantity apples sold at loss = $25 - 20 = 5$ kg

$$x = 60$$

12.(B)

Let numbers be $3x$ & $5x$

Subtract 6 from each we get

$$\frac{3x-6}{5x-6} = \frac{9}{17}$$

$$51x - 102 = 45x - 54$$

$$6x = 48$$

$$x = 8$$

No's are 24 and 40

13.(B)

Required distance in percentage =

$$\frac{(32-12-12-4)}{32} \times 100$$

$$= \frac{4}{32} \times 100 = 12.5\%$$

14.(A)

Her age at marriage = $5x$

Her present age = $6x$

Difference = $6x - 5x = x$

$x = 6$ years

Present age = 36 years

Hence son's age = $36/12 = 3$ years

15.(D)

$$40 \times x = 120 \times 20$$

$$x = \frac{120 \times 20}{40}$$

16. (D)

Let CP = $100x$

P = $20x$

$$SP = \frac{120}{100} \times 100x = 120x$$

If SP = $120x + 15$

P = 40%

$$120x + 15 = \frac{140}{100} \times 100x$$

$$x = \frac{3}{4}$$

$$CP = 100x = \frac{3}{4} \times 100 = 75$$

17.(B)

Let CP of bike for shipra = x

$$\therefore SP = \frac{125}{100}x = \frac{5}{4}x = \text{CP of gita}$$

$$SP \text{ of gita} = \frac{120}{100} \times \frac{5}{4}x = \frac{3}{2}x = \text{CP of ritu}$$

$$\frac{3}{2}x = 60000 \Rightarrow x = 40000$$

$$\text{Required profit} = \frac{(60000 - 40000)}{40000} \times 100$$

$$= 50\%$$

18. (C)

$$SP = \frac{85}{100} \times 1500$$

$$= 1275$$

19.(D)

$$1600 * 3 * \frac{R}{100} + 2200 * 3 * \frac{R+1}{100} = 636$$

$$24R + 33R + 33 = 318$$

$$57R = 285$$

$$R = 5\%$$

$$R + 1 = 6\%$$

20.(D)

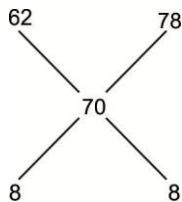
$$MP = \frac{100}{75} \times \frac{100}{83} \times 747$$

$$= 1200$$

$$\begin{aligned} \text{Required Percentage} &= \frac{\{(7000+6000)-10000\}}{10000} * 100 \\ &= 30\% \end{aligned}$$

21.(E)

$$\text{CP of mixture} = \frac{91 \times 100}{130} = 70 \text{ per kg}$$



$$= 1 : 1$$

\therefore equal quantities are mixed

i.e. 100 kg

25.(A)

$$\begin{aligned} \text{Average Samsung phones sold} &= \frac{6000 + 7000 + 8400 + 8000 + 12000}{5} \\ &= 8280 \end{aligned}$$

$$\begin{aligned} \text{Average of Mi phone sold} &= \frac{6400 + 9000 + 10600 + 9000 + 9800}{5} \\ &= 8960 \end{aligned}$$

$$\text{Required difference} = 680$$

22.(D)

$$\text{total marks in 7 subjects} = 7 \times 42 = 294$$

$$\text{Marks in first 3 subjects} = 3 \times 43 = 129$$

$$\text{Marks in last 3 subjects} = 3 \times 40.5 = 121.5$$

$$\begin{aligned} \text{Marks in 4th subject} &= 294 - (129 + 121.5) \\ &= 294 - 250.5 = 43.5 \end{aligned}$$

23.(B)

$$\frac{12}{18} = \frac{18}{P} \& \frac{9}{12} = \frac{12}{Q}$$

$$\Rightarrow P = \frac{18 \times 18}{12}, Q = \frac{12 \times 12}{9}$$

$$P = 27, Q = 16$$

According to question

$$\frac{27}{16} = \frac{16}{x} \Rightarrow x = \frac{16 \times 16}{27}$$

$$x = \frac{256}{27}$$

24.(C)

26.(D)

$$\begin{aligned} \text{Samsung phone sold in 2018} &= 12000 * \frac{5}{6} \\ &= 10000 \end{aligned}$$

$$\text{Micromax phone sold in 2018} = 9400/2 = 4700$$

$$\text{MI phones sold in 2018} = 9800$$

$$\begin{aligned} \text{Required average} &= \frac{10000 + 4700 + 9800}{3} \\ &= 8167(\text{approx}) \end{aligned}$$

27.(B)

$$\text{Required ratio} = \frac{(\frac{7}{16} * 6400 + \frac{4}{9} * 9000)}{\frac{9}{16} * 6400 + \frac{5}{9} * 9000} = \frac{28+40}{36+50} = \frac{34}{43}$$

28.(A)

$$\text{Total customers} = 19000$$

$$\text{total female customers} = 2/19 * 19000 = 2000$$

Females who bought Micromax phones

$$= 2000 - \left(\frac{1}{6} * 6000 + \frac{1}{8} * 6400 \right)$$

$$= 2000 - (1000 + 800) = 200$$

29.(C)

Probability that no one is selected $= \frac{4}{5} * \frac{2}{7} *$

$$\frac{1}{3} = \frac{8}{105}$$

$$\text{Required probability} = 1 - \frac{8}{105} = \frac{97}{105}$$

30.(A)

Let Shakur's marks = $100x$

$$\text{Santosh's marks} = \frac{112.5}{100} \times 100x = 112.5x$$

$$\text{Rohit's marks} = \frac{320}{300} \times 112.5x = 120x$$

According to question

$$120x - 100x = 40$$

$$\Rightarrow 20x = 40$$

$$x = 2$$

$$\text{Difference} = 12.5x = 25$$

31.(C)

Let total number of staff = x

Officers = 15

Non officers = $x - 15$

According to Question

$$15000 \times x = 25000 \times 15 + 10000 (x - 15)$$

$$7500x = 375000 + 5000x - 75000$$

$$x = 45$$

32.(D)

Required ways

$$= {}^6C_3 \times {}^7C_1 + {}^6C_4$$

$$= 155$$

33.(D)

Bobby's Efficiency = 2

Deepak's Efficiency = 3

According to question

Total units = 20 units

$$\text{ATQ, } (3+s) * 5 = 20$$

$$S = 1$$

Time taken by Sagar = $20/1 = 20$ days

34.(D)

Let the train are P and Q speed respectively

According to Question

$$P + Q = \frac{450}{7.5}$$

$$P + Q = 60 \quad \dots(i)$$

$$P - Q = 10 \quad \dots(ii)$$

from equation (i) and (ii)

$$P = 35 \text{ m/s}$$

$$Q = 25 \text{ m/s} = 25 * \frac{18}{5} = 90 \text{ kmph}$$

35.(A)

Let present ages of Gulshan and Gulati be M years and N years

After 9 years, Gulshan will be twice the age Gulati.

$$M + 9 = 2 (N + 9)$$

$$M = 2N + 9$$

Three years Back the ratio of their ages was 10:3

$$(M - 3) / (N - 3) = 10 / 3$$

$$3M - 9 = 10N - 30$$

$$3M - 10N = -21$$

$$3(2N + 9) - 10N = -21$$

$$6N - 10N + 27 = -21$$

$$N = 48/4 = 12$$

Age of Gulati = 12 years

\therefore Age of Gulmohar = (12 + 6) years = 18 years
Average age = $\frac{12+18}{2} = 15$

36.(C)

Price of resultant mixture = [Price of 20 l milk + Price of 7 l water] / (20 + 7)
Price of 4 liters of resultant mixture
= $2 \times [\text{price of 20 l milk} + \text{price of 7 l water}] / (20 + 7)$
= $2 \times [(20 \times 54 + 7 \times 0) / 27] = 80$
price of 4 liters of resultant mixture is Rs. 80

37.(D)

suppose there are 50 T students and T teachers.
If 30 more teacher are added, ratio of students to teachers becomes = 20 : 1
= $50T / (T + 30) = 20 / 1$
T = 20
 \therefore No. of students in school
= 50T = 50×20
 $\Rightarrow 1000$

38.(A)

Let Height of T Persian increased by 2 cm
= Height of (300 - T) Persons increased by 5 cm
Increase in Average height = 173 cm - 170 cm = 3 cm
 $[2T + 5(300 - T)] / 300 = 3$
 $\Rightarrow T = 300/3 = 200$
People with 5cm increased height = 100

39.(B)

$6M \times 16 = 20W \times 24$
M = 5W
So, 1 men = 5 women
6 men and 10 women
6 men + 2 men = 8 men
4 men can complete work in 9 Days,
so by 8 men, the time it takes is
 $4 \times 9 = 8 \times \text{days}$
 $\text{days} = \frac{36}{8} = 4.5 \text{ days}$
 \therefore 6 Men and 10 women complete the work in 4.5 days

40.(B)

volume of cuboid (V_1) = $L \times B \times H$
 $V_1 = 45 \times 15 \times 20 = 13,500 \text{ cm}^3$
Ball is in the shape of sphere = volume of sphere (V_2) = $\frac{4}{3} \pi r^3$
r = radius of ball = 1.4 cm
 $V_2 = \frac{4}{3} \times \frac{22}{7} \times 1.4 \times 1.4 \times 1.4 = 11.50$
No. of balls = $13500/11.50$
= 1173.91 ~ 1173

41.(E)

Let 'L' be length of plat from in m
speed of train in m/s is = $72 \times (5/18) = 20 \text{ m/s}$
 $1/180 \text{ hours} = 20 \text{ sec}$
 $\Rightarrow (\text{Length of the train}/20) = 20$
Length of train = 400 m
time taken to cross the plat from is
= (Length of train + length of plat from) / speed of train
since train takes $3/5 \text{ min} = 36 \text{ sec}$ to cross the platform
 $36 = (400 + L)/20$
L = $720 - 400$
L = 320 m

42.(A)

Time taken = 45 min = $45/60 = 3/4 \text{ hr}$
 \therefore Distance between then when they started = $(17+5) \times 3/4 = 16.5 \text{ km}$

43.(B)

SI on a certain amount at 6% p.a. after 6 years,
 $5364 = (P \times 6 \times 6)/100$
 $\Rightarrow P = \text{Rs. } 14900$

44.(C)

Quantity I
 $2x^2 - 12x + 16 = 0$
 $x^2 - 6x + 8 = 0$
 $x^2 - 4x - 2x + 8 = 0$
 $x(x - 4) - 2(x - 4) = 0$
 $(x - 4)(x - 2) = 0$
x = 2, 4
Quantity II
 $3y^2 + 6y - 24 = 0$
 $y^2 + 2y - 8 = 0$
 $y^2 + 4y - 2y - 8 = 0$
 $y(y + 4) - 2(y + 4) = 0$

$$(y + 4)(y - 2) = 0$$

$$y = -4, 2$$

Quantity I \geq Quantity II

45.(A)

Quantity I

$$\text{Interest earned from scheme 'A'} = \frac{4000 \times 2 \times 80}{100} =$$

Rs. 6400

Quantity II

$$\text{Interest earned from scheme 'B'} = \frac{7200 \times 6 \times 12.5}{100} =$$

Rs. 5400

Quantity II

$$5400 + 600 = \text{Rs. 6000}$$

46.(E)

Let speed of boat in still water and speed of stream be 'a' km/hr and 'b' km/hr

According to Question

$$a + b + a - b = 24$$

$$\Rightarrow a = 12 \text{ km/hr}$$

$$\text{But, } a = 3b$$

$$b = 4 \text{ km/hr}$$

$$\text{speed of boat in downstream} = 12 + 4 = 16 \text{ km/hr}$$

$$\text{speed of boat in upstream} = 12 - 4 = 8 \text{ km/hr}$$

Quantity I

$$\text{Required time} = \frac{96}{16} = 6 \text{ hours.}$$

Quantity II

$$\text{Required time} = \frac{64}{8} = 8$$

Quantity II > Quantity I

47.(A)

Quantity I

$$\text{Rate} = 16\frac{2}{3}\% \text{ time} = 2 \text{ years}$$

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

$$245 = P \left(1 + \frac{1}{6} \right)^2$$

$$245 = P \left(\frac{7}{6} \right)^2$$

$$P = \text{Rs. 180}$$

Quantity II

$$R = \frac{120 \times 100}{500 \times 4} \times \frac{60 \times 100}{500 \times 2} = 6\%$$

$$\text{Amounts} = 150 + \frac{150 \times 6 \times 5}{2 \times 100}$$

$$= 150 + 22.5 = \text{Rs. 172.5}$$

Quantity I > Quantity II

48.(A)

Quantity I

$$x^2 - 5x + 4 = 0$$

$$x^2 - 4x - x + 4 = 0$$

$$x(x - 4) - 1(x - 4) = 0$$

$$(x - 1)(x - 4) = 0$$

$$x = 1, 4$$

Quantity II

$$y^2 + 3y + 2 = 0$$

$$y^2 + 2y + y + 2 = 0$$

$$y(y + 2) + 1(y + 2) = 0$$

$$(y + 1)(y + 2) = 0$$

$$= y = -1, -2$$

Quantity I > Quantity II

49.(D)

If T = total number of students

$$\text{Required \%} = \frac{\frac{115.2}{360} * T - \frac{136.8}{360} * T}{\frac{136.8}{360} * T} * 100$$

$$= 15\%$$

50.(D)

$$\text{Female doing master in I.T} = 360 \times \frac{4}{3} = 480$$

$$\text{therefore, total student doing master in I.T} = 360 + 480 = 840$$

$$\text{total students doing master in Sociology} = \frac{840}{36} \times 72 = 1680$$

$$\text{females doing master in Sociology} = 1680 \times \frac{1}{5}$$

$$= 336$$

$$\text{Difference} = 480 - 336 = 144$$

51.(D)

total students doing master in Zoology

$$= \frac{540}{(100 - 40)} \times 100 = 900$$

students who failed in Zoology

$$= 900 \times \frac{40}{100} = 360$$

total student doing master in Philosophy

$$= \frac{900}{64.8} \times 57.6 = 800$$

$$\text{Required Ratio} = \frac{360}{800} = 9 : 20$$

52.(C)

total student who are doing master in Philosophy = $576 \times 2 = 1152$

Required Average

$$\frac{1152}{57.6} \times (79.2 + 64.8 + 72) \\ = 216 \times 20 \\ \Rightarrow 4320$$

53.(E)

total student doing master = $1800 \times 6 = 10800$

Males doing master in Sociology

$$= 10800 \times \frac{72}{360} \times \frac{2}{5} = 864$$

Females doing master in Pol. Science

$$= 10800 \times \frac{2}{3} \times \frac{50.4}{360} = 1008$$

Required ratio = $1008/864 = 7:6$

54.(B)

Let sum invested by Sajan in scheme A be $2x$ and in scheme B be $3x$.

equivalent Interest on CI for two years will be

$$= 20 + 20 + \frac{20 \times 20}{100}$$

= 44%

CI - SI = Rs. 416

$$\frac{2x \times 44}{100} - \frac{3x \times 12 \times 3}{100} = 416$$

$$\frac{88x}{100} - \frac{72x}{100} = 416$$

$x = 2600$

sum invested in scheme B = 3×2600

= Rs. 7800

55.(D)

$$\text{volume of sphere} = \frac{4}{3} \pi r^3 \quad [r \rightarrow \text{radius}]$$

$$\text{volume of cylinder} = \pi r^2 h \quad \left[\begin{array}{l} r \rightarrow \text{radius} \\ h \rightarrow \text{height} \end{array} \right]$$

= Radius of cylinder

= radius of sphere

According to Question

$$\frac{\frac{4}{3} \pi r^3}{\pi r^2 h} = \frac{2}{3}$$

$2r = h$

Area of circle

$$\pi r^2 = 1386 \text{ cm}^2$$

$r = 21 \text{ cm}$

Radius of cylinder = side of circle = 21

curved surface area of cylinder = $2\pi rh$

$$= 2 \times \frac{22}{7} \times 21 \times 42$$

$$= 5544 \text{ cm}^2$$

56.(B)

Let the initial cost price be $100x$

then selling price = $130x$

$$\text{New cost price} = 100x \times \frac{(100 - 20)}{100} = 80x$$

New selling price = $130x - 60$

According to question

$$(130x - 60) - 80x = \frac{1}{4} \times 80x$$

$$50x - 60 = 20x$$

$$30x = 60$$

$$x = 2$$

Initial cost price = $2 \times 100 = \text{Rs. } 200$

Required selling price

$$185 \times 200 / 100 = 370$$

57.(D)

total profit = Rs. 3000 = 30% of B's capital

\therefore 100% of B's capital = Rs. 10000

Let total capital be $100x$

A's capital = $30x$

B's capital = $20x$

C's capital = $50x$

$$\therefore x = \frac{10000}{20} = 500$$

\therefore Average of capital of A & C together

$$= \frac{80x}{2} = 40x = 20,000$$

58.(A)

ATQ, $b + w = b - w = 36$

$B = 18$

Therefore $w = 5 \times 18 / 9 = 10 \text{ km/hr}$

According to Question

$$\frac{560}{(10 + 18)} + \frac{560}{(10 + 18) + x} + \frac{1120}{(18 - 10) + x} = 90$$

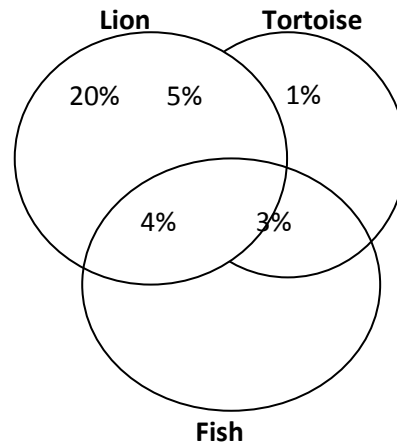
$$\frac{560}{28 + x} + \frac{1120}{8 + x} = 70$$

$$\frac{8}{28 + x} + \frac{16}{8 + x} = 1$$

$$x^2 + 12x - 288 = 0$$

$$x = 12 \text{ km/hr}$$

(59-63)

**59. (A)**

$$5\% = 50$$

60. (B)

$$32\% = 320$$

61. (C)

$$5\% = 50$$

62. (D)

$$20\% = 200$$

63. (E)

$$\text{Ratio} = \frac{1\%}{30\%} = \frac{1}{30}$$

64. (D)

ATQ,

$$\pi(r+2)^2 - \pi r^2 = \frac{13}{36}\pi r^2$$

$$\pi(r+2)^2 = \frac{49}{36}\pi r^2$$

$$r+2 = \frac{7}{6}r$$

$$r = 12$$

65. (C)

Let the no. of boys be b.

$$\frac{b}{b+25} = \frac{4}{9}$$

$$b = 20$$

$$\text{Probability} = \frac{20 \times 25 \times 2}{(45 \times 44)} = \frac{50}{99}$$

66. (C)

$$30\left(1 - \frac{4}{30}\right)^2$$

$$= 22.54 \text{ litres}$$

67. (E)

Interest gained before tax
deduction = $1500/95 \times 100 = 2000$

Here time is not given which is required to calculate the required Principal, which is give in II

statement.

68. (E)

Let x = Number of people

$$20(x - 9) = 15x$$

$$x = 36$$

69. (C)

Efficiency of Komal And Kamal = 3:1 with total work units = 30

First two days = $3 \times 2 = 6$ units done

Next day = 1 unit done

In three days = 7 units done

In 12 days = 28 units done

On 13th day remaining 2 units will be done by Komal.

70. (D)

$$\text{CP} = 100x$$

$$\text{MP} = 140x$$

$$\text{SP} = 140x \times \frac{85}{100} \times \frac{88}{100}$$

$$= 104.72x$$

$$\text{Profit} = 104.72 - 100x$$

$$= 4.72x$$

$$4.72x = 354$$

$$x = 75$$

$$20\% \text{ Profit Shopkeeper} = 7500 \times \frac{130}{100} = 9750$$

71. (A)

$$\text{amount to be paid back} = 10000 \times \frac{115}{100} =$$

$$11500$$

Amount paid by man in 3 year

$$= 11500 - 852$$

$$= 10648$$

ATQ,

$$10648 = 10000 \times \frac{4}{5} \times \left(1 + \frac{R}{100}\right)^3$$

$$\left(1 + \frac{R}{100}\right)^3 = \frac{10648}{8000}$$

$$\left(1 + \frac{R}{100}\right)^3 = \frac{1331}{1000}$$

$$\left(1 + \frac{R}{100}\right) = \frac{11}{10}$$

$$R = 10\%$$

72. (D)

Rahul(t): Anchal(t)=20:30

Rahul(n): Anchal(n)=3:2

Total work units = 60

In 2 days 5 units done.

In 24 days 60 units will be done.

73. (C)

Upstream speed = x

Downstream speed = 11x

$$\text{Speed of Boat} = \frac{1}{2}(x + 11x) = 30$$

$$x = \frac{30 \times 2}{12} = 5$$

Upstream speed = 5 km/hr

5 Hour in upstream

$$= 5 \times 2.5$$

$$= 12.5 \text{ km}$$

74. (A)

Average no. of goals scored by Liverpool F.C over four years

$$= (12 + 14 + 10 + 20) / 4$$

$$= 14 < 17$$

Average no. of goals scored by Chelsea F.C over four years

$$= (22 + 16 + 18 + 10) / 4$$

$$= 16.5 < 17$$

Average numbers of goals scored by Manchester City F.C over four years

$$= (8 + 18 + 16 + 22) / 4$$

$$= 16 < 17$$

75. (B)

total number of goals scored by Liverpool F.C over four years = (12 + 14 + 10 + 20) = 56

Angle formed by sector representing goals scored by Liverpool F.C in 2019

$$= (20/56) \times 360^\circ = 129^\circ$$

76. (C)

total number of goals scored by Liverpool F.C over four years = (12 + 14 + 10 + 20) = 56

total number of goals scored by Manchester City F.C over four years = (8 + 18 + 16 + 22) = 64

the average no. of goals scored by Liverpool F.C can become greater than the Manchester City

F.C if total no. of

goals scored by Liverpool is more than that of Manchester City F.C

∴ Liverpool F.C should have scored 8 more goals.

77. (D)

Goals scored by Chelsea F.C in 2017 and 2018 = 16 + 18 = 34

Goals scored by Manchester City F.C in 2017 and 2018 = 18 + 16 = 34

78. (D)

Liverpool:Manchester:Chelsea=56:64:66=28:3

2:33

79. (C)

$$58.33\% \text{ of } 408 + 62.5\% \text{ of } 368 = 18 \times ?$$

$$\frac{7}{12} \times 408 + \frac{5}{8} \times 368 = 18 \times x$$

$$238 + 230 = 18x$$

$$x = \frac{468}{18}$$

$$x = 26$$

80. (A)

$$\left(15\frac{2}{3} + 33\frac{1}{3}\right) + 18\frac{3}{4} \times 7\frac{3}{15} = ? + 34$$

$$49 + \frac{75}{4} \times \frac{108}{15} = x + 34$$

$$49 + 135 - 34 = x$$

$$x = 150$$

81. (C)

$$544 \div 16 \times 32 - 766 + 224 = ?$$

$$= 1088 - 542$$

$$= 546$$

82. (A)

$$333.33 + 33.33 + 13 + 0.33 + 0.03 = ?$$

$$= 380.2$$

83. (C)

$$525 - (13)^2 + 63 = (?)^2 + 95$$

$$(?)^2 + 95 = 525 - 169 + 63$$

$$(?)^2 = 419 - 95$$

$$= \sqrt{324}$$

$$= 18$$

84. (B)

$$(52.5 * 18 * 4) \div 9 + 92 = (?)^3$$

$$\frac{3780}{9} + 92 = (?)^3$$

$$420 + 92 = (?)^3$$

$$= \sqrt[3]{512}$$

$$= 8$$

85. (D)

$$28 \times 2 \times 864 \div \sqrt{2916} = ? + 540$$

$$\frac{28 \times 2 \times 864}{54} = ? + 540$$

$$= 896 - 540$$

$$= 356$$

86. (B)

$$339\% \text{ of } 803 + 77.8\% \text{ of } 1107 = ?$$

$$= \frac{340 \times 800}{100} + \frac{78 \times 1100}{100}$$

$$= 2720 + 858$$

$$= 3578$$

Approx. 3580

87. (A)

$$32.88\% \text{ of } 1506 + 46.94\% \text{ of } 804 = ?$$

$$= \frac{33 \times 1500}{100} + \frac{47 \times 800}{100}$$

$$= 495 + 376$$

$$= 870 \text{ Approx.}$$

88. (B)

$$58.5\% \text{ of } 4862 + ? \% \text{ of } 2748 = 3505$$

$$\frac{58.5 \times 4860}{100} + \frac{x \times 2750}{100} = 3505$$

$$2843 + \frac{55x}{2} = 3505$$

$$\frac{55x}{2} = 3505 - 2843$$

$$x = 662 \times \frac{2}{55}$$

$$x \text{ is approx. } 24$$

89. (A)

$$1206 \div 47.92 + 40.11 \times 16.96 = ?$$

$$= \frac{1200}{48} + 40 \times 17$$

$$= 25 + 680$$

$$= 705$$

90. (B)

$$148\% \text{ of } 1212 - 11.99 \times 25.02 = ?$$

$$= \frac{150 \times 1200}{100} - 12 \times 25$$

$$= 1800 - 300$$

$$= 1500$$

91. (B)

The number should be 738.

$$3^3 + 3, 6^3 - 6, 9^3 + 9, 12^3 - 12 \dots$$

92. (C)

The number should be 17.

$$14+1=15 \quad 7+1=8$$

$$15+1=16 \quad 8+1=9$$

$$16+1=17$$

93. (D)

The number should be 174.

$$\times 3 + 5, \times 3 + 10, \times 3 + 15 \dots$$

94. (B)

The number should be 217.

$$\times 1 + 15, \times 2 + 20, \times 3 + 25, \times 4 + 30 \dots$$

95. (A)

The number should be 9277.
 $+ (21)^3, + (18)^3, + (15)^3 \dots\dots$

96. (D)

$$1 * 7 = 7$$

$$7 * 7 = 49$$

$$49 * 7 = 343$$

$$343 * 7 = 2401$$

97. (C)

$$17 \times 3 + 1 = 52$$

$$52 \times 3 + 2 = 158$$

$$158 \times 3 + 3 = 477$$

$$477 \times 3 + 4 = 1435$$

$$1435 \times 3 + 5 = 4310$$

98. (D)

$$5 \times 2 + 1 = 11$$

$$11 \times 2 + 3 = 25$$

$$25 \times 2 + 5 = 55$$

$$55 \times 2 + 7 = 117$$

99. (A)

$$2 + 2^2 = 6$$

$$6 + 3^3 = 33$$

$$33 + 4^2 = 49$$

$$49 + 5^3 = 174$$

$$174 + 6^2 = 210$$

$$210 + 7^3 = 553$$

100. (B)

$$286 \times \frac{1}{2} - 1 = 142$$

$$142 \times \frac{1}{2} - 1 = 70$$

$$70 \times \frac{1}{2} - 1 = 34$$

$$34 \times \frac{1}{2} - 1 = 16$$

$$16 \times \frac{1}{2} - 1 = 7$$

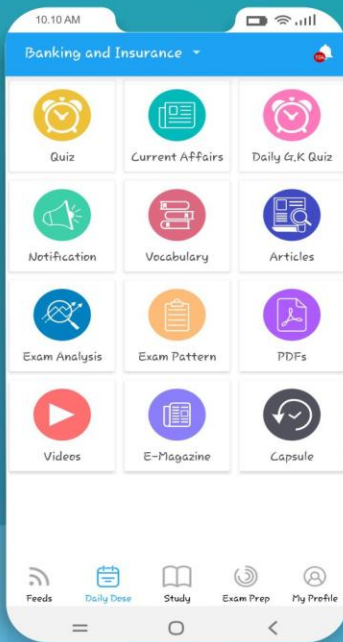


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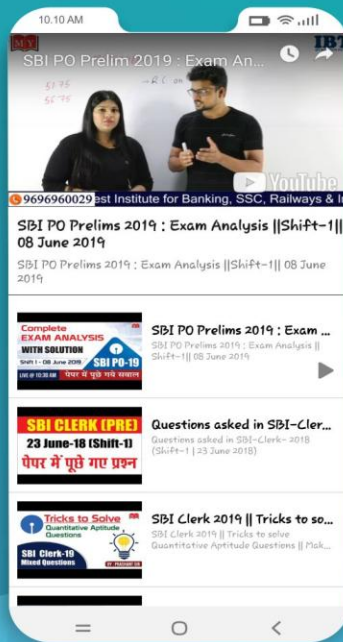
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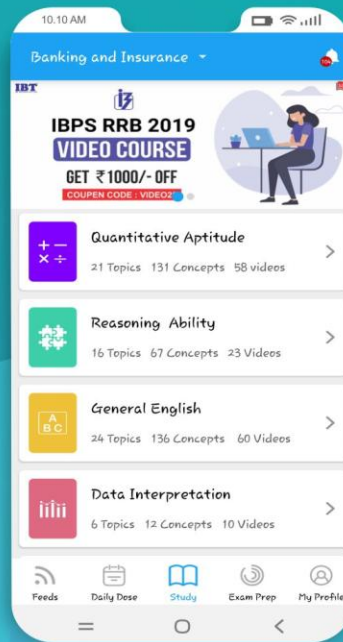
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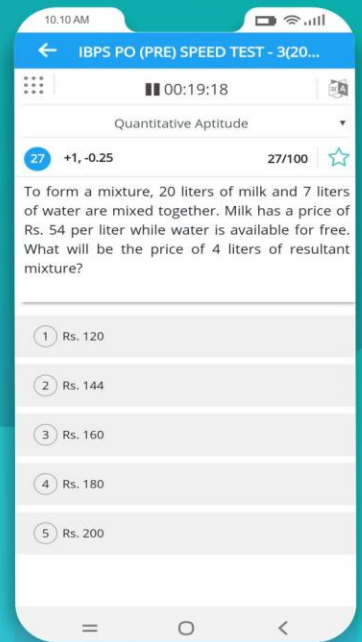
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