



CPT QA TEST 1(11/06/2018)

NAME : _____ QA: _____ CA: _____ X 1 = _____ WA: _____ X 0.25= (_____) NMO: _____

TIME ALLOWED 75 MIN

1. During the certain period the C. L. I. gives up from 150 to 225 and the Salary of a worker is also raised from 330 to 396, then the real terms is
 - a) Loss by Rs.89
 - b) Loss by 99
 - c) Loss by Rs. 90
 - d) None of these
2. Finite population multiplier is
 - a) square root of $(N-1)/(N-n)$
 - b) square root of $(N-n)/(N-1)$
 - c) square of $(N-1)/(N-n)$
 - d) square of $(N-n)/(N-1)$
3. If X and Y are 2 independent normal variables with mean as 10 and 12 and SD as 3 and 4, then $(X+Y)$ is normally distributed with
 - a) mean = 22 and SD = 7.
 - b) mean = 22 and SD = 25
 - c) mean = 22 and SD = 5
 - d) mean = 22 and SD = 49
4. What is the no. of trials of a binomial distribution having mean and SD as 3 and 1.5 respectively?
 - a) 2
 - b) 4
 - c) 8
 - d) 12
5. Given $P(A) = \frac{1}{2}$, $P(B) = \frac{1}{3}$, $P(AB) = \frac{1}{4}$, the value of $P(A/B)$ is
 - a) $1/2$
 - b) $1/6$
 - c) $2/3$
 - d) $3/4$
6. Which one is true
 - a) $b_{yx} = r * \sigma_x / \sigma_y$
 - b) $b_{yx} = r * \sigma_y / \sigma_x$
 - c) $b_{yx} = r * \sigma_{xy} / \sigma_y$
 - d) $b_{yx} = r * \sigma_{yy} / \sigma_x$
7. In case 'Insurance companies' profits and the no of claims they have to pay "____"
 - a) positive correlation
 - b) negative correlation
 - c) no correlation
 - d) none

8. In a symmetrical distribution when the 3rd quartile plus 1st quartile is halved, the value would give
- Mean
 - Mode
 - Median
 - None
9. The mean of the 1st n natural no. is
- $n/2$
 - $(n-1)/2$
 - $(n+1)/2$
 - None
10. If each item is reduced by 15 A.M is
- Reduced by 15
 - Increased by 15
 - Multiplied by 15
 - Divided by 15
11. Half of the nos. in an ordered set have values less than the _____ and half will have values greater than the _____
- Mean, median
 - Median, median
 - Mode, mean
 - None
12. _____ is the reciprocal of the AM of reciprocal of observations.
- H. M
 - G. M
 - Both
 - None
13. In case of .an even number of observations which of the following is median ?
- Any of the two middle-most value
 - The simple average of these two middle values
 - The weighted average of these two middle values
 - Any of these
14. Consecutive rectangles in a Histogram have no space in between
- true
 - false
 - both
 - none
15. The most attractive method of data presentation is
- Tabular
 - Textual
 - Diagrammatic
 - (a) or (b)
16. Drinking habit of a person is
- An attribute
 - A variable
 - A discrete variable
 - A continuous variable

17. Which of the following statements is false?
- Statistic is derived from the Latin word 'Statista'
 - Statistic is derived from the Italian word 'Statista'
 - Statistic is derived from the French word 'Statista'
 - Both (a) and (c).

18. 'Stub' of a table is the

- Left part of the table describing the columns
- Right part of the table describing the columns
- Right part of the table describing the rows
- Left part of the table describing the rows.

19. From the data given below:

Commodity	Price Relative	Weight
A	125	4
B	100	2
C	250	4

Then the suitable index number is

- 150.9
 - 155.8
 - 170
 - None of these
20. A random sample of a group of people is taken and 180 were found to be in favor of liberalizing licensing regulations. If the proportion of people in the population found in favor of liberalization with 95% confidence lies between 0.683 and 0.817, then the number of people in the group is
- 140
 - 240
 - 160
 - 175
21. A simple random sample of size 16 is drawn from a population with 50 members. What is the SE of sample mean if the population variance is known to be 36 given that the sampling is done with replacement?
- 1.25
 - 6.25
 - 1.52
 - 1.50
22. Which measure of dispersion is based on all the observations?
- Mean deviation
 - Standard deviation
 - Quartile deviation
 - (a) and (b) but not (c)
23. If the two quartiles of None of these (μ , σ^2) are 9.8 and 26 respectively, what is the standard deviation of the distribution?
- 12
 - 6
 - 10
 - 8
24. What is spurious correlation?
- It is a bad relation between two variables.
 - It is very low correlation between two variables.
 - It is the correlation between two variables having no causal relation.
 - It is a negative correlation.
25. If 3 per cent of an airline's flights suffer a minor equipment failure in an aircraft, what is the probability that there will be exactly 4 such failures in the next 100 such flights?
- 0.50
 - 0.184
 - 0.265
 - 0.168

26. Covariance may be positive, negative or zero.

- a) True b) False c) Both d) None

27. If the overall percentage of success in an exam is 80, what is the probability that out of a group of 3 students ; none has passed?

- a) 0.6525 b) 0.9744 c) 0.008 d) 0.0256

28. If all the values taken by a random variable are equal then

- a) its expected value is zero
b) its standard deviation is zero
c) its standard deviation is positive
d) its standard deviation is a real number.

29. For a group of students, 35 %, 40% and 45% passed in Physics, Chemistry and at least one of the two subjects respectively. If an examinee is selected at random, what is the probability that he failed in Physics if it is known that he passed in Chemistry?

- a) $1/2$ b) $1/3$ c) $1/4$ d) $1/6$

30. For a Poisson distribution

- a) mean and standard deviation are equal
b) mean and variance are equal
c) standard deviation and variance are equal
d) both (a) and (b)

31. The probability distribution of a random variable is as follows:

x:	1	2	3	4	5
P:	k	2k	3k	3k	k

The SD of x is

- a) 1.80 b) 4.41 c) 2.32 d) 2.47

32. The interval $(\mu - 3\sigma, \mu + 3\sigma)$ covers

- a) 95% area of a normal distribution.
b) 96% area of a normal distribution
c) 99% area of a normal distribution
d) all but not 0.27% area of a normal distribution

33. If the regression line of y on x and that of x on y are given by $y = -2x + 3$ and $8x = -y + 3$ respectively, what is the coefficient of correlation between x and y?

- a) 0.5 b) $-1/\sqrt{2}$ c) -0.5 d) None of these

34. As the sample size increases, standard error

- a) Increases b) Decreases c) Remains constant d) None.

35. For 11 pairs of observations, No. of concurrent deviations was found to be 3. What is the value of the coefficient of concurrent deviation?
- a) $\sqrt{0.2}$ b) $-\sqrt{0.4}$ c) $1/3$ d) $-1/3$
36. When the product of price index and the quantity index is equal to the corresponding value index then
- a) Unit test b) Time reversal test c) Factor reversal test d) None holds
37. If two variables x and y are related to $3x + 4y - 11 = 0$ 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) 11.25 b) 12 c) 50 d) 4
38. If the AM and HM for two numbers are 12.50 and 3.125 respectively then the GM two numbers
- a) 6 b) 4 c) 6.25 d) 5
39. Cost of sugar in a month under the heads Raw Materials, labour, direct production and others were 12, 20, 35 and 33 units respectively. What is the difference between the central angles for the LABOUR and smallest components of the cost of sugar?
- a) 72° b) 48° c) 28.8° d) 92°
40. Bowley's index No. is ____ Mean of ____ and ____.
- (a) AM, Laspeyres's pasche's . (b) GM, Laspeyres's pasche's (c) HM, Laspeyres's pasche's . (d) None
41. The average salary of a group of unskilled workers is Rs.18000 and that of a group of skilled workers is Rs.24,000. If the combined salary is Rs.22000, then what is the percentage of un skilled workers?
- (a) 16.67% (b) 66.67% (c) 33.33% (d) None of these
42. _____ is an extension of time reversal test
- a) Factor Reversal test
b) Circular test
c) Both
d) None
43. Chain index is equal to
- a) $\frac{\text{link relative of current year} \times \text{chain index of the current year}}{100}$
b) $\frac{\text{link relative of previous year} \times \text{chain index of the current year}}{100}$
c) $\frac{\text{link relative of current year} \times \text{chain index of the previous year}}{100}$
d) $\frac{\text{link relative of previous year} \times \text{chain index of the previous year}}{100}$
44. Two variables x and y are given by $5y = 2x + 3$. If the median of x is 21, what is the median of y?
- a) 8
b) 7

- c) 9
- d) 6

45. The lower and upper quartiles and median of a variable are 48, 70 and 55 respectively. Its coeffⁿ of quartile deviation is

- a) 23
- b) 20
- c) 22
- d) 30

46. If two variables x and y are related to $12x + 20y - 17 = 0$ and mean deviation about mean of x is 0.5, then mean deviation of y about mean is

- a) 0.3
- b) 0.4
- c) 0.9
- d) 0.8

47. The SD for 1,2,3,4,5,6,7 respectively. .

- a) 2
- b) 4
- c) 5
- d) 3

48. The coefficient of correlation r between x and y when:

Cov (x, y) = -16.5, Var (x) = 2.89, Var (y) = 100 is:

- (a) -0.97
- (b) 0.97
- (c) 0.89
- (d) -0.89

49. If $r = 0.5$ $n=25$ find standard error

- (a) .25
- (b) .05
- (c) .15
- (d) .35

50. The two regression lines are $7x - 3y - 18 = 0$ and $4x - y - 11 = 0$. Find the values of

b_{yx} and b_{xy}

- (a) $\frac{7}{3}, \frac{1}{4}$
- (b) $\frac{-7}{3}, \frac{-1}{4}$
- (c) $\frac{-3}{7}, \frac{-1}{4}$
- (d) None of these

ALL THE BEST