CAT 2011 QA Slot 2 Question Paper

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

1. If the cost price of an item is Rs. 200 and it is sold at a 25% profit, what is the selling price?

(1) Rs. 225

(2) Rs. 250

(3) Rs. 275

(4) Rs. 300

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2. What is the value of x in the equation $2x + 5 = 13$?

(1) 3

(2) 4

(3) 5

(4) 6

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3. A train travels 240 km in 4 hours. What is its speed in km/h?

(1) 50

(2) 60

(3) 70

(4) 80

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4. The ratio of two numbers is 3:4. If their sum is 70, what is the larger number?

(1) 30

(2) 40

(3) 50

(4) 60

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5. What is the area of a rectangle with length 12 cm and width 5 cm?

(1) 50 cm²

(2) 60 cm²

(3) 70 cm²

(4) 80 cm²

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6. If $x^2 - 5x + 6 = 0$, what is the sum of the roots?

(1) 3

(2) 4

(3) 5

(4) 6

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7. A shop offers a 20% discount on an item with a marked price of Rs. 500. What is the selling price?

(1) Rs. 350

(2) Rs. 400

(3) Rs. 450

abuses(4) Rs. 480

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8. What is the LCM of 12 and 18?

(1) 24

(2) 36

(3) 48

(4) 72

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9. A man invests Rs. 10,000 at 5% simple interest per annum. What is the interest earned after 2 years?

(1) Rs. 1,000

(2) Rs. 1,200

(3) Rs. 1,500

(4) Rs. 2,000

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10. If $x + y = 10$ and $xy = 21$, what is $x^2 + y^2$?

(1) 58

(2) 64

(3) 72

((4) 79

11. The circumference of a circle is 44 cm. What is its radius? (Use $\pi = \frac{22}{7}$).

(1) 6 cm

(2) 7 cm

(3) 8 cm

(4) 9 cm

12. A number when divided by 7 leaves a remainder of 4. What is the remainder when it is divided by 5?

(1) 2

(2) 3

(3) 4

(4) 5

13. A boat travels 60 km downstream in 3 hours. What is the speed of the boat in still water if the river's speed is 5 km/h?

(1) 10 km/h

(2) 15 km/h

(3) 20 km/h

(4) 25 km/h

14. If $a = 2b$ and $b = 3c$, what is the ratio $a : b : c$?

(1) 2:3:1

(2) 6:3:1

(3) 3:2:1

(4) 1:2:3

15. What is the value of $\sqrt{169}$?

(1) 11

(2) 12

(3) 13

(4) 14

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16. A sum of Rs. 5,000 is invested at 10% compound interest annually for 2 years. What is the total amount?

(1) Rs. 6,000

(2) Rs. 6,050

(3) Rs. 6,100

(4) Rs. 6,150

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17. If $3x + 2y = 12$ and $x - y = 1$, what is x?

(1) 2

(2) 3

(3) 4

(4) 5

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18. What is the HCF of 24 and 36?

(1) 6

(2) 12

(3) 18

(4) 24

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19. A car travels 300 km at an average speed of 60 km/h. How long does it take?

(1) 4 hours

(2) 5 hours

(3) 6 hours

(4) 7 hours

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20. If $2^x = 16$, what is x?

(1) 2

(2) 3

(3) 4

(4) 5

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21. A sum of Rs. 8,000 is lent at 8% simple interest for 3 years. What is the total amount?

(1) Rs. 9,920

(2) Rs. 9,940

(3) Rs. 9,960

(4) Rs. 9,980

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22. What is the area of a triangle with base 10 cm and height 8 cm?

(1) 30 cm²

(2) 40 cm²

(3) 50 cm²

(4) 60 cm²

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23. If $x^2 + 4x + 4 = 0$, what is x?

(1) -1

(2) -2

(3) -3

(4) -4

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24. A man works 8 hours a day for 5 days to earn Rs. 4,000. What is his hourly wage?

(1) Rs. 80

(2) Rs. 100

(3) Rs. 120

(4) Rs. 140

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25. If $5x = 25$, what is x?

(1) 3

(2) 4

(3) 5

(4) 6

26. A pipe fills a tank in 6 hours. Another pipe fills it in 8 hours. How long to fill the tank together?

(1) 3.43 hours

(2) 3.53 hours

(3) 3.63 hours

(4) 3.73 hours

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27. What is the perimeter of a square with side 7 cm?

(1) 24 cm

(2) 28 cm

(3) 32 cm

(4) 36 cm

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28. If $x^2 - 3x + 2 = 0$, what is the product of the roots?

(1) 1

(2) 2

(3) 3

(4) 4

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29. A man buys 5 kg of apples at Rs. 20 per kg and 3 kg of oranges at Rs. 30 per kg. What is the total cost?

(1) Rs. 170

(2) Rs. 180

(3) Rs. 190

(4) Rs. 200

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30. If $3x + 4 = 19$, what is x?

(1) 4

(2) 5

(3) 6

(4) 7

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31. What is the area of a circle with radius 7 cm? (Use $\pi = \frac{22}{7}$).

(1) 154 cm²

(2) 165 cm²

(3) 176 cm²

(4) 187 cm²

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32. If the sum of three consecutive integers is 24, what is the middle integer?

(1) 7

(2) 8

(3) 9

(4) 10

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33. A sum of Rs. 12,000 is lent at 6% simple interest for 4 years. What is the interest?

(1) Rs. 2,880

(2) Rs. 2,900

(3) Rs. 2,920

(4) Rs. 2,940

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34. What is the value of $3^3 \times 2^2$?

(1) 98

(2) 108

(3) 118

(4) 128