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D 72452 (Pages : 4) Name.....

Reg. No.....

THIRD SEMESTER B.A. DEGREE EXAMINATION, NOVEMBER 2014

(U.G.—CCSS)

Core Course—Economics

EC 3B 03—QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS—I

(2013 Admissions)

Time : Three Hours Maximum : 30 Weightage

Answers may be written **either** *in English* **or** *in Malayalam.*

Part A

Answer all **twelve** *questions.*

1. When a variable assumes all values between a range of values, it is called :

   (a) Discrete variable. (b) Random variable.

   (c) Continuous variable.

2. When data are arranged for a number of years it is known as :

   (a) Time series data. (b) Cross-section data.

   (c) Polled data.

3. When x and y are two different positive numbers the relationship between Arithmetic Mean (AM) and Geometric Mean (GM) is given by :

   (a) AM is more than GM. (b) AM is less than GM.

   (c) AM is equal to GM.

4. Pearson's correlation coefficient measures ——— relationship between variables.

   (a) Linear. (b) Curvi-linear.

   (c) Both linear and non-linear.

5. When P is the price and Q the quantity demanded of a normal good, the correlation coefficient between P and Q is expected to be :

   (a) Negative. (b) Positive.

   (c) Zero.

Turn over

6. The relationship between arrival of birds in a particular locality and the number of newly babies in the same locality is an example of :

   (a) Rank correlation. (b) Non-sense correlation.

   (c) Linear correlation.

7. When L, P and F are respectively the Laspeyre's, Paasche's and Fischer's index number relationship among them is given by :

   (a) F = AM of L and P. (b) F = GM of L and P.

   (c) F = HM of L and P.

   Where AM, GM and HM respectively stand for Arithmetic mean, Geometric mean and Har mean.

8. The official index of inflation in India is constructed by using :

   (a) Wholesale prices. (b) Retail prices.

   (c) Agricultural prices.

9. In the trend equation $y = a + bT$, where T is time, which of the following is an indicator of

   (a) T. (b) a.

   (c) b.

10. A regression model that takes explicit account of random variable is known as :

    (a) Stochastic model. (b) Deterministic model.

    (c) Markov model.

11. Which of the following is not an assumption of Classical Linear Regression model ?

    (a) Heteroscedasticity. (b) No serial correlation.

    (c) Normally distributed errors.

12. Who among the following coined the term econometrics ?

    (a) Lawrence R Klien. (b) Ragnar Nurkse.

    (c) Ragnar Frisch.

(12 × ¼ = 3 wei

Part B (Short Answer Type Questions)

Answer **all** *questions.*

Each question carries 1 *weightage.*

Explain briefly the functions of statistics.

Distinguish between population and sample.

What is the use of scatter diagram ? Explain.

Distinguish between Pearson's and Spearmans correlation coefficient.

What are the different measures of index number ?

Explain briefly the components of time series.

What do you mean by deflating ?

What is a moving average ?

Distinguish between population regression and sample regression function.

(9 × 1 = 9 weightage)

Part C (Short Essay/Paragraph Type Questions)

Answer any **five** *questions out of seven.*

Each question carries 2 *weightage.*

Write a note on the limitations of statistics.

Explain the requisites of a good average.

What are the properties of coefficient of correlation ? Explain.

Briefly explain the problems involved in the construction of index numbers.

Explain various tests of Index numbers.

What are the uses of regression analysis ? Explain.

Explain the assumptions of Classical Linear Regression Model.

(5 × 2 = 10 weightage)

Part D (Essay Questions)

Answer any **two** *questions out of three.*

Each question carries 4 *weightage.*

Compute the coefficient of variation of numbers from 1 to 10.

30. The following table supplies the wages earned by labourers in two regions :

Wages (in Rupees)	:	108	110	112	115	120	130	135	140	150	200
No. of Labourers in area A	:	12	15	16	17	20	22	18	14	16	10
No. of Labourers in area B	:	20	15	18	14	16	20	22	20	25	10

Draw Lawrence curve for the above data. Interpret the curve.

31. Explain how a linear trend line is fitted using a simple mathematical model.

(2 × 4 = 8 weight