

CAT 2016 Answer Key PDF

- Q1. (B) Rs. 13, Rs. 20.8. Explanation: Total cost of 10 books = Rs. 120 and of 8 books = Rs. 94, so the remaining two cost Rs. 26. One is 60% more than the other, giving prices Rs. 13 and Rs. 20.8.
- Q2. (C) 24. Explanation: Cubes with exactly one face painted = $6 \times (4 - 2)^2 = 24$.
- Q3. (C) 7 cm. Explanation: Using the given dimensions and geometric relations, $CD = 7$ cm.
- Q4. (B) Rs. 100. Explanation: Based on the profit and selling-price relation, the required value is Rs. 100.
- Q5. (B) 34, 11. Explanation: Let present ages be x and y . Solving $x + y = 45$ and $(x - 5)(y - 5) = 124$ gives ages 34 and 11.
- Q6. (A) 20%. Explanation: Cost per article = Rs. 1 and selling price per article = Rs. 1.2, giving 20% profit.
- Q7. (B) 3. Explanation: For logarithms in arithmetic progression, the middle term squared equals the product of the other two, yielding $x = 3$.
- Q8. (B) Rs. 980. Explanation: Cost varies as the square of size. Therefore, cost = $500 \times (7^2/5^2) =$ Rs. 980.
- Q9. (A) 10. Explanation: Students speaking exactly two languages = $(8 - 5) + (11 - 5) + (6 - 5) = 10$.
- Q10. (C) 150 seconds. Explanation: Using the two race conditions and relative-speed equations, A takes 150 seconds to run 1 km.
- Q11. (C) 8. Explanation: First term = $S_1 = 3(1)^2 + 5(1) = 8$.
- Q12. (B) 2 km. Explanation: Upstream speed = 4 km/h and downstream speed = 6 km/h. Solving the time equation gives distance = 2 km.
- Q13. (B) 2. Explanation: Let the common ratio be r . Using GP and AP conditions gives $r = 2$.
- Q14. (D) 80. Explanation: From the combined work rates, A alone can complete the work in 80 days.
- Q15. (A) 48 km/h. Explanation: Average speed for equal distances = $2ab/(a + b) = 48$ km/h.
- Q16. (B) 48. Explanation: Treating the two books as one block gives $4! \times 2! = 48$ arrangements.
- Q17. (B) 9 cm. Explanation: Length + width = 16 and length $\times$ width = 63, giving dimensions 9 cm and 7 cm.
- Q18. (D) $-1 < p < 1$. Explanation: For real and distinct roots, the discriminant must be positive, leading to $-1 < p < 1$.
- Q19. (A) 19/66. Explanation: Probability = $[{}^3C_2 + {}^4C_2 + {}^5C_2] / {}^{12}C_2 = (3 + 6 + 10)/66 = 19/66$.
- Q20. (A) Rs. 11,576.25. Explanation: Compound amount after 3 years at 5% = $10000 \times (1.05)^3 =$ Rs. 11,576.25.
- Q21. (B) 45. Explanation: $\sin \theta + \cos \theta = \sqrt{2}$ only when $\theta = 45^\circ$.
- Q22. (D) Rs. 180. Explanation: Applying the discount and profit conditions gives the required value as Rs. 180.