PAPER – 3:
QUANTITATIVE APTITUDE

QUESTIONS

1. If $2^{n-1}+2^{n+1}= 320$, then n value is equals

   (a) 6

   (b) 8

   (c) 5

   (d) 7

2. What is the value of $\frac{P+Q}{P-Q}$ if $\frac{P}{Q}=7$.

   (a) 4/3

   (b) 2/3

   (c) 2/6

   (d) 7/8

3. If $\log_4(x^2+x)- \log_4(x^2+1) = 2$, then the value of x is:

   (a) 2

   (b) 4

   (c) 8

   (d) 16

4. If a certain sum of money is double in 8 years at a given simple interest in how many years will it be four times?

   (a) 24 years

(b) 15 years

(c) 20 years

(d) none of these

5. The average salary of the whole employees in a company is ₹ 400 per day. The average salary of officers is ₹ 800 per day and that of clerks is ₹ 320 per day. If the number of officers is 40, then find the number of clerks in the company?

(a) 50

(b) 100

(c) 150

(d) 200

6. If two dice are thrown then what is the probability that the sum of the faces of dice are square or cube number?

(a) 1/4

(b) 1/2

(c) 1/3

(d) None of these

7. An examination paper consists of 12 questions divided into two parts A and B. Part A contains 7 questions and Part B contains 5 questions. A candidate is required to attempt 8 questions selecting at least 3 from each part, in how many maximum ways can the candidate select the questions?

(a) 35

(b) 175

(c) 210

(d) 420

8. The sum of terms of an infinite GP is 15. And the sum of the squares of the term is 45. Find the common ratio

(a) 3/2

(b) 1

(c) -2/3

(d) 2/3

9. If A = [1,2,3,4} B = {2,4,6,8} F(1) = 2, f(2) = 4, f(3) = 6 and f(4) = 8, and f: A B then f^{-1} is:

(a) {(2,1), (4,2), (6,3) (8,4)}

(b) {(1,2), (2,4), (3,6), (4,8)}

(c) {(1,4), (2,2), (3,6), (4,8)}

(d) None of these

10. Suppose E and F are two events of a random experiment. If the probability of occurrence of E is 1/5 and the probability of occurrence of F given E is 1/10, then the probability of non-occurrence of at least one of the events E and F is :

(a) 1/50

(b) 1/25

(c) 13/50

(d) 49/50

11. Find the effective rate of interest on ₹ 10,000 on which interest is payable half yearly at 5% p.a.

(a) 5.06%

(b) 4%

(c) 0.4%

(d) 3%

12. What is the mean of X having the following density function?

$f(x) = \frac{1}{\sqrt[4]{2\pi}} e^{\frac{(x-10)^2}{32}}$ for $-\infty < x < \infty$

(a) 4

(b) 10

(c) 40

(d) None of these

13. In a Poisson distribution if P(x=4) = P(x= 5) then the parameter of Poisson distribution is:

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

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

(c) 4

(d) 5

14. If the two lines of regression are x + 2y – 5 = 0 and 2x + 3y – 8 = 0, then the regression line of y on x is:

(a) x + 2y – 5 = 0

(b) x + 2y = 0

(c) 2x + 3y – 8 = 0

(d) 2x + 3y = 0

15. Ram is known to hit a target in 2 out of 3 shots whereas Shyam is known to hit the same target in 5 out of 11 shots. What is the probability that the target would be hit if they both try?

(a) $\frac{9}{11}$

(b) $\frac{6}{11}$

(c) $\frac{10}{33}$

(d) $\frac{3}{11}$

16. In the following number series only one number is wrong. Find out the wrong number.

18.3, 20.6, 16, 22.9, 13.7, 2.2, 11.4

(a) 2.2

(b) 18.3

(c) 13.7

(d) 22.9

17. The equation $x^3 - x^2 - 12x = 0$ is satisfied by _____

(a) 1, 4, –3

(b) 0, 4, –3

(c) 0, –4, 3

(d) none of these

18. Find D6 for the following observations. 7, 9, 5, 4, 10, 15, 14, 18, 6, 20

(a) 11.40

(b) 12.40

(c) 13.40

(d) 13.80

19. The appropriate measure of dispersion for open-end classification is

(a) Standard deviation

(b) Mean deviation

(c) Quartile deviation

(d) All these measures

20. Evaluate the value of $\int_0^3 (3x^2 + 5x + 2)\,dx$

(a) 55

(b) 55.5

(c) 57

(d) 56

21. If $y = ax^3+bx^2+cx+d$, then $\frac{dy}{dx}$ is equal to

(a) $3ax^2 + 2bx + c$

(b) $\frac{ax^4}{4}+\frac{bx^3}{3}+\frac{cx^2}{2}+dx$

(c) 0

(d) 1

22. When the data are classified in respect of successive time points, they are known as_____.

(a) Chronological data

(b) Geographical data

(c) Ordinal data

(d) Cardinal data

23. Two variables x and y are related by $5x + 6y + 9 = 0$ and $\bar{x} = 6$, then $\bar{y}$ is

(a) 6.50

(b) 6.66

(c) -6.50

(d) -6.66

24. A variable is known to be _____ if it can assume any value from a given interval.

(a) Discrete

(b) Continuous

(c) Attribute

(d) Characteristic

25. Following are the marks of 10 students:82, 79, 56, 79, 85, 95, 55, 72, 70, 66. Find coefficient of range.

(a) 25.66

(b) 26.67

(c) 27.66

(d) 28.67

26. Which term of series 3, $\sqrt{3}$, 1, $\frac{1}{\sqrt{3}}$ ..... is $\frac{1}{243}$?

(a) 13

(b) 14

(c) 15

(d) 12

27. The series $1^2+2^2+3^2+4^2+...+10^2$ is equal to

(a) 385

(b) 386

(c) 384

(d) None of these

28. $\lim_{x\to 0}\frac{\log(1+x)}{x}$ is equal to _____

(a) 0

(b) 1

(c) -1

(d) ∞

29. A card is drawn from each of two well-shuffled packs of cards. The probability that at least one of them is an ace is

(a) 1/169

(b) 25/169

(c) 2/13

(d) None of these

30. If $P(A) = \frac{1}{2}$; $P(B) = \frac{1}{3}$ and $P(A \cap B) = \frac{1}{4}$ then the value of $P(\bar{A} \cap \bar{B})$ is

(a) $\frac{5}{12}$

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

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

(d) None of these

SUGGESTED ANSWERS

1.	**(d)**	2.	**(a)**	3.	**(d)**	4.	**(a)**	5.	**(d)**
6.	**(c)**	7.	**(d)**	8.	**(d)**	9.	**(a)**	10.	**(d)**
11.	**(a)**	12.	**(b)**	13.	**(d)**	14.	**(a)**	15.	**(a)**
16.	**(a)**	17.	**(b)**	18.	**(b)**	19.	**(c)**	20.	**(b)**
21.	**(a)**	22.	**(a)**	23.	**(c)**	24.	**(b)**	25.	**(b)**
26.	**(a)**	27.	**(a)**	28.	**(b)**	29.	**(b)**	30.	**(a)**