

D 72452

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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 born 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 numbers, the 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 Harmonic 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 trend?
- (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 weightage)

**Part B (Short Answer Type Questions)**

Answer **all** questions.

Each question carries 1 weightage.

13. Explain briefly the functions of statistics.
14. Distinguish between population and sample.
15. What is the use of scatter diagram ? Explain.
16. Distinguish between Pearson's and Spearman's correlation coefficient.
17. What are the different measures of index number ?
18. Explain briefly the components of time series.
19. What do you mean by deflating ?
20. What is a moving average ?
21. 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.

22. Write a note on the limitations of statistics.
23. Explain the requisites of a good average.
24. What are the properties of coefficient of correlation ? Explain.
25. Briefly explain the problems involved in the construction of index numbers.
26. Explain various tests of Index numbers.
27. What are the uses of regression analysis ? Explain.
28. 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.

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

Turn over

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 weightage)

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