QUESTION BANK

DEPARTMENT OF ECONOMICS, NAYAGARH AUTONOMOUS COLLEGE, NAYAGARH

+3 2ND YEAR ARTS (1st SEMESTER)
STATISTICAL METHODS FOR ECONOMICS
CC-07
GROUP-A

Each question carries 1 mark.

1. The statistical constant of the population is known as_____.
2. The statistical constant of the sample is known as_____.
3. Data originally collected in the process of investigation are known as _____.
4. _____data are costlier in terms of time, money and efforts involved.
5. _____data are collected from the published sources.
6. Direct personal investigation is a method of collecting_____ data.
7. The cumulative frequency curve is known as_____.
8. AM, GM, HM, Median and Mode are measure of _____.
9. Median is a _____average.
10._____ divide a distribution into two equal parts.
11.The sum of deviation of the items from arithmetic mean is_____.
12.The sum of square deviation of the items from arithmetic mean is_____.
13.The median of 2,5,8,7,10 is _____.
14.The sum of the absolute deviation from _____is the minimum.
15.Calculation _____ requires arranging of data in ascending or descending order.
16._____ divide the series into four equal parts.
17.The value of the variable which occur most frequently in a distribution is called the_____.
18.Grouping and Analysis table are used for the calculation of _____.
19.Mode can be obtained graphically by using _____.
20.Mode is equal to _____median minus _____mean.
21.In a perfectly symmetrical distribution mean, median and mode are_____.
22.In _____distribution mean > median > Mode.
23.In _____ distribution mean < median < mode.
24._____ defined as the n_{th} root of the product of n items.
25._____cannot be calculated in case of negative value.
26.Log table is required for the calculation of_____.

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27._____ is the best measure of ratio, percentage and growth rate.
28._____ is defined as the reciprocal of the arithmetic average of the reciprocal of the values of the variable.
29._____ is usefull in finding averages involving speed, time and distance.
30._____ is the graphical method of measuring dispersion.
31._____ is known as the best measure of dispersion.
32._____ is defined as the difference between the largest and the smallest value of a series.
33._____ measures of dispersion is independent of units of measurement.
34.The second quartile is also known as_____.
35.The semi inter quartile range is also known as_____.
36.Mean deviation can be calculated from_____.
37.Calculation of _____ ignore positive and negative signs.
38.The relative measure of dispersion based on standard deviation is called_____.
39.The standard deviation divided by arithmetic mean is called_____.
a. 100 times of coefficient of standard deviation is called_____.
40.The square of standard deviation is called_____.
41.Standard deviation is independent of change of _____ but not of _____.
42._____ gives an idea about the shape of the frequency curve.
43.If the longer tail of the frequency curve of distribution lies to the right of the central point, it is called a _____ distribution
44.If the longer tail of the frequency curve of distribution lies to the left of the central point, it is called a _____ distribution.
45._____ refers to the degree of peakedness of flatness of a frequency curve.
46.A curve having high peak than the normal curve is called_____.
47.A curve having low peak than the normal curve is called_____.
48.If the value of kurtosis is equal to 3 then it is called_____.
49.If the value of kurtosis is less than 3 then it is called_____.
50.If the value of kurtosis is more than 3 then it is called_____.
51.If two variable moves in the same direction then there exist _____ correlation.
52.If two variable moves in the opposite direction then there exist

_____ correlation.

53.The graphical method of measuring correlation is called_____.

54.The karl pearson's coefficient of correlation lies between_____.

55.The karl pearson's coefficient of correlation is independent of change of_____ and_____.

56._____ between two variables is symmetric.

57._____ is used to measure the reliability of the karl pearson's coefficient of correlation.

58.The rank correlation method was propounded by_____.

59.In case of qualitative data _____ correlation method is used.

60.The square of correlation coefficient is called_____.

61._____ is the measure of average relationship between two or more variables.

62._____ line is also known as line best fit.

63._____ is the geometric mean between two regression coefficients.

64.Both the regression coefficients are of _____ sign.

65.If one of the regression coefficient tis greater than one, the other must be_____.

66.Regression coefficients are independent of change of _____.

67.A_____ consist of data arranged chronologically.

68.The long term trend of a time series is known as _____.

69._____ variation in a time series occurs regularly with in a period of 12 months.

70._____ is the best method of trend fitting in a time series.

71.Laspayre's index number assigned weight on the basis of _____.

72.Paasche's's index number assigned weight on the basis of _____.

73._____ index number is known as the ideal index number.

74._____ index number satisfies time reversal and factor reversal test.

75._____ index is the geometric mean between Laspayre"s and Paasche's index.

76.The total number of possible outcomes of a trail/experiment are called_____.

77.Two events are said to be_____ if they cannot happen simultaneously.

78.Two events are said to be _____ if the occurrences of one does not affect and is not affected by the other.

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79.The value of probability lies between _____.
80.Probability of drawing an ace from a set of card is _____.
81.In case of mutually exclusive events P(A or B) =_____.
82.In case of mutually inclusive events P(A or B) =_____.
83.In case of _____ events P(A and B)= P(A) *P(B).
84.If 'a' is a constant, then E(a) =_____.
85.If 'a' is a constant, then E(aX) =_____.
86.If 'a' is a constant, then Var(a) =_____.
87.If 'a' is a constant, then Var(aX) =_____.
88.In case of normal distribution value of kurtosis is _____.
89.In case of normal distribution value of skewness is _____.
90.Normal distribution was first discovered by_____.

Group-B

Each question carries 2 marks

1. What is parameter?
2. What is Statistic?
3. What is primary data?
4. What is secondary data?
5. What is direct personal investigation?
6. What is indirect oral interview?
7. What is questionnaire?
8. What is interview Schedule?
9. What is frequency distribution?
10. What is exclusive series?
11. What is inclusive series?
12. What is open end series?
13. What is close end series?
14. What is pie chart?
15. What is histogram?
16. What is ogive?
17. What is meant by central tendency?
18. Define arithmetic mean?
19. Define median?
20. Define mode?
21. Define Geometric Mean?
22. Define Harmonic Mean?
23. What are the demerits of Median?
24. What are the demerits of Mode?
25. What are the demerits of Geometric Mean?
26. What are the demerits of Harmonic mean?
27. What are the demerits of Arithmetic Mean?
28. What are the uses of Harmonic mean?

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29. What is dispersion?
30. What are the absolute measures of dispersion?
31. What are the Relative measures of dispersion?
32. What is range?
33. What is quartile deviation?
34. What is inter quartile range?
35. Define Mean Deviation?
36. Define Standard deviation?
37. What is Lorenz curve?
38. What is coefficient of variation?
39. What is coefficient of standard deviation?
40. What is coefficient of mean deviation?
41. What is coefficient of range?
42. What is coefficient of quartile deviation?
43. What is combined standard deviation?
44. Define skewness?
45. What is symmetrical distribution?
46. What is asymmetrical distribution?
47. Define positively skewed distribution?
48. Define negatively skewed distribution?
49. What is kurtosis?
50. What are types of kurtosis?
51. What is platy-kurtic distribution?
52. What is lepto-kurtic distribution?
53. What is meso-kurtic distribution?
54. Define Correlation?
55. What is positive correlation?
56. What is negative correlation?
57. What is linear correlation?
58. What is non-linear correlation?
59. What is simple correlation?
60. What is multiple correlation?
61. What is partial correlation?
62. What is nonsense correlation?
63. What is scatter diagram method?
64. What is coefficient of determination?
65. Define regression?
66. Define regression link of X on Y?
67. Define regression link of Y on X?
68. Define regression equations?
69. What is regression coefficient?
70. What are the similarities between correlation and regression?

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71. What is time series?
72. What is secular trend?
73. Define index number?
74. What are the limitations of index number?
75. What is price index numbers?
76. What is quantity index numbers?
77. What is value index numbers?
78. State the Laspayre's index number?
79. State the Paasche's index number?
80. State the Fisher's index number?
81. What is time reversal test?
82. What is Factor reversal test?
83. What is circular test?
84. What is consumer price index?
85. What is probability?
86. Define an experiment?
87. What is exhaustive event?
88. Define equally likely events?
89. What is mutually exclusive event?
90. What do you mean by complementary events?
91. What is conditional probability?
92. What is random variable?
93. Define variance of a random variable?

Group-C

Each question carries 3 marks

1) Distinguish between Parameter and statistic?
2) Distinguish between Population and sample?
3) Distinguish between primary and secondary data?
4) Distinguish between questionnaire and interview schedule?
5) What are the sources of secondary data?
6) What is combined Asthmatic Mean?
7) What are the merits of Median?
8) What are the merits of Mode?
9) What are the merits of Geometric Mean?
10) What are the merits of Harmonic mean?
11) What are the merits of Arithmetic Mean?
12) Explain the empirical relation between mean ,median and mode?
13) What are the uses of Geometric mean?
14) What are the objectives of measuring dispersion?
15) Distinguish between absolute and relative measures of dispersion?
16) What are the merit and demerit of quartile deviation?
17) What are the merit and demerit of mean deviation?

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18) What are the merit and demerit of Range?
19) What are the merit and demerit of standard deviation?
20) Distinguish between skewness and kurtosis?
21) Explain different types of kurtosis?
22) Distinguish between positive and negative correlation?
23) Distinguish between linear and non linear correlation?
24) Distinguish between simple and multiple correlation?
25) Distinguish between correlation and regression?
26) What are properties of correlation?
27) What are the merits of karl pearson's coefficient of correlation?
28) What is probable error?
29) What are the merit and demerits of Spearman's rank correlation?
30) What do you mean by regression lines?
31) What are the properties of regression coefficient?
32) What is standard error of estimate?
33) What are the components of time series?
34) What is cyclical variation?
35) What is seasonal variation?
36) What is irregular variation?
37) Explain semi average method of measuring trend of time series?
38) Explain moving average method?
39) Explain least square method?
40) What are the merits and demerits of least square methods?
41) What are the uses of index number?
42) Why fisher index number is called as an ideal index number?
43) Distinguish between simple and compound evens?
44) Distinguish between dependent and independent events?
45) State the classical definition of probability?
46) State the empirical definition of probability?
47) State the Addition theorem of probability?
48) State the Multiplication theorem of probability?
49) Define mathematical expectation of a random variable?
50) State the properties of Mathematical Expectations?
51) Explain the properties of variance of a random variable?

1.Explain the characteristics/properties of a good average?

2.Calculate the arithmetic mean, median and mode of the following series

X	0-10	10-20	20-30	30-40	40-50
F	3	8	12	4	3

3.The mean marks 100 students were found to be 40. Later it was discovered that a score of 45 was misread as 54. Find the correct mean.

4.Explain the mathematical properties of Arithmetic mean?

5.Explain the relationship between mean, Median and Mode?

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6.Prove that AM is greater than equal to GM and GM is greater than equal to HM.

7. Explain different relative measures of dispersion?

8. Calculate Standard deviation of the following series?

X	5	8	12	15	20
F	3	4	6	4	3

9. Explain different properties of standard deviation?

10. Calculate Mean deviation from median of the following series?

MARKS	0-10	10-20	20-30	30-40	40-50
NO OF STUDENTS	4	7	12	5	2

11.Distinguish between skewness and kurtosis. Explain different methods of measuring skewness?

12.State and prove different properties of karl pearson's coefficient of correlation?

13.State and prove different properties of regression coefficient?

14.Explain the scatter diagram methods of measuring correlation?

15.Find karl pearson's coefficient of correlation between X and Y from the following series.

X	6	2	10	4	8
Y	9	11	5	8	7

16. From the following data, obtain two regression equations. Estimate the value of X when y=15.

X	7	8	12	5	3
Y	2	5	8	3	2

17. Calculate coefficient of rank correlation from the following data.

X	71	55	67	70	71	62	50
Y	75	54	75	64	49	75	95

18.In a regression analysis, the two regression lines are obtained as 2x-3y+6=0 and 4y-5x-8=0. Calculate means of X and Y. If the variance of X is 9 Find the standard deviation of Y.

19.Explain different components of a time series.

20.From the following data calculate trend values using 3 yearly moving average.

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Year	1995	1996	1997	1998	1999	2000	2001
Production	412	438	446	454	470	483	490

21.Fit a straight-line trend by the methods of least squares and estimate the trend values.

Year	2000	2001	2002	2003	2004	2005	2006	2007
Value	80	90	92	83	94	99	92	104

22.Find trend line to the following data by using semi average method.

Year	1985	1986	1987	1988	1989	1990
Profit (In Million)	80	82	85	70	89	95

23.Explain the problems in the construction of index numbers?
24.Construct price index number from the following data by using laspayre;s, Paasche's and Fisher's Methods.

Commodity	1995	1995	2000	2000
	Price	Quantity	Price	Quantity
A	2	8	4	6
B	5	10	6	5
C	4	14	5	10
D	2	19	2	15

25.By using suitable example prove that Fisher index is the geometric mean between Laspayere and paasche's index.
26.Why Fisher index number is an ideal index number.
27.What is the probability that a leap year selected at random will contain 53 Sundays?
28.State and prove addition and multiplication theorem of probability?
29.Two cards are drawn from a pack of playing cards one after another without
replacement. What is the probability of drawing (1) Two aces (2) Two Spades.
30.A problem in statistics is given to four students. Their chances of solving it are ½,1/3,1/4 and 1/5. What is probability that the problem will be solved.