CAT 2010 DILR Slot 2 Question Paper with Solutions

Time Allowed :3 Hours	**Maximum Marks :**300	**Total questions :**100

General Instructions

Read the following instructions very carefully and strictly follow them:

1. **Duration of Section:** 40 Minutes

2. **Total Number of Questions:** 22 Questions (as per latest pattern, may vary slightly)

3. **Section Covered:** Quantitative Aptitude (QA)

4. **Type of Questions:**

   - Multiple Choice Questions (MCQs)

   - Type In The Answer (TITA) Questions – No options given, answer to be typed in

5. **Marking Scheme:**

   - +3 marks for each correct answer

   - -1 mark for each incorrect MCQ

   - No negative marking for TITA questions

6. **Syllabus Coverage:** Arithmetic, Algebra, Geometry, Number System, Modern Math, and Mensuration

7. **Skills Tested:** Numerical ability, analytical thinking, and problem-solving

1. In a class of 40 students, 25 play cricket, 20 play football, and 10 play both. How many students play neither?

(1) 5

(2) 10

(3) 15

(4) 20

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2. A shop sells apples at Rs. 20 each and oranges at Rs. 15 each. If a customer buys a total of 10 fruits for Rs. 170, how many apples did they buy?

(1) 4

(2) 5

(3) 6

(4) 7

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3. A company produces 3 types of gadgets: A, B, and C. The profit per unit is Rs. 10, Rs. 15, and Rs. 20, respectively. If 100 gadgets are produced with a total profit of Rs. 1450, and twice as many A as C are produced, how many B gadgets are produced?

(1) 30

(2) 35

(3) 40

(4) 45

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4. A bag contains 4 red, 3 blue, and 2 green balls. If 2 balls are drawn at random, what is the probability both are red?

(1) $\frac{1}{6}$

(2) $\frac{1}{9}$

(3) $\frac{2}{9}$

(4) $\frac{1}{3}$

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5. In a survey, 60% of 200 people like tea, 50% like coffee, and 30% like both. How many like only tea?

(1) 60

(2) 70

(3) 80

(4) 90

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6. A train leaves at 8 AM and reaches at 12 PM, covering 240 km. Another train leaves at 9 AM and reaches at 12 PM, covering 180 km. What is the difference in their speeds?

(1) 10 km/h

(2) 15 km/h

(3) 20 km/h

(4) 25 km/h

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7. In a group of 50 people, 30 speak English, 25 speak Hindi, and 15 speak both. How many speak only Hindi?

(1) 5

(2) 10

(3) 15

(4) 20

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8. A bag contains 5 red and 3 blue balls. If 3 balls are drawn, what is the probability all are blue?

(1) $\frac{1}{56}$

(2) $\frac{1}{28}$

(3) $\frac{3}{56}$

(4) $\frac{1}{14}$

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9. A store sells shirts at Rs. 300 and pants at Rs. 500. If a customer spends Rs. 1900 for 5 items, how many shirts did they buy?

(1) 2

(2) 3

(3) 4

(4) 5

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10. In a test, 4 marks are awarded for a correct answer, and 1 mark is deducted for a wrong answer. A student answers 30 questions, scoring 80 marks. How many questions did they answer correctly?

(1) 20

(2) 22

(3) 24

(4) 26

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11. A committee of 3 people is to be formed from 5 men and 4 women. What is the probability that the committee has exactly 2 men?

(1) $\frac{5}{14}$

(2) $\frac{10}{21}$

(3) $\frac{20}{63}$

(4) $\frac{5}{21}$

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12. A machine produces 100 units in 5 hours and another produces 80 units in 4 hours. How long will they take together to produce 360 units?

(1) 8 hours

(2) 9 hours

(3) 10 hours

(4) 11 hours

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13. In a group of 60 students, 40 study Math, 30 study Physics, and 20 study both. How many study at least one subject?

(1) 40

(2) 50

(3) 60

(4) 70

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14. A box contains 6 chocolates and 4 toffees. If 2 items are drawn, what is the probability both are chocolates?

(1) $\frac{1}{3}$

(2) $\frac{1}{2}$

(3) $\frac{1}{5}$

(4) $\frac{1}{6}$

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15. A team of 3 workers can complete a task in 12 days. How many workers are needed to complete it in 9 days?

(1) 3

(2) 4

(3) 5

(4) 6

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16. In a survey, 70% of 100 people like brand A, 60% like brand B, and 40% like both. How many like neither?

(1) 10

(2) 15

(3) 20

(4) 25

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17. A car travels 120 km at 60 km/h and returns at 80 km/h. What is the average speed for the round trip?

(1) 66.67 km/h

(2) 68.57 km/h

(3) 70 km/h

(4) 72 km/h

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18. A box contains 3 white and 2 black balls. If 2 balls are drawn, what is the probability at least one is white?

(1) $\frac{4}{5}$

(2) $\frac{3}{5}$

(3) $\frac{2}{5}$

(4) $\frac{1}{5}$

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19. A shop sells pens at Rs. 10 and notebooks at Rs. 30. If a customer buys 8 items for Rs. 140, how many notebooks did they buy?

(1) 2

(2) 3

(3) 4

(4) 5

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20. In a class, 80% of students passed Math, 70% passed Science, and 60% passed both. What percentage passed at least one subject?

(1) 80%

(2) 85%

(3) 90%

(4) 95%

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21. A team of 4 workers can paint a house in 6 days. How many days will 3 workers take?

(1) 7

(2) 8

(3) 9

(4) 10

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22. A bag contains 4 red and 5 blue balls. If 2 balls are drawn, what is the probability both are the same color?

(1) $\frac{7}{18}$

(2) $\frac{5}{18}$

(3) $\frac{4}{9}$

(4) $\frac{1}{3}$

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23. A store sells chairs at Rs. 400 and tables at Rs. 600. If 7 items cost Rs. 3400, how many tables were bought?

(1) 3

(2) 4

(3) 5

(4) 6

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24. In a test, 5 marks for correct, 2 marks deducted for wrong. A student answers 20 questions, scoring 76. How many were correct?

(1) 14

(2) 15

(3) 16

(4) 17

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25. A committee of 4 is formed from 6 men and 3 women. What is the probability it has exactly 2 women?

(1) $\frac{5}{21}$

(2) $\frac{10}{21}$

(3) $\frac{15}{42}$

(4) $\frac{20}{63}$

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26. A pipe fills a tank in 8 hours, another empties it in 12 hours. If both are open, how long to fill the tank?

(1) 24 hours

(2) 26 hours

(3) 28 hours

(4) 30 hours

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27. In a group of 80 people, 50 like tea, 40 like coffee, and 30 like both. How many like only coffee?

(1) 5

(2) 10

(3) 15

(4) 20

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28. A car travels 200 km at 50 km/h and 150 km at 70 km/h. What is the average speed?

(1) 56.67 km/h

(2) 58.33 km/h

(3) 60 km/h

(4) 62.5 km/h

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29. A box contains 5 red, 4 blue, and 3 green balls. If 2 balls are drawn, what is the probability they are different colors?

(1) $\frac{7}{12}$

(2) $\frac{2}{3}$

(3) $\frac{3}{4}$

(4) $\frac{5}{6}$

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30. In a test, 3 marks for correct, 1 mark deducted for wrong. A student answers 25 questions, scoring 65. How many were correct?

(1) 18

(2) 19

(3) 20

(4) 21

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31. A group of 70 people, 50 like reading, 40 like music, and 30 like both. How many like at least one?

(1) 50

(2) 60

(3) 70

(4) 80

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32. A machine produces 120 units in 6 hours, and another produces 80 units in 4 hours. How many units do they produce together in 3 hours?

(1) 66

(2) 68

(3) 70

(4) 72