

- If $24AB4$ is divisible by 99, then $A \times B$ is:
 - 25
 - 30
 - 20
 - 15
- If a, b, c, d, e and f satisfy $2a = 3b = 6c = 9d = 12e = 18f$, then what is the value of $\frac{a+b}{c+d+e+f}$?
 - $\frac{4}{7}$
 - 2
 - $\frac{5}{2}$
 - $\frac{9}{2}$
- A train covers its journey at speed of 80 km/h in 10 hours. If the same distance is to be covered in 4 hours. By how much speed of train will have to increase?
 - 195 kmph
 - 200 kmph
 - 85 kmph
 - 120 kmph
- The cost of diamond varies directly as the square of its weight. A diamond broke into four pieces with their weights in the ratio of 1 : 2 : 4 : 5. If the loss in total value of the diamond was Rs.98,000, what was the price of the original diamond?
 - Rs.2,00,000
 - Rs.2,40,000
 - Rs.2,50,000
 - Rs.2,75,000
- In a 100 m race. A runs at a speed of $\frac{5}{3}$ m/s. If A gives a start of 4 m to B and still beats him by 12 seconds, what is the speed of B?
 - $\frac{5}{4}$ m/s
 - $\frac{7}{5}$ m/s
 - $\frac{4}{3}$ m/s
 - $\frac{6}{5}$ m/s
- If 5 men can do a piece of work in 10 days and 12 women can do the same work in 15 days, the number of days required to complete the work by 5 men and 6 women is
 - 7.5 days
 - 8 days
 - 9.5 days
 - 12 days
- Ice-cream, completely filled in a cylinder of diameter 35 cm and height 32 cm, is to be by completely filling identical disposable cones of diameter 4 cm and height served by 7 cm. The maximum number of persons that can be served in this way is
 - 950
 - 1000
 - 1050
 - 1100
- The ratio of $A : B = 1 : 3$, $B : C = 2 : 5$, $C : D = 2 : 3$. Find the value of $A : B : C : D$.
 - 4 : 30 : 12 : 45
 - 4 : 12 : 45 : 30
 - 4 : 12 : 30 : 45
 - 4 : 12 : 30 : 15
- If the positive square root of $(5 + 3\sqrt{2})(5 - 3\sqrt{2})$ is a , then what is positive square root of $8 + 2a$?
 - $2 + \sqrt{3}$
 - $3 - \sqrt{2}$
 - $\sqrt{7} + 1$
 - $\sqrt{7} - 1$

10. An aeroplane flying at a height of 300 m above the ground passes vertically above another plane at an instant when the angles of elevation of the two planes from the same point on the ground are 60° and 45° respectively. What is the height of the lower plane from the ground?
- a) $100\sqrt{3}$ m b) $\frac{100}{\sqrt{3}}$ m c) $50\sqrt{3}$ m d) $150(1 + \sqrt{3})$ m
11. Which of the following triples does not represent the sides of a triangle?
- a) (3,4,5) b) (4,7,10) c) (3,6,8) d) (2,3,6)
12. A passenger train departs from Delhi at 6 p.m. for Mumbai. At 9 p.m., an express train, whose average speed exceeds that of the passenger train by 15 km/hour leaves Mumbai for Delhi. Two trains meet each other mid-route. At what time do they meet, given that the distance between the cities is 1080 km?
- a) 4 pm b) 2 am c) 12 mid night d) 6 am
13. Twelve percent of bananas bought by a fruit vendor got lost during transportation. On selling the remaining bananas, the vendor's overall profit turned out to be 4%. If the vendor had not lost any bananas and had sold them at the price of the remaining bananas, what would have been his profit percentage?
- a) $8\frac{1}{9}\%$ b) $9\frac{1}{11}\%$ c) $18\frac{2}{11}\%$ d) None of these
14. 25 kg of alloy X is mixed with 125 kg of alloy Y. If the amount of lead and tin in the alloy X is in the ratio 1 : 2 and the amount of lead and tin in the alloy Y is in the ratio 2: 3, then what is the ratio of lead to tin in the mixture?
- a) 1:2 b) 2:3 c) 3:5 d) 7:11
15. Consider the following statements in respect of all factors of 360 :
- (a) The number of factors is 24.
(b) The sum of all factors is 1170.
- Which of the above statements is/are correct ?
- a) 1 only b) 2 only c) Both 1 and 2 d) Neither 1 nor 2
16. If $x = \frac{\sqrt{a+b}-\sqrt{a-b}}{\sqrt{a+b}+\sqrt{a-b}}$, then what is $bx^2 - 2ax + b$ equal to ($b \neq 0$)?
- a) 0 b) 1 c) ab d) 2ab

17. In a business dealing, A owes B Rs.20,000 payable after 5 years, whereas B owes A Rs.12,000 payable after 4 years. They want to settle it now at the rate of 5% simple interest. Who gives how much money in this settlement ?

a) Both are at par
b) B gives Rs.6,000 to A

c) A gives Rs.6,000 to B
d) A gives Rs.4,000 to B
18. Average marks in Mathematics of Section A comprising 30 students is 65 and that of Section B comprising 35 students is 70. What are the average marks (approximately) of both the sections if it was detected later that an entry of 47 marks was wrongly made as 74 ?

a) 67.28
b) 67.58

c) 68.11
d) 68.63
19. What is the HCF and LCM of $\frac{4}{5}$, $\frac{5}{6}$ and $\frac{7}{15}$

a) $\frac{1}{3}$ and 30
b) $\frac{1}{30}$ and 140

c) 30 and 140
d) $\frac{1}{60}$ and 280
20. A group consist of 4 men, 6 women and 5 children. In how many ways can 2 men, 3 women and 1 child selected from the given group?

a) 500
b) 400

c) 600
d) 300
21. The product of two numbers is 2160 and their HCF is 12. If the sum of the squares of the two numbers is 4896, then what is the mean of the two numbers ?

a) 24
b) 36

c) 48
d) 96
22. The age of Q exceeds the age of P by 3 years. The age of R is twice the age of P and the age of Q is twice the age of S. Further, the age difference of R and S is 30 years. What is the sum of the ages of P and Q ?

a) 35 years
b) 38 years

c) 39 years
d) 45 years
23. 3 - taps A, B and C together can fill a tank in 6 hours. Tap C alone can fill the tank in 12 hours. To fill the tank, when it is empty, all the three taps are started together. After working t hours, tap C is closed and the tank is filled in 8 more hours. find value of "t" ?

a) 1
b) 2

c) 4
d) 6
24. If $\sin \theta = \frac{12}{13}$, then what is the value of $(\tan \theta + \sec \theta)^2(\operatorname{cosec} \theta - \cot \theta)^{-2}$, $0 < \theta < \frac{\pi}{2}$?

a) $\frac{121}{4}$
b) $\frac{169}{9}$

c) $\frac{196}{9}$
d) $\frac{225}{4}$

25. There are four bells which ring at an interval of 15 minutes, 25 minutes, 35 minutes and 45 minutes respectively. If all of them ring at 9 A.M., how many more times will they ring together in the next 72 hours ?
- a) 0 b) 1 c) 2 d) 3
26. Let a, b, c and d be four positive integers such that $a + b + c + d = 200$. If $S = (-1)^a + (-1)^b + (-1)^c + (-1)^d$, then what is the number of possible values of S ?
- a) 1 b) 2 c) 3 d) 4
27. Racer A and Racer B run a race of 18 km on a circular track of length 1000 m. Both complete one round in 200 sec and 250 sec, respectively. After how much time from the start will the faster person meet the slower person for the last time?
- a) 2250 sec b) 4000 sec c) 1800 sec d) 2700 sec
28. The speed of a boat in still water is 15 km/hr. If it can travel 42 km downstream and 28 km upstream in the same time, then what is the speed of the stream ?
- a) 2.5 kmph b) 3 kmph c) 4.5 kmph d) 6 kmph
29. Find the value of x that satisfies $4 \cos^2 30^\circ + 2x \sin 30^\circ - \cot^2 30^\circ - 6 \tan 15^\circ \tan 75^\circ = 0$.
- a) 11 b) 12 c) 13 d) 6
30. A sum of money becomes two times of itself in 8 years at simple interest, and it becomes four times of itself in 2 years at compound interest, when interest is compounded annually. Find the ratio of the rate of simple interest to the rate of compound interest offered per year.
- a) 2:3 b) 3:5 c) 5:3 d) 1:8
31. A bag contains equal number of Rs.5, Rs.2 and Rs.1 coins. If the total amount in the bag is Rs.1152, find the total number of coins ?
- a) 432 b) 288 c) 144 d) 72
32. Ranveer bought a computer paying 25% less than the list price and sold it to his neighbour at a 40% profit on his purchase cost. The profit percentage earned by Ranveer on the list price of the computer is:
- a) 10% b) 7.5% c) 6.67% d) 5%

- 33.** The surface area of a cube is increased by 25%. If p is the percentage increase in its length, then which one of the following is correct ?
- a) $16 < p < 18$ b) $14 < p < 16$ c) $12 < p < 14$ d) $10 < p < 12$
- 34.** What is the area of the circle (approximately) inscribed in a triangle with side lengths 12 cm, 16 cm and 20 cm ?
- a) 48 cm^2 b) 50 cm^2 c) 52 cm^2 d) 54 cm^2
- 35.** What is the maximum area that can be covered by three non-intersecting circles drawn inside a rectangle of sides 8 cm and 12 cm ?
- a) $16\pi \text{ cm}^2$ b) $18\pi \text{ cm}^2$ c) $20\pi \text{ cm}^2$ d) $24\pi \text{ cm}^2$
- 36.** A person spends 40% of his monthly income. The monthly income of the person is increased by 15% and his expenditure is decreased by 22%. What is the approximate percentage increase in his savings?
- a) 40% b) 44% c) 32% d) 36%
- 37.** A container contains a mixture of two liquids. A and B, in the proportion 7 : 5. If 9 liters of the mixture is replaced by 9 liters of liquid B, then the ratio of the two liquids becomes 7 : 9. How much of liquid A was there in the container initially?
- a) 21 liters b) 35 liters c) 40 liters d) 19 liters
- 38.** A person has some coins of Rs.10, Rs.5 and Rs.2 denominations. The ratio of the products of the numbers of Rs.10 and Rs.5 coins, the numbers of Rs.5 and Rs.2 coins, and the numbers of Rs.2 and Rs.10 coins is 3:4:2 respectively. What could be the minimum amount of money this person has?
- a) Rs.52 b) Rs.88 c) Rs.68 d) Rs.74
- 39.** B is 10% more than A. C is 20% less than A. B is what percentage more than C?
- a) 45% b) 27.5% c) 37.5% d) 25%
- 40.** 15 men and 21 women, working together, can do a job in 56 days, while 12 men and 24 women, working together, can do the same job in 64 days. In how many days can the same job be done by 18 men and 24 women, working together?
- a) $47\frac{9}{19}$ days b) $47\frac{5}{19}$ days c) $47\frac{6}{19}$ days d) $47\frac{3}{19}$ days

41. If the sum of two numbers added to the sum of their squares is 42 and the product of these numbers is 15, then the numbers are :
- a) 15, 1 b) $\frac{15}{6}$, 6 c) $2\frac{1}{2}$, 6 d) 5, 3
42. If the selling price of an article is doubled, then the profit becomes four times. What was the original profit percentage?
- a) 25% b) 50% c) 100% d) 75%
43. A man took a loan of Rs.32,400 at a certain rate of simple interest per annum. The rate of interest is one-fourth of the number of years for which the loan is taken. If he paid Rs.11,664 as interest at the end of the loan period, the rate of interest was:
- a) 12% b) 8% c) 5% d) 3%
44. A thief committed a crime and escaped from the spot at a speed of 12 m/h. A Security guard started chasing him 20 minutes after the thief started running and caught him in the next 20 minutes. What is the speed (in m/h) of the Security guard?
- a) 32 b) 30 c) 24 d) 36
45. The wheel of a lorry has radius 182 cm. The number of revolutions (approximately) per minute the lorry wheel will make is. (if the speed of the lorry is 66 km/h).
- a) 1144 b) 66 c) 96 d) 100
46. A, B and C did certain investments and the ratio of their time periods is 3 : 2 : 7 respectively. Ratio of the profits of A, B and C is 4 : 3 : 14 respectively. What is the ratio of the investments of A, B and C?
- a) 1:3:4 b) 7:9:11 c) 8:9:12 d) 2:3:11
47. Two successive discounts of 20% and 30% are given while selling an article. what is the ratio of the marked price of the article to its selling price?
- a) 25:14 b) 21:10 c) 24:13 d) 27:16
48. The ratio of the number of hens to the number of goats in farm A is 5 : 3 and that on farm B is 5:7. What could be the ratio of the total number of hens to the total number of goats in farms A and B taken together?
- a) 3:2 b) 35:23 c) 25:23 d) 7:11

49. A camp of 150 soldiers has food for 400 days. After 50 days, 100 more soldiers join the camp. For how many days will the food last from then onwards?
- a) 250 days b) 210 days c) 230 days d) 220 days
50. In a competitive exam, The minimum qualifying percentages for Category A and B Category B jobs are 25% and 45%, respectively. A candidate scored 83 marks and failed to get a Category B job by 25 marks. What is the minimum qualifying marks to secure a Category A job?
- a) 55 b) 60 c) 50 d) 65
51. There are two numbers 'x' and 'y'. 40% of 'x' is equal to 60% of 'y'. If the average of 'x' and y is 225. then what is the difference between 'x' and 'y'?
- a) 85 b) 80 c) 75 d) 90
52. A and B currently have an age ratio of 7 : 3. After 7 years this age ratio will become 2: 1.,After how many years from now will the age ratio between the ages of A and B become 3 :2?
- a) 49 years b) 42 years c) 35 years d) 28 years
53. In a family of six males and a few females, the average monthly consumption of grain per head is 14.4 kg. If The average monthly consumption per head is 20 kg in the case of males and 6 kg in the case of females, find the number of females in the family?
- a) 8 b) 4 c) 6 d) 7
54. 2 candidates contested an election. The winning candidate got 52% of the valid votes and won by a margin of 360 votes. If 10% of votes were declared invalid, then what was the total number of votes polled?
- a) 11,000 b) 10,000 c) 8,000 d) 12,000
55. Anoop travels first $\frac{1}{3}$ rd of the total distance at the speed of 10 km/hr and the next $\frac{1}{3}$ rd at 20 kmph and the last $\frac{1}{3}$ rd at 60 km/hr. The average speed of Anoop is :
- a) 15 kmph b) 18 kmph c) 25 kmph d) 30 km
56. if $\sqrt{1 + \frac{x}{144}} = \frac{13}{12}$, then x equal to
- a) 1 b) 13 c) 27 d) 25

57. If 25% discount is given on an article, then there will be a loss of 15%. If the article is sold at its marked price, then what will the profit percentage be? [Give your answer correct to 2 decimal places.]
- a) 15.66% b) 12.66% c) 13.33% d) 10.22%
58. A and B solutions of acid and water. The ratios of water and acid in A and B 4:5 and 1:2, respectively. If x liters of A is mixed with y liters of B, then the ratio of water and acid in the mixture becomes 8:13. what is x:y?
- a) 5:6 b) 2:5 c) 3:4 d) 2:3
59. A can do a piece of work in 15 days. B is 25% more efficient than A, and C is 40% more efficient than B. A and C work together for 3 days and then C leaves. A and B together will complete the remaining work in:
- a) 3 days b) 2 1/2 days c) 4 days d) 3 1/2 days
60. The height of a solid cylinder is 30 cm and the diameter of its base is 10 cm. Two identical conical holes each of radius 5 cm and height 12 cm are drilled out. What is the surface area (in cm²) of the remaining solid?
- a) 430π b) 230π c) 330π d) 120π
61. If $\frac{45}{53} = \frac{1}{a + \frac{1}{b + \frac{1}{c - \frac{2}{5}}}}$, where a, b and c are positive integers, then what is the value of $4a - b + 3c$?
- a) 6 b) 4 c) 5 d) 7
62. A and B start moving towards each other from places X and Y, respectively, at the same time on the same day. The speed of A is 20% more than that of B. After meeting on the way, A and B take p hours and 7 hours and 12 mins, respectively, to reach Y and X, respectively. What is the value of p?
- a) 4.5 b) 5 c) 5.5 d) 6
63. A sold a watch to B at a profit of 20%. B sold it to C at 30% profit. C sold it to D at 10% loss. If B's profit is Rs.80 more than that of A, then D bought it for:
- a) Rs.700 b) Rs.680 c) Rs.652 d) Rs.702

64. Rishu saves $X\%$ of her income. If her income increases by 26% and the expenditure increases by 20% , then her savings increase by 50% . What is the value of X ?
- a) 25 b) 30 c) 20 d) 10
65. The radii of two right circular cylinders are in the ratio $3 : 2$ and the ratio of their volumes is $27 : 16$. What is the ratio of their heights?
- a) 8:9 b) 3:4 c) 4:3 d) 9:8
66. The monthly incomes of A and B are in the ratio $3 : 5$ and the ratio of their savings is $2 : 3$. If the income of B is equal to three times the savings of A, then what is the ratio of the expenditures of A and B?
- a) 5:8 b) 8:15 c) 3:7 d) 7:11
67. When x is added to each of 9, 15, 21 and 31, the numbers so obtained are in proportion. What is the mean proportional between the numbers $(3x - 2)$ and $(5x + 4)$?
- a) 42 b) 35 c) 20 d) 30
68. Given that $\triangle DEF \sim \triangle ABC$. If the area of $\triangle ABC$ is 9 cm^2 and that of $\triangle DEF$ is 12 cm^2 and $BC = 2.1 \text{ cm}$, then the length of EF is:
- a) $\frac{8\sqrt{3}}{5} \text{ cm}$ b) $\frac{7\sqrt{3}}{5} \text{ cm}$ c) $\frac{4\sqrt{7}}{5} \text{ cm}$ d) $\frac{3\sqrt{7}}{5} \text{ cm}$
69. A sum of Rs.10,500 amounts to Rs.13,650 in 2 years at a certain rate per cent per annum simple interest. The same sum will amount to what in 1 year at the same rate, if the interest is compounded half-yearly (nearest to Rs.1)?
- a) Rs.12,124 b) Rs.12,134 c) Rs.12,143 d) Rs.12,314
70. A boat can go 5 km upstream and 7.5 km downstream in 45 minutes. It can also go 5 km downstream and 2.5 km upstream in 25 minutes. How much time (in minutes) will it take to go 6 km upstream?
- a) 30 b) 36 c) 24 d) 32
71. The denominator of a fraction is 4 more than twice the numerator. When the numerator is increased by 3 and the denominator is decreased by 3, the fraction becomes $\frac{2}{3}$. What is the difference between the denominator and numerator of the original fraction?
- a) 13 b) 10 c) 12 d) 11

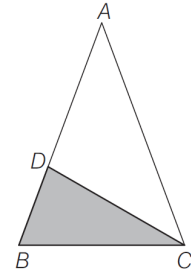
- 72.** A conical tent has to accommodate 25 persons. Each person must have 4 m^2 of space on the ground and 80 m^3 of air to breathe. Find the height of the tent.
- a) 60 m b) 50 m c) 40 m d) 45 m
- 73.** A loan is to be returned in two equal yearly instalments. If the rate of interest is 10% p.a., compounded annually, and each instalment is Rs.5,808, then the total interest charged in this scheme is:
- a) Rs.1,563 b) Rs.1,536 c) Rs.1,632 d) Rs.1,602
- 74.** Amita travels from her house at $3\frac{1}{2}$ kmph and reaches her school 6 minutes late. The next day she travels at $4\frac{1}{2}$ kmph and reaches her school 10 minutes early. What is the distance between her house and the school?
- a) 5.6 km b) 4.8 km c) 5.4 km d) 4.2 km
- 75.** The graphs of the linear equations $3x - 2y = 8$ and $4x + 3y = 5$ intersect at the point $P(a, b)$. What is the value of $2a - b$?
- a) 3 b) 4 c) 6 d) 5
- 76.** A, B and C can do a work separately in 18, 36 and 54 days, respectively. They started the work together but B and C left 5 days and 10 days respectively, before the completion of the work. How many days was the work finished?
- a) 15 days b) 13 days c) 14 days d) 12 days
- 77.** If A's income is 60% less than B's income, then B's income is what percentage more than that of A's income?
- a) 40% b) 150% c) 120% d) 80%
- 78.** A man walks at a speed of 8 km/h. After every kilometre, he takes a rest for 4 minutes. How much time will he take to cover a distance of 6 km?
- a) 70 minutes b) 60 minutes c) 69 minutes d) 65 minutes
- 79.** A and B undertake a piece of work for Rs.250. A alone can do that work in 5 days and B alone can do that work in 15 days. With the help of C, they finish the work in 3 days. If every one gets paid in proportion to work done by them, the amount C will get is:
- a) Rs.50 b) Rs.100 c) Rs.150 d) Rs.200

80. Anil bought two articles A and B at a total cost of Rs.10,000. He sold the article A at 15% profit and the article B at 10% loss. In the whole deal, he made no profit or no loss. Find the selling price of the article A.
- a) Rs.4,500 b) Rs.5,400 c) Rs.4,600 d) Rs.4,200
81. On selling 38 balls at Rs.2,240, there is a loss equal to the cost price of 6 balls. The cost price of a ball is equal to:
- a) Rs.80 b) Rs.70 c) Rs.60 d) Rs.50
82. If the radius of a cylinder is decreased by 20% and the height is increased by 20% to form a new cylinder, then the volume will be decreased by:
- a) 23.2% b) 22.3% c) 32.2% d) 20.5%
83. In the following two equations questions numbered (I) and (II) are given. You have to solve both equations and Give answer. $2x^2 - 7x - 60 = 0$ and $3y^2 - 13y + 4 = 0$
- a) $x > y$ c) $y > x$
b) $x \geq y$ d) $x = y$ or no relation can be established
84. Number 1 to 25 are marked on tokens of equal size one on each. A token is drawn at random. Find the probability of getting a number divisible by both 2 and 3?
- a) $7/25$ b) $2/25$ c) $9/25$ d) $4/25$
85. How many 3 digit even numbers are there such that if 3 is one of the digits then 9 is the next digit?
- a) 365 b) 536 c) 210 d) 156
86. The number of integral solutions for the equation $a + b + c + d = 12$, where $(a, b, c, d) \geq 0$ is :
- a) 969 b) 204 c) 455 d) None of these
87. There are 6 numbered chairs placed around a circular table. 3 boys and 3 girls want to sit on them such that neither of two boys nor two girls sit adjacent to each other. How many such arrangements are possible?
- a) 36 b) 58 c) 72 d) None of these

88. If 5 - digit number 235xy is divisible by 3, 7 and 11, then what is the value of $(3x - 4y)$?
- a) 10 b) 8 c) 9 d) 5
89. The number of ways in which an examiner can assign 50 marks to 10 questions giving not less than 3 marks to any question is :
- a) ${}^{29}C_9$ b) ${}^{47}C_3$ c) ${}^{52}C_2$ d) ${}^{40}C_{10}$
90. In how many ways can 8 identical apples be divided among 3 sisters?
- a) 25 b) 65 c) 45 d) 24
91. A card is drawn from a deck of 52 cards. Find the probability of getting a red card or a heart or a king.
- a) $\frac{6}{13}$ b) $\frac{7}{13}$ c) $\frac{11}{26}$ d) $\frac{15}{26}$
92. A natural number is chosen at random from amongst the first 300. What is the probability that the number, so chosen is divisible by 3 or 5?
- a) $\frac{48}{415}$ b) $\frac{4}{150}$ c) $\frac{1}{2}$ d) None of these
93. A die is thrown twice and the sum of the numbers appearing is observed to be 9. What is the conditional probability that the number 4 has appeared atleast once?
- a) $\frac{1}{2}$ b) $\frac{2}{3}$ c) $\frac{3}{4}$ d) None of these
94. Two persons A and B throw a die alternatively till one of them gets a three and wins the game. Find their respective probabilities of winning.
- a) $\frac{6}{11}, \frac{5}{11}$ b) $\frac{5}{11}, \frac{8}{11}$ c) $\frac{3}{11}, \frac{7}{11}$ d) $\frac{8}{11}, \frac{3}{11}$
95. 7 men can complete a piece of work in 12 days. How many additional men will be required to complete double the work in 8 days?
- a) 28 b) 21 c) 14 d) 7
96. An urn contains 6 red balls and 9 green balls. Two balls are drawn in succession without replacement. What is the probability that first is red and second is green.
- a) $\frac{9}{35}$ b) $\frac{6}{35}$ c) $\frac{2}{35}$ d) $\frac{7}{35}$
97. The largest possible length of a tape which can measure 525 cm, 1050 cm and 1155 cm length of cloths in a minimum number of attempts without measuring the length of a cloth in a fraction of the tape's length?

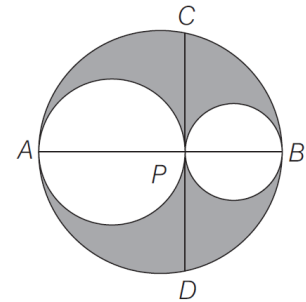
- a) 1 b) 5 c) 15 d) None of these

98. In the following figure, $AB = AC$, $BC = CD$ and $\angle BAC = 36^\circ$. If $AD = 1 + \sqrt{5}$ cm, find the area of the shaded region (in sq. cm).



- a) $\sqrt{5 + 2\sqrt{5}}$ b) $2\sqrt{3 + \sqrt{5}}$ c) $2\sqrt{7 - 2\sqrt{5}}$ d) None of these

99. In the following figure there are two smaller circles inscribed in a larger circle touching each other. The centres of all the three circles fall on AB, and CD is tangent to both the interior circles. If $CD = 16$ cm, find the area of the shaded region.



- a) 35π sq. cm b) 22π sq. cm c) 32π sq. cm d) 16π sq. cm
100. Rohit starts a travel agency by investing Rs. 40000. After 4 months Raj joins the agency. Raj invests Rs. 50000, what will be profit share of Raj if they earn a Rs. 187000 as profit in the entire year?
- a) 3450 b) 9700 c) 8500 d) None of these