

CAT 2016 QA Memory Based Question Paper PDF

1. The average price of 10 books is Rs. 12 while the average price of 8 of these books is Rs. 11.75. Of the remaining two books, if the price of one book is 60% more than the price of the other, what is the price of each of these two books?

- (a) Rs. 5, Rs. 7.5
 - (b) Rs. 13, Rs. 20.8
 - (c) Rs. 16, Rs. 10
 - (d) Rs. 12, Rs. 14
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2. A cube of side 4 cm is painted on all its faces. If it is sliced into 1 cm cubes, how many 1 cm cubes will have exactly one face painted?

- (a) 8
 - (b) 16
 - (c) 24
 - (d) 32
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3. In a triangle ABC, the lengths of the sides AB and AC are 17.5 cm and 9 cm respectively. Let D be a point on AB such that $AD = 7$ cm. What is the length of CD?

- (a) 5 cm
 - (b) 6 cm
 - (c) 7 cm
 - (d) 8 cm
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4. A shopkeeper sells a product at a 20

- (a) Rs. 50
 - (b) Rs. 100
 - (c) Rs. 120
 - (d) Rs. 150
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5. The sum of the ages of a father and his son is 45 years. Five years ago, the product of their ages was 124. What are their current ages?

- (a) 36, 9

- (b) 34, 11
 - (c) 32, 13
 - (d) 30, 15
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6. A person buys 12 articles for Rs. 12 and sells them at Rs. 12 for 10 articles. What is the profit percentage?

- (a) 20%
 - (b) 25%
 - (c) 44%
 - (d) 50%
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7. If $\log_3 2, \log_3(2^x - 5), \log_3(2^x - 7/2)$ are in arithmetic progression, then what is the value of x ?

- (a) 2
 - (b) 3
 - (c) 4
 - (d) 5
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8. The cost of a pair of shoes varies directly as the square of its size. If a pair of size 5 costs Rs. 500, what is the cost of a pair of size 7?

- (a) Rs. 960
 - (b) Rs. 980
 - (c) Rs. 1000
 - (d) Rs. 1020
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9. In a class of 50 students, 23 speak English, 15 speak Hindi, and 18 speak Tamil. 8 speak both English and Hindi, 11 speak both Hindi and Tamil, 6 speak both English and Tamil, and 5 speak all three languages. How many students speak exactly two languages?

- (a) 10
- (b) 12
- (c) 14

(d) 16

10. A and B run a 1 km race. If A gives B a start of 50 m and still beats him by 15 seconds, and if A gives B a start of 70 m and beats him by 10 seconds, find the time taken by A to run 1 km.

- (a) 100 seconds
 - (b) 120 seconds
 - (c) 150 seconds
 - (d) 180 seconds
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11. The sum of the first n terms of an arithmetic progression is $3n^2 + 5n$. What is the first term of the series?

- (a) 2
 - (b) 5
 - (c) 8
 - (d) 11
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12. A man can row at 5 km/h in still water. If the river flows at 1 km/h and it takes him 1 hour to row to a place and return, what is the distance he rows to the place?

- (a) 1 km
 - (b) 2 km
 - (c) 2.4 km
 - (d) 3 km
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13. If a, b, c are in geometric progression, and $a, b, 2c$ are in arithmetic progression, then what is the common ratio of the geometric progression?

- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
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14. A and B together can complete a work in 12 days, B and C together in 15 days, and C and A together in 20 days. In how many days can A alone complete the work?

- (a) 20
 - (b) 30
 - (c) 60
 - (d) 80
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15. A car travels from A to B at 60 km/h and returns at 40 km/h. What is the average speed for the entire journey?

- (a) 48 km/h
 - (b) 50 km/h
 - (c) 52 km/h
 - (d) 54 km/h
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16. In how many ways can 5 different books be arranged on a shelf if two particular books must be together?

- (a) 24
 - (b) 48
 - (c) 120
 - (d) 240
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17. The area of a rectangle is 63 cm², and its perimeter is 32 cm. What is the length of the rectangle?

- (a) 7 cm
 - (b) 9 cm
 - (c) 11 cm
 - (d) 13 cm
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18. If the roots of the equation $x^2 - 2px + p^2 - 1 = 0$ are real and distinct, what is the range of p ?

- (a) $p > 1$

- (b) $p < -1$
 - (c) $p > 1$ or $p < -1$
 - (d) $-1 < p < 1$
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19. A bag contains 3 red, 4 white, and 5 blue balls. Two balls are drawn at random. What is the probability that both are of the same color?

- (a) $\frac{19}{66}$
 - (b) $\frac{17}{66}$
 - (c) $\frac{15}{66}$
 - (d) $\frac{13}{66}$
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20. A man invests Rs. 10,000 at 5

- (a) Rs. 11,576.25
 - (b) Rs. 11,500
 - (c) Rs. 12,000
 - (d) Rs. 12,100
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21. If $\sin \theta + \cos \theta = \sqrt{2}$, then what is the value of θ (in degrees)?

- (a) 30
 - (b) 45
 - (c) 60
 - (d) 90
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22. A shopkeeper allows a discount of 10

- (a) Rs. 150
 - (b) Rs. 160
 - (c) Rs. 170
 - (d) Rs. 180
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