CAT Quantitative Aptitude Questions for Practice

Difficulty Level-Medium

1. Three glasses have capacity of 750 litre, 1950 litre, and 600 litres. 2046 litre of wine is poured into them so that the same fraction of each is filled. The volume filled in the largest glass will be
   (a) 1272 litre
   (b) 1209 litre
   (c) 1245 litre
   (d) 1200 litre

2. Rs.1720 is divided among 45 persons consisting of men, women and children. The sum of men's, women's and children's shares are as 12 : 15 : 16 but the individual shares of a man, woman & child are as 6 : 5 : 4. Find respective share of 1 man, 1 women and 1 child.
   (a) 48, 40, 32
   (b) 48, 32, 24
   (c) 48, 60, 64
   (d) 24, 20, 16

3. The gross annual sales of a firm are Rs. 7500. The cost of materials and manufacture is 35% of the gross sal ; office expenses to Rs 272 ;
   (a) 22.43%
   (b) 21.22%
   (c) 19.68%
   (d) 24.5%

4. Find the equ lar to the line of equation 2x
   (a) $4x - 5y = 7$
   (b) $3x - 2y = 12$
   (c) $3x - 2y = 6$
   (d) $2x - 3y = 12$

5. What kind of triangle is formed by points (4,3), (6,-2) and (-11, -3)?
   (a) Right angled triangle
   (b) Isosceles Triangle
   (c) Equilateral Triangle
   (d) Scalene Triangle

6. In a geometric progression, product of 11th term, 18th term and 20th term is equal to the product of 28th term and 5th term. Which of the following is necessarily true about that geometric progression?
   (a) One of terms of this GP has to be equal to zero.
   (b) One of the terms of this GP has to be equal to one.
   (c) This GP will have infinite terms.

(d) Common ratio of this GP will be less than 1.

7. Three solid metal spheres of radii 3 cm, 4 cm, 5 cm respectively, are melted together. The metal is recast as a single solid sphere. Find the percentage reduction in the area of surface resulting from this.
   (a) 0%
   (b) 16%
   (c) 28%
   (d) 32%

8. Two people start from opposite ends *A* and *B* of a corridor and move towards *B* and *A* respectively. When they meet for the first time, the respective distances covered by them is in the ratio 3 : 5 and one of them has covered 30 metres more than the other. If the speed of the person from *A* is 6 m/s, when will the person from *B* reach the end *A* after meeting with person from *A*?
   (a) 5 seconds
   (b) 7 seconds
   (c) 4.5 seconds
   (d) 9 seconds

9. Two metals *A* and *B* are to be used for making two different alloys. There are only 506 kg of *A* and 322 kg o t in the second is 4 : 7, find w ft over.
   (a) Alloy I =
   (b) Alloy I =
   (c) Alloy I =
   (d) Alloy I

10. 400 students f the students left the camp. If ore days will the food last than what was initially planned?
   (a) 133.33 days
   (b) 53.33 days
   (c) 33.33 days
   (d) 65 days

11. The nature of roots of equation $x^2 - 2\sqrt{5}x + 3 = 0$ is as follows:
   (a) Real and equal
   (b) Rational and equal
   (c) Rational and unequal
   (d) Irrational and unequal

12. Given $px^2 + qx + r = 0$, pick out the incorrect statement from the following:
   I. Roots are equal if $q^2 = 4pr$
   II. Roots are equal but opposite in sign if $q = 0$
   III. One root is reciprocal of the other if $p = r$
   IV. Roots are complex if $q^2 > 4pr$
   (a) (I)
   (b) (II)

(c) (III)
(d) (IV)

13. The figure shows a cylindrical tube with a hemispherical bottom of radius 1 cm. if its length is 7 cm, find the capacity of the tube.

(a) $\frac{20}{3}\pi$ cm^3
(b) $\frac{25}{6}\pi$ cm^3
(c) $\frac{41}{3}\pi$ cm^3
(d) $\frac{17}{5}\pi$ cm^3

14. If $P + Q +$ nce between the values of R a
(a) 1200
(b) 300
(c) 60
(d) 100

15. A survey on a sample of 50 new cars being sold at a local auto dealer was conducted to see which of the three popular options – E1 engine, E2 engine and E3 engines were already installed. Following were the observation of the survey:
I. 30 had E1 engine
II. 4 had E1 engine and E3 engine but no E2 engine
III. 24 had E2 engine
IV. 12 had E1 engine and E2 engine but no E3 engine
V. 22 had E3 engine
VI. 8 had E2 engine and E3 engine
VII. 6 had all three options
What is the number of cars that had none of the options?
(a) 4
(b) 3
(c) 1
(d) 2

16. How many zeroes will be there at the end of the number N, if $N = 100! + 200!$?
(a) 73

(b) 49
(c) 24
(d) None of these

17. For which of the following values of a and b, $f(x) = a - x^2 + 1$ and $g(x) = x^2 + b + 3$ and $f(2)\ g(1) < 0$ holds true.
(a) $a < 3, b > 4$
(b) $a > 3, b < 4$
(c) $a > 2, b < 3$
(d) $a < 2, b > 4$

18. A quadratic function *f(x)* attains a maximum of 3 at $x = 1$. The value of the function at $x = 0$ is 1. What is the value of $f(x)$ at $x = 10$?
(a) −119
(b) −159
(c) −110
(d) −180

19. *A, B* and *C* can alone do a work in 15 days, 20 days and 30 days, respectively. They work together for some time after which *C* leaves. A total of Rs. 18000 is paid for the work and *B* gets Rs. 6000 mo
(a) 4
(b) 10
(c) 6
(d) 8

20. In Rajdhani 0 passengers per boggie. If at equal number of passenger th e?
(a) 45
(b) 64
(c) 56
(d) None of these