



PAPER – 3: QUANTITATIVE APTITUDE



QUESTIONS

1. 4 tables and 3 chairs together cost ₹ 2,250 and 3 tables and 4 chairs cost ₹ 1950. Find the cost of 2 chairs and 1 table.
(A) ₹ 550
(B) ₹ 1050
(C) ₹ 750
(D) None of these
2. One root of the equation: $x^2 - 2(5 + m) + 3(7 + m) = 0$ is reciprocal of the other. Find the value of m.
(A) $-20/3$
(B) 7
(C) $1/7$
(D) 117
3. Sangeeta leaves from her home. She first walk 30 metres in North-West direction, and then 30m in South-West direction, next she walks 30 metres in South-East direction. Finally she turns towards her house. In which direction is she moving?
(A) North-West
(B) North-East
(C) South-East

- (D) South-West
4. If a simple interest on a sum of money at 6% p.a. for 7 years is equal to twice of simple interest on another sum for 9 years at 5% p.a. The ratio will be:
- (A) 2:15
(B) 7:15
(C) 15:7
(D) 1:7
5. The Scarap value of machine valued at Rs,10,00,000 after 15 years of depreciation is 10% per annum.
- (A) ₹ 215891.13
(B) ₹ 205891.13
(C) ₹ 225891.13
(D) None
6. If the difference between the compound interest compounded annually and simple interest on a certain amount at 10% per annum for two years is ₹ 372, then the principal amount is.
- (A) ₹ 37,000
(B) ₹ 37,200
(C) ₹ 37,500
(D) None of the above
7. Find the present value of an annuity of ₹ 1,000 payable at the end of each year for 10 years. If rate of interest is 6% compounding per annum. (given $(1.06)^{-10} = 0.5584$):
- (A) ₹ 7,360
(B) ₹ 8,360

- (C) ₹ 12,000
- (D) None of these.
8. What will be the population after 3 years, when present population is 1,00,000 and the population increases at 3% in year 1st year, at 4% in second year and 5% in third year.
- (A) 1,12,476
- (B) 1,15,476
- (C) 1,20,576
- (D) 1,25,600
9. Find the present value of an annuity which pays 200 at the end of each 3 months for 10 years assuming money to be worth 5% converted quarterly?
- (A) ₹ 3473.86
- (B) ₹ 3108.60
- (C) ₹ 6265.38
- (D) None of these
10. The value of furniture depreciates by 10% a year, if the present value of the furniture in an office is ₹ 21870, calculate the value of furniture 3 years ago:
- (A) ₹ 30,000
- (B) ₹ 40,000
- (C) ₹ 35,000
- (D) ₹ 50,000
11. The letters of the word VIOLENT are arranged so that the vowels occupy even place only. The number of permutations is:
- (A) 144

- (B) 120
(C) 24
(D) 72
12. If the p th term of an A.P. is 'q' and the q th term is 'p', then its r th term is:
(A) $p + q + r$
(B) $p + q - r$
(C) $p - q - r$
(D) $p + q$
13. Find the sum of all natural numbers between 250 and 1,000 which are exactly divisible by 3:
(A) 1,56,375
(B) 1,56,357
(C) 1,65,375
(D) 1,65,357
14. Let R is the set of real numbers, such that the function $f: R \rightarrow R$ and $g: R \rightarrow R$ are defined by $f(x) = x^2 + 3x + 1$ and $g(x) = 2x - 3$. Find (fog) :
(A) $4x^2 + 6x + 1$
(B) $x^2 + 6x + 1$
(C) $4x^2 - 6x + 1$
(D) $x^2 - 6x + 1$
15. Find the positive value of k for which the equations: $x^2 + kx + 64 = 0$ and $x^2 - 8x + k = 0$ will have real roots:
(A) 12
(B) 16
(C) 18

- (D) 22
16. Praveen is facing west. He turns 45° in the clockwise direction and then again another turns with 180° in the same direction i.e. clockwise direction, after that he turns 270° in the anti-clockwise direction. Which direction is he facing now?
- (A) North-West
(B) West
(C) South-West
(D) South
17. If $\log_4(x^2 + x) - \log_4(x + 1) = 2$ then the value of x is
- (A) 2
(B) 3
(C) 16
(D) 8
18. If HEALTH is written as GSKZDG, then how will NORTH be written in that code?
- (A) OPSUI
(B) GSQNM
(C) FRPML
(D) IUSPO
19. In a certain code, TEACHER is written as VGCEJGT. How is CHILDREN written in that code?
- (A) EJKNEGTP
(B) EGKNEITP
(C) EJKNFGTO
(D) EJKNFTGP

20. The covariance between two variables X and Y is 8.4 and their variances are 25 and 36 respectively. Calculate Karl Pearson's coefficient of correlation between them.
- (A) 0.82
(B) 0.28
(C) 0.01
(D) 0.09
21. If two variables x and y are related by $2X + 3Y - 7 = 0$ and the mean and mean deviation about mean of X are 1 and 0.3 respectively, then the coefficient of mean deviation of Y about mean is.
- (A) -5
(B) 4
(C) 12
(D) 50
22. The mean salary for a group of 40 female workers is ₹ 5200 per month and that for a group of 60 male workers is ₹ 6800 per month. What is the combined salary?
- (A) ₹ 6160
(B) ₹ 6280
(C) ₹ 6890
(D) ₹ 6920
23. The average age of 15 students is 15 years. Out of these the average age of 5 students is 14 years and that of other 9 students is 16 years, then the age of 15th student is ____
- (A) 11 years
(B) 14 years
(C) 15 years

- (D) None of these
24. The standard deviation of 25, 32, 43, 53, 62, 59, 48, 31, 24, 33 is
- (A) 13.23
- (B) 12.33
- (C) 11.33
- (D) none of these
25. If the range of x is 2, what would be the range of $-3x + 50$?
- (A) 2
- (B) 6
- (C) -6
- (D) 44
26. The Standard deviation is independent of change of
- (A) Origin
- (B) Scale
- (C) Both
- (D) none
27. In _____ distribution, mean = variance.
- (A) Normal
- (B) Binomial
- (C) Poisson
- (D) none of these
28. The pair of averages whose value can be determined graphically.
- (A) Mean and Median
- (B) Mode and Mean

- (C) Mode and Median
(D) None of these
29. The tests of shifting bases are called _____
(A) Unit test
(B) Time reversal test
(C) Circular test
(D) None
30. Purchasing power of money is stated as _____ price index?
(A) Equal to
(B) Reciprocal of
(C) Unequal to
(D) None


SUGGESTED ANSWERS/HINTS

1.	(A)	2.	(A)	3.	(B)	4.	(C)	5.	(B)
6.	(B)	7.	(A)	8.	(A)	9.	(C)	10.	(A)
11.	(A)	12.	(B)	13.	(A)	14.	(C)	15.	(B)
16.	(C)	17.	(C)	18.	(B)	19.	(D)	20.	(B)
21.	(C)	22.	(A)	23.	(A)	24.	(A)	25.	(B)
26.	(A)	27.	(C)	28.	(C)	29.	(C)	30.	(B)