PAPER – 3:
QUANTITATIVE APTITUDE

QUESTIONS

1. If ½, 1/3 ,1/5 and 1/x are in proportion, then the value of x will be -

   (a) 15/2

   (b) 6/5

   (c) 10/3

   (d) 5/6

2. If $p = x^{1/3} + x^{-1/3}$, then find value of $3p^3 - 9p$

   (a) 3

   (b) ½(x+1/x)

   (c) (x+1/x))

   (d) 2((x+1/x))

3. If α and β are the roots of the equation $x^2 + 7x + 12 = 0$, then the equation whose roots $(\alpha + \beta)^2$ and $(\alpha - \beta)^2$ will be:

   (a) $x^2 - 14x + 49 = 0$

   (b) $x^2 - 24x + 144 = 0$

   (c) $x^2 - 50x + 49 = 0$

   (d) $x^2 - 19x + 144 = 0$

4. The rules and regulations demand that the employer should employ not more than 5 experienced hands to 1 fresh one and this fact is represented by (Taking experienced person as x and fresh person as y) -

(a) $y \geq \frac{x}{5}$

(b) $5y \leq x$

(c) $5x > y$

(d) none of these

5. The number of ways of arranging 6 boys and 4 girls in a row so that all 4 girls are together is

(a) 6!. 4!

(b) 2 (7! 4!)

(c) 7! 4!

(d) 2. (6! 4!)

6.. What will be the population after 3 years. When the population increases at the rate 3 % in I year, 4 % in II year and 5% in III year. If the beginning of the population was 25,000?

(a) 28,119

(b) 29,118

(c) 27,000

(c) 30,000

7. If ₹ 10,000 is invested at 8 % per annum, then compounded quarterly. Then value of investment after 2 years is

(a) ₹ 11,716.59

(b) ₹ 10,716.59

(c) ₹ 12,715.59

(d) none of these

8. In how many years will a sum of money become double at 5% p.a. compound interest:

(a) 14 years

(b) 15 years

(c) 16 years

(d) 14.3 years

9.. The future value of an annuity of ₹ 1,000 is made annually for 5 years at interest rate of 14% compounded annually [Given that $(1.14)^5 = 1.92541$] is _____

(a) ₹ 5610

(b) ₹ 6610

(c) ₹ 6160

(d) ₹ 5160

10. If f(x) = x+2, g(x) = 7^x, then gof(x) = ____

(a) $7^x.x+2.7^x$

(b) 7^{x-2}

(c) $49(7^x)$

(d) none of these

11. Given x = 2t + 5; y = t^2-2, then $\frac{dy}{dx}$ is calculated as -

(a) t

(b) 1/t

(c) -1/t

(d) none of these

12. If Z = 52 and ACT = 48, then BAT will be equal to -

(a) 39

(b) 41

(c) 44

(d) 46

13. If ROSE is coded as 6821, CHAIR is coded as 73456 and PREACH is coded as 961473, what will be the code for SEARCH?

(a) 246173

(b) 214673

(c) 214763

(d) 216473

14. Find the missing term in each of the following series: 28, 33,31,36, 34?

(a) 48

(b) 39

(c) 54

(d) 62

15.. Raju leaves his house and walks 12 km towards North. He turns right and walks another 12 km. He turns right, walks 12 km more and turns left to walk 5 km. How far is he from his home and in which direction?

(a) 7 km east

(b) 10 km east

(c) 17 km east

(d) 24 km east

16. For a symmetric distribution:

(a) Mean = Median = Mode

(b) Mode = 3 Median – 2 Mean

(c) Mode = 1/3 Median = 1/2 Mean

(d) None

17. Sanjay has three daughters, and each daughter has a brother. How many male members are there in the family?

(a) 4

(b) 2

(c) 3

(d) 1

18. Median of a distribution can be obtained from -

(a) Frequency polygon

(b) Histogram

(c) ogives

(d) None of these.

19. Cost of sugar in a month under the heads raw Materials, labour, direct production and others were 12, 20, 35 and 23 units respectively. What is the difference between the central angles for the largest and smallest components of the cost of sugar?

(a) 72°

(b) 48°

(c) 56°

(d) 92°

20. For open-end classification, which of the following is the best measure of central tendency?

(a) AM

(b) GM

(c) Median

(d) Mode

21. The quartiles of a variable are 45, 52 and 65 respectively. Its quartile deviation is -

(a) 10

(b) 20

(c) 25

(d) 8.30

22. If x and y are related by y = 2x+ 5 and the SD and AM of x are known to be 5 and 10 respectively, then the coefficient of variation of y is -

(a) 25

(b) 30

(c) 40

(d) 20

23. Given that for two events A and B, P (A) = 3/5, P (B) = 2/3 and P (A) = 3/4, what is P (A/B)?

(a) 0.655

(b) 13/60

(c) 31/60

(d) 0.775

24. The SD of a binomial distribution with parameter n and p is -

(a) n (1– p).

(b) np (1 – p).

(c) np.

(d) $\sqrt{np(1-p)}$.

25. X and Y stand in a line with 6 other people. What is the probability that there are 3 persons between them?

(a) 1/5

(b) 1/6

(c) 1/7

(d) 1/3

26. The deviations are minimum when taken from -

(a) Mean

(b) Median

(c) Mode

(d) GM

27. Histogram is useful to determine graphically the value of -

(a) Arithmetic Mean

(b) Median

(c) Mode

(d) HM

28. If x and y are related as 3x-4y= 20 then the Quartile Deviation of x is 12, then the Quartile Deviation of y is -

(a) 14

(b) 15

(c) 16

(d) 9

29. If the coefficient of correlation between two variables is –0 .9, then the coefficient of determination is -

(a) 0.9

(b) 0.81

(c) 0.1

(d) 0.19

30. For a Poisson Variate x, P(x=2) =3 P(x=4), then the standard deviation of x is

(a) 2

(b) 4

(c) √2

(d) 3

SUGGESTED ANSWERS/HINTS

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

PAPER – 3: QUANTITATIVE APTITUDE

QUESTIONS

1. The salaries of A, B and C are of ratio 2:3:5. If the increments of 15%, 10% and 20% are done their respective salaries, then find new salaries.

   (a) 23: 33: 60

   (b) 33:23:60

   (c) 23: 60:33

   (d) 33: 60: 23

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

   (a) 2

   (b) 3

   (c) 16

   (d) 8

3. If the nominal rate of growth is 17% and inflation is 9% for the five years. Let P be the Gross Domestic Product (GDP) amount at present year then the projected real GDP after 6^{th} year is

   (a) 1.587P

   (b) 1.921P

   (c) 1.403P

   (d) 2.51P

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4. What will be population after 3 years when present population is 25, 000 and population increases at the rate of 3% in I year, at 4% in II year and 5% in III year?

   (a) ₹ 28,119

   (b) ₹ 29,118

   (c) ₹ 27, 000

   (d) ₹ 30, 000

5. The future value of an annuity of ₹ 1500 made annually for five years at interest of 10% compounded annually is (Given that $(1.1)^5 = 1.61051$)

   (a) ₹ 9517.56

   (b) ₹ 9157.65

   (c) ₹ 9715.56

   (d) ₹ 9175.65

6. Find the effective annual rate of interest corresponding to a nominal rate of 8% per annum payable half-yearly is:

   (a) 8.8%

   (b) 8.23%

   (c) 8.6%

   (d) 8.16%

7. If the sum of 'terms of an Arithmetic Progression is $2n^2$, the fifth term is.

   (a) 20

   (b) 50

   (c) 18

   (d) 25

8. The number of words that can be formed out of the letters of the word "ARTICLE" so that vowels occupy even places is

   (a) 36

   (b) 144

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(c) 574

(d) 754

9. Let Z be the universal set for two sets – A and B. If n(A) = 300, n(B) = 400 and n (A ∩ B) = 200, then n (A' ∩ B') is equal to 400 provided n(Z) is equal to

(a) 900

(b) 800

(c) 700

(d) 600

10. In a group of students 80 can speak Hindi, 60 can speak English and 40 can speak Hindi and English both, then number of students is:

(a) 100

(b) 140

(c) 180

(d) 60

11. If $f(x) = x^2-1$ and $g(x) = 2x+3$ then gof (3)

(a) 71

(b) 61

(c) 41

(d) 19

12. $\int 2^{3x}.3^{2x}.5^{x}dx=$

(a) $\frac{2^{3x}.3^{2x}.5^{x}}{\log(270)}+C$

(b) $\frac{2^{3x}.3^{2x}.5^{x}}{\log(360)}+C$

(c) $\frac{2^{3x}.3^{2x}.5^{x}}{\log(180)}+C$

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(d) $\frac{2^{3x}.3^{2x}.5^{x}}{\log(90)}+C$

13. Marginal cost and marginal revenue of a commodity is C′(x)=8+6x and R′(x)=30. Fixed cost is 0. Find the total profit.

(a) $22x + 3x^2$

(b) $22x - 3x^2$

(c) $22x - x^2$

(d) $x + 3x^2$

14. If 2x+5>3x+2 and 2x-3≤4x-5, then 'x' can take which of the following value?

(a) 4

(b) -4

(c) 2

(d) 2

15. The value of scooter is ₹ 1,00,000 find its depreciation is 10% p.a. Calculate total depreciation value at the end of seven years.

(a) ₹ 47829.70

(b) ₹ 47000.90

(c) ₹ 42709

(d) ₹ 42,000

16. Find out the wrong number. 2,10,18,54,162,486,1458

(a) 18

(b) 10

(c) 54

(d) 162

17. In a certain code, "Delhi is capital" is coded as "7 5 9", "capital are beautiful" is coded as "3 6 9", "Delhi is beautiful" is coded as "6 7 5", "Patna also capital" is coded as "9 2 4". What is code for "beautiful" ?

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(a) 2

(b) 4

(c) 6

(d) 9

18. Pointing towards photograph. Vinod said "she is the daughter of my wife's mother's only daughter ". How is Vinod is related to the girl in the Photograph?

(a) Cousin

(b) Uncle

(c) Father

(d) None

19. Sanjay started from his house towards west. After a walking a distance 15 km he turned to the right and walked 10 km, he again turned to the right and walked 5 km. After this he turns Clockwise direction at 135^0 and covered 10 km in which direction should he is going?

(a) South

(b) South-West

(c) South-East

(d) North –West

20. If, in a code, MIND becomes KGLB and ARGUE becomes YPESC, then what will DIAGRAM be in that code?

(a) BGYEPYK

(b) BGYPYEK

(c) GLPEYKB

(d) LKBGYPK

21. The Standard deviation is independent of change of

(a) Scale

(b) Origin

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(c) Both (a) and (b)

(d) None of these

22. The coefficients of correlation between two variables x and y is the simple _____ of two regression coefficients.

(a) Harmonic Mean

(b) Arithmetic Mean

(c) Geometric Mean

(d) None of the above

23. Two regression lines coincide when:

(a) $r = \pm 1$

(b) $r = 0$

(c) $r = 2$

(d) None of these

24. For a normal distribution $Q_1 = 54.32$ and $Q_3 = 78.86$, then the median of the distribution is

(a) 12.17

(b) 39.43

(c) 66.59

(d) None of these

25. In a Binomial Distribution B (n, p), n= 4, then P (x=2) = 3 P (x= 3) find P

(a) 1/3

(b) 2/3

(c) 6/4

(d) 4/3

26. One card is drawn from a pack of 52, what is the probability that is a king or queen?

(a) 11/13

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(b) 2/13

(c) 1/13

(d) None of these

27. Circular test is satisfied by

(a) Laspyres Index number

(b) Paschhes index number

(c) The simple geometric mean of price relatives and weighted aggregative with fixed weights.

(d) None of these

28. Standard deviation of first n natural number is 2. What is the value of n?

(a) 7

(b) 6

(c) 5

(d) 8

29. In the equation 4x+2y = 3, quartile deviation for y is 3. Find the quartile deviation for x.

(a) 4.5

(b) 6

(c) 1.5

(d) None of these

30. For a normal distribution, the first and third quartile are given to be 37 and 49, the mode of the distribution is.

(a) 37

(b) 49

(c) 43

(d) 45

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SUGGESTED ANSWERS/HINTS

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

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QUESTIONS

1. If arithmetic mean between roots of a quardratic equation is 8 and the geometric mean between them is 5, the equation is _____

   (a) $x^2 - 16x - 25 = 0$

   (b) $x^2 - 16x + 25 = 0$

   (c) $x^2 - 16x + 25 = 0$

   (d) None of these

2. Roots of equation $2x^2 + 3x + 7 = 0$ are α and β. The value of $\alpha\beta^{-1} + \beta\alpha^{-1}$ is

   (a) 2

   (b) 3/7

   (c) 7/2

   (d) -19/14

3. If $\frac{p}{q} = -\frac{2}{3}$ then the value of $\frac{2p+q}{2p-q}$ is:

   (a) 1

   (b) -1/7

   (c) 1/7

   (d) 7

4. Find the value of $\left[\log_{10}\sqrt{25} - \log_{10}(2^3) + \log_{10}(4)^2\right]^x$

   (a) x

   (b) 10

   (c) 1

   (d) None

5. A sum of money doubles itself in 10 years. The number of years it would treble itself is:

   (a) 25 years

   (b) 15 years

   (c) 20 years

   (d) None

6. The effective rate equivalent to nominal rate of 6% compounded monthly is:

   (a) 6.05

   (b) 6.16

   (c) 6.26

   (d) 6.07

7. What is the rate of simple interest if a sum of money amounts to Rs. 2,784 in 4 years and Rs. 2,688 in 3 years?

   (a) 1% p.a.

   (b) 4% p.a.

   (c) 5% p.a.

   (d) 8% p.a.

8. A building contractor needs three helpers and ten men apply. In how many ways can these selections take place?

   (a) 36

   (b) 15

(c) 150

(d) 120

9. 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

10. If A = (1,2,3,4,5), B = (2,4) and C = (1,3,5) then (A-C)×B is

(a) {(2,2,), (2,4), (4,2), (4,4), (5,2), (5,4)}

(b) {(1,2), (1,4), (3,2), (3,4), (5,2), (5,4)}

(c) (2,2), (4,2), (4,4), (4,5)

(d) (2,2), (2,4), (4,2), (4,4)

11. If f : R $\rightarrow$R is a function, defined by f(x) = 10x-7, if g(x) = $f^{-1}(x)$, then g(x) is equal to

(a) $\frac{1}{10x-7}$

(b) $\frac{1}{10x+7}$

(c) $\frac{x+7}{10}$

(d) $\frac{x-7}{10}$

12. $\underset{n\to\infty}{Lim}\left(\frac{1}{3}+\frac{1}{3^2}+\frac{1}{3^3}+.....\frac{1}{3^n}\right)$ is equal to :

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

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

(c) 2

(d) 1

13. The function f(x) = $\frac{x^2-9}{x-3}$ is undefined at x = 3. What value must be assigned to f(3), if f(x) is to be continuous at x = 3?

(a) 6

(b) 0

(c) 9

(d) 3

14. Given x = 2t + 5; y = t^2-2, then $\frac{dy}{dx}$ is calculated as:

(a) t

(b) 1/t

(c) -1/t

(d) None

15. $\int_1^2 \frac{2x}{1+x^2}dx$:

(a) $\log_e \frac{5}{2}$

(b) $\log_e 5 - \log_e 2 + 1$

(c) $\log_e \frac{2}{5}$

(d) None of these

16. In certain code language 'CLOCK' is coded as 75276 and 'EARTH' is coded as 83491, then 'COAT' is coded as

(a) 7329

(b) 7239

(c) 7932

(d) 7529

17. Find the missing term of series 2, 7, 16, 29...., 67,92

(a) 39

(b) 46

(c) 43

(d) 62

18. In a certain language 'MENTION' is written as 'NFOUJPO', the code of 'MYSTIFY' is:

(a) NZTUJGZ

(b) NFOFTJT

(c) LNEITNO

(d) OERESTIN

19. Anil started walking 5 kms towards north then he turned left and walked 3 kms. Again, he turned left and walked 5 kms. Then the total number of kms he walked is

(a) 13 kms

(b) 8 kms

(c) 3 kms

(d) 5 kms

20. Raju started walking 10 kms towards east from his home. He turned right and walked 5 kms to the south to reach his school. In which directions is his school from his home?

    (a) South – East

    (b) North – East

    (c) South – West

    (d) North – West

21. L is wife of N, P is son of N, K is brother of N and father of O. What is the relationship of P and O?

    (a) Uncle

    (b) Brother

    (c) Cousin

    (d) Nephew

22. Standard Error (SE) and square root of sample size are

    (a) Directly proportional

    (b) Equal

    (c) Inversely proportional

    (d) Not equal

23. Out of 1000 persons 40% are female, others are male. In a marriage function, 300 persons enjoyed the song.30% of the people who had not enjoyed the song were female. What is the number of male, who did not enjoy the song in the function?

    (a) 120

    (b) 180

    (c) 360

    (d) 490

24. Find the Harmonic Mean of 2,4 & 6.

    (a) 3.30

    (b) 3.00

(c) 3.75

(d) 4.00

25. If the mode of the following data is 13, then the value of x in the data set is 13, 8, 6, 3, 8, 13,2x + 3, 8, 13, 3, 5, 7

(a) 6

(b) 5

(c) 7

(d) 8

26. The best measure of central tendency is

(a) Mean

(b) Median

(c) Mode

(d) Range

27. For a distribution the mean is 30. The standard deviation is 2, then coefficient of variation is.

(a) 6.67%

(b) 9.45%

(c) 7.5%

(d) 2.5%

28. Mean deviation is ____ when the deviations are taken from the median.

(a) maximum

(b) minimum

(c) zero

(d) can't say

29. Ogive is used to find

(a) Mean

(b) Median

(c) Mode

(d) Range

30. A population comprises 7 members. The number of all possible samples of size 3 that can be drawn from it with replacement is

(a) 216

(b) 343

(c) 21

(d) 125



SUGGESTED ANSWERS

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

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   (b) $x^2 - 16x + 25 = 0$

   (c) $x^2 - 16x + 25 = 0$

   (d) None of these

2. Roots of equation $2x^2 + 3x + 7 = 0$ are α and β. The value of $\alpha\beta^{-1} + \beta\alpha^{-1}$ is

   (a) 2

   (b) 3/7

   (c) 7/2

   (d) -19/14

3. If $\frac{p}{q} = -\frac{2}{3}$ then the value of $\frac{2p+q}{2p-q}$ is:

   (a) 1

   (b) -1/7

   (c) 1/7

   (d) 7

4. Find the value of $\left[\log_{10}\sqrt{25} - \log_{10}(2^3) + \log_{10}(4)^2\right]^x$

   (a) x

   (b) 10

   (c) 1

   (d) None

5. A sum of money doubles itself in 10 years. The number of years it would treble itself is:

   (a) 25 years

   (b) 15 years

   (c) 20 years

   (d) None

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   (a) 6.05

   (b) 6.16

   (c) 6.26

   (d) 6.07

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(c) 150

(d) 120

9. 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

10. If A = (1,2,3,4,5), B = (2,4) and C = (1,3,5) then (A-C)×B is

(a) {(2,2,), (2,4), (4,2), (4,4), (5,2), (5,4)}

(b) {(1,2), (1,4), (3,2), (3,4), (5,2), (5,4)}

(c) (2,2), (4,2), (4,4), (4,5)

(d) (2,2), (2,4), (4,2), (4,4)

11. If f : R $\rightarrow$R is a function, defined by f(x) = 10x-7, if g(x) = $f^{-1}(x)$, then g(x) is equal to

(a) $\frac{1}{10x-7}$

(b) $\frac{1}{10x+7}$

(c) $\frac{x+7}{10}$

(d) $\frac{x-7}{10}$

12. $\underset{n\to\infty}{Lim}\left(\frac{1}{3}+\frac{1}{3^2}+\frac{1}{3^3}+.....\frac{1}{3^n}\right)$ is equal to :

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

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

(c) 2

(d) 1

13. The function f(x) = $\frac{x^2-9}{x-3}$ is undefined at x = 3. What value must be assigned to f(3), if f(x) is to be continuous at x = 3?

(a) 6

(b) 0

(c) 9

(d) 3

14. Given x = 2t + 5; y = t^2-2, then $\frac{dy}{dx}$ is calculated as:

(a) t

(b) 1/t

(c) -1/t

(d) None

15. $\int_1^2 \frac{2x}{1+x^2}dx$:

(a) $\log_e \frac{5}{2}$

(b) $\log_e 5 - \log_e 2 + 1$

(c) $\log_e \frac{2}{5}$

(d) None of these

16. In certain code language 'CLOCK' is coded as 75276 and 'EARTH' is coded as 83491, then 'COAT' is coded as

(a) 7329

(b) 7239

(c) 7932

(d) 7529

17. Find the missing term of series 2, 7, 16, 29...., 67,92

(a) 39

(b) 46

(c) 43

(d) 62

18. In a certain language 'MENTION' is written as 'NFOUJPO', the code of 'MYSTIFY' is:

(a) NZTUJGZ

(b) NFOFTJT

(c) LNEITNO

(d) OERESTIN

19. Anil started walking 5 kms towards north then he turned left and walked 3 kms. Again, he turned left and walked 5 kms. Then the total number of kms he walked is

(a) 13 kms

(b) 8 kms

(c) 3 kms

(d) 5 kms

20. Raju started walking 10 kms towards east from his home. He turned right and walked 5 kms to the south to reach his school. In which directions is his school from his home?

    (a) South – East

    (b) North – East

    (c) South – West

    (d) North – West

21. L is wife of N, P is son of N, K is brother of N and father of O. What is the relationship of P and O?

    (a) Uncle

    (b) Brother

    (c) Cousin

    (d) Nephew

22. Standard Error (SE) and square root of sample size are

    (a) Directly proportional

    (b) Equal

    (c) Inversely proportional

    (d) Not equal

23. Out of 1000 persons 40% are female, others are male. In a marriage function, 300 persons enjoyed the song.30% of the people who had not enjoyed the song were female. What is the number of male, who did not enjoy the song in the function?

    (a) 120

    (b) 180

    (c) 360

    (d) 490

24. Find the Harmonic Mean of 2,4 & 6.

    (a) 3.30

    (b) 3.00

(c) 3.75

(d) 4.00

25. If the mode of the following data is 13, then the value of x in the data set is 13, 8, 6, 3, 8, 13,2x + 3, 8, 13, 3, 5, 7

(a) 6

(b) 5

(c) 7

(d) 8

26. The best measure of central tendency is

(a) Mean

(b) Median

(c) Mode

(d) Range

27. For a distribution the mean is 30. The standard deviation is 2, then coefficient of variation is.

(a) 6.67%

(b) 9.45%

(c) 7.5%

(d) 2.5%

28. Mean deviation is ____ when the deviations are taken from the median.

(a) maximum

(b) minimum

(c) zero

(d) can't say

29. Ogive is used to find

(a) Mean

(b) Median

(c) Mode

(d) Range

30. A population comprises 7 members. The number of all possible samples of size 3 that can be drawn from it with replacement is

(a) 216

(b) 343

(c) 21

(d) 125



SUGGESTED ANSWERS

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

PAPER – 3: QUANTITATIVE APTITUDE

QUESTIONS

1. Find missing term of the series 7,26, 63,124,215, 342, ?

   (a) 391

   (b) 421

   (c) 481

   (d) 511

2. In a certain code, KAVERI is written as VAKIRE. How is MYSORE written in that code?

   (a) EROSYM

   (b) SYMROE

   (c) SYMERO

   (d) SMYERP

3. In a certain code DECEMBER is written as ERMBCEDE. which word will written as ERMBVENO in that code?

   (a) AUGUST

   (b) SEPTEMBER

   (c) OCTOBER

   (d) NOVEMBER

4. Ravi faces towards North. Turning to his right, he walks 25 meters. He turns to his left and walks 30 meters. Next, he moves 25 meters to his right. He then turns to his right again and walks 55 meters. Finally, he

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turns to the right and moves 40 meters. In which direction is he now from his starting point?

(a) South-West

b) South

(c) North-West

(d) South-East

5. Ponying to a gentleman, Deepak said, "His only brother is the father of my daughters father." How is gentleman related to Deepak?

(a) Grandfather

(b) Father

(c) Uncle

(d) Brother-in-law

6. Find the value of p from $\left(\sqrt{4}\right)^{-6} \times \left(\sqrt{2}\right)^{-4} = 2^{p}$

(a) 16

(b) 8

(c) -8

(d) 4

7. If (7p+ 3q) : (3p-2q) = 43:2 , then p:q is _____

(a) 5:4

(b) 4:5

(c) 7: 2

(d) 2:7

8. The sum of the digits of a two digit number is 10. If 18 be subtracted from it, the digits in the resulting number will be equal. The number is

(a) 37

(b) 73

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(c) 64

(d) None of these

9. The difference between Compound Interest and Simple Interest on a certain sum for 2 years at 6% p.a. is Rs. 13.50. Find the sum

(a) 3750

(b) 2750

(c) 4750

(d) none of these

10. A machine for which the useful life is estimated to be 5 years, Cost Rs. 5000 and Rate of depreciation is 10% p.a. The scrap value at the end of its life is

(a) 2952.45

(b) 2500

(c) 3000

(d) 2559.50

11. Every two person shakes hands with each other in a party and the total number of hand shakes is 66. The number of guests in the party is

(a) 11

(b) 12

(c) 13

(d) 14

12. The ways of selecting 4 letters from the word EXAMINATION is

(a) 136

(b) 130

(c) 125

(d) none of these

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13. If the A.M. and G.M. for two numbers are 6.50 and 6 respectively then the two numbers are

(a) 6 and 7

(b) 9 and 4

(c) 10 and 3

(d) 8 and 5

14. The sixth term of a G.P. with common ratio as 2 and first term being 5 is_____.

(a) 160

(b) 32

(c) 800

(d) 64

15. If g(x) = x–1/x, g(–½) is

(a) 1

(b) 2

(c) ½

(d) 3

16. $\text{Lim}_{x\to 3}\frac{x^2-9}{x-3}$ is equal to

(a) 0

(b) 6

(c) -6

(d) Does not exist

17. Evaluate $\int_0^1 (2x^2 - x^3)\,dx$ and the value is

(a) 4/3

(b) 5/12

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(c) -4/3

(d) none of these

18. Find $\frac{dy}{dx}$ when $y = 4x^3 + 8x^7$ at $x^2 = 2$

(a) 424

(b) 470

(c) 472

(d) none of these

19. The best method to collect data in case of natural calamity is

(a) Personal interview.

(b) Telephone interview.

(c) Mailed questionnaire method.

(d) Indirect interview.

20. The entire upper part of a table is known as

(a) Caption.

(b) Stub.

(c) Box head

(d) Boady

21. Standard error can be described as

(a) The error committed in sampling.

(b) The error committed in sample survey.

(c) The error committed in estimating a parameter.

(d) Standard deviation of a statistic.

22. The standard deviation of 25, 32, 43, 53, 62, 59, 48, 31, 24, 33 is

(a) 13.23

(b) 12.23

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(c) 11.23

(d) none of these

23. What is the value of the first quartile for observations 15, 18, 10, 20, 23, 28, 12, 16?

(a) 17

(b) 16

(c) 15.75

(d) 12

24. If the quartile deviation of a normal curve is 4.05, then its mean deviation is

(a) 5.26

(b) 6.24

(c) 4.24

(d) 4.80

25. If there are two groups containing 30 and 20 observations and having 50 and 60 as arithmetic means, then the combined arithmetic mean is

(a) 55

(b) 56

(c) 54

(d) 52

26. Two variables x and y are related by $5x + 2y + 5 = 0$ and $\bar{x} = 5$, then $\bar{y}$ is

(a) 10

(b) -10

(c) 15

(d) -15

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27. If Arithmetic Mean and coefficient of variation of x are 5 and 20 respectively. What is the variance of (15-2x)?

(a) 16

(b) 4

(c) 64

(d) 32

28. The coefficient of correlation between two variables is 0.5, and then the coefficient of determination is

(a) 0.5

(b) 0.25

(c) -0.5

(d) 0.05

29. If r = 0.5, $\sum xy$ = 120, σ_y = 8, $\sum x^2$ = 90, then value of n is equal to _____

(a) 5

(b) 10

(c) 15

(d) 20

30. What is the chance of picking a heart or a queen not of heart from a pack of 52 cards?

(a) 17/52

(b) 4/13

(c) 1/3

(d) 3/13

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SUGGESTED ANSWERS/HINTS

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

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PAPER – 3:
QUANTITATIVE APTITUDE

QUESTIONS

1. If a : b = 3 : 4, the value of (2a+3b) : (3a+4b) is

   (A) 18: 25

   (B) 8 : 25

   (C) 17 : 24

   (D) None of these

2. Two alloys contain silver and copper in the ratio of 3:1 and 5:3. In what ratio the two alloys should be added together to get a new alloy having silver and copper in the ratio of 2:1.

   (A) 1:3

   (B) 1:2

   (C) 2:3

   (D) None of these

3. If $\log_x \sqrt[3]{2} = \frac{1}{15}$; then value of x is

   (A) 8

   (B) 32

   (C) 16

   (D) 64

4. If α , ß be the roots of the equation $2x^2 - 4x - 3 = 0$, the value of α^2 + $ß^2$ is _____.

   (A) 5

   (B) 7

   (C) 3

   (D) -4

5. Mr. A plans to invest upto Rs.30,000 in two stocks X and Y. Stock X(x) is priced at Rs.175 and Stock Y(y) at Rs.95 per share. This can be shown by

   (A) $175x+95y \leq 30,000$

   (B) $175x+95y \geq 30,000$

   (C) $175x+95y = 30,000$

   (D) None of these

6. The difference between Compound Interest and Simple Interest on a certain sum for 2 years at 6% p.a. is Rs. 13.50. Find the sum

   (A) 3750

   (B) 2750

   (C) 4750

   (D) None of these

7. The effective rate of interest corresponding to a nominal rate 3% p.a. payable half yearly is

   (A) 3.2% p.a.

   (B) 3.25% p.a.

   (C) 3.0225% p.a.

   (D) none of these

8. Every two person shakes hands with each other in a party and the total number of hand shakes is 66. The number of guests in the party is

   (A) 11

   (B) 12

(C) 13

(D) 14

9. The ways of selecting 4 letters from the word EXAMINATION is

(A) 136

(B) 130

(C) 125

(D) none of these

10. A box contains 7 red, 6 white and 4 blue balls. How many selections of two balls can be made so that none is red?

(A) 90

(B) 45

(C) 48

(D) 12

11. Find the sum of 10 terms G.P with first term and common ratio being 8 and 3 respectively?

(A) 263291

(B) -236291

(C) 219631

(D) 236192

12. The sum of progression (a+b), a, (a–b).....n term is

(A) $\frac{n}{2}$ [2a+(n–1)b]

(B) $\frac{n}{2}$ [2a+(3–n)b]

(C) $\frac{n}{2}$ [2a+(3–n)]

(D) $\frac{n}{2}$ [2a+ (n–1)]

13. Given A = {2, 3}, B = {4, 5}, C = {5, 6} then A × (B∩C) is

(A) {(2, 5), (3, 5)}

(B) {(5, 2), (5, 3)}

(C) {(2, 3), (5, 5)}

(D) None of these.

14. Find the *f o g* for the functions f (x) =x^2, g (x) = x+ 1

(A) x^2 (x+1)

(B) x^2

(C) x+1

(D) $(x+1)^2$

15. $\lim_{x \to t} \frac{x^3 - t^3}{x^2 - t^2}$ is evaluated to be

(A) 3/2

(B) 2/3 t

(C) $\left(\frac{3}{2}\right)t$

(D) None of these.

16. $\lim_{x \to 2} \frac{2x^2 - 7x + 6}{5x^2 - 11x + 2}$ is equal to

(A) 1/9

(B) 9

(C) -1/9

(D) none of these

17. $\int_0^2 3x^2 \, dx$ is

(A) 7

(B) -8

(C) 8

(D) None of these

18. The derivative of $8x^2-2x+5$ w.r.t. x is

(A) 16x+2

(B) 16x–2

(C) 16x–2/x+5

(D) 16x+7

19. The entire upper part of a table is known as

(A) Caption.

(B) Stub.

(C) Box head.

(D) Body.

20. A Qualitative characteristic is known as

(A) An attribute.

(B) A variable.

(C) A discrete variable.

(D) A continuous variable.

21. If each item is reduced by 12, A.M. is

(A) Reduced by 12

(B) Increased by 12

(C) Unchanged

(D) None of these

22. An Ogive can be prepared in _____ different ways.

(A) 2

(B) 3

(C) 4

(D) 5

23. The median of 27,30,26,44,42,51,37 is

(A) 30

(B) 42

(C) 44

(D) 37

24. If the relationship between x and y is given by 4x– 6y =13 and if the median of x is 16. Find median of y.

(A) 7.50

(B) 8.00

(C) 8.50

(D) none of these

25. If r = 0.8, then coefficient of determination .....shall be

(A) 0.64

(B) 0.40

(C) 0.60

(D) 0.80

26. If 2x + 5y – 9 = 0 and 3x – y – 5 = 0 are two regression equation, then find the value of mean of x and mean of y.

(A) 2,1

(B) 2,2

(C) 1,2

(D) 1,1

27. When r = 0 then Cov(x,y) is equal to

(A) +1

(B) -1

(C) 0

(D) None of these

28. The two lines of regression become identical when

(A) r = 1

(B) r = –1

(C) r = 0

(D) (a) or (b)

29. For a (m×n) classification of bivariate data, the maximum number of conditional distributions is

(A) q

(B) p+q

(C) pq

(D) p

30. Circular test is satisfied by which index number?

(A) Laspeyre's

(B) Paasche's

(C) Fisher's

(D) Simple Geometric mean of price Relatives and the aggregative with Fixed weights.

SUGGESTED ANSWERS/HINTS

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

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 I 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 pth term of an A.P. is 'q' and the qth term is 'p', then its rth 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 → R and g : R → 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 co-efficient 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 15^{th} 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)**

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)**