16U334 (Pages:3) Name: ……

Reg. No……..

THIRD SEMESTER B.A DEGREE EXAMINATION, NOVEMBER 2017

(Regular/Supplementary/Improvement)

(CUCBCSS – UG)

CC15U ECO3 B03 - QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS I

Economics - Core Course

(2015 Admission Onwards)

Time: Three Hours Maximum: 80 Marks

Section A

Objective Type Questions.

Answer ***all*** questions.

1. If = 3 then x----------

a) 216 b) 261 c) 225 d)200

2. $\log_N N \div \log_a b$ =

a) $\log_a N$ b) $\log_b N$ c) $\log_n b$ d) $\log_b a$

3. A straight line and a parabola intersect at

a) 2 points b) 1 point c) At origin d) no point

4. The value of correlation coefficient r is equal to:

a) $r = 0$ b) $r \leq \pm 1$ c) $r \geq \pm 1$ d) none of these

5. Find the 8^{th} term of 64,32,16.....

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

a) Wholesale prices. b) Retail Prices

c) Agricultural Prices d) None of these

7. Value of $2^{-2} \times 2^5$ is :

a) 8 b) 4 c) 2 d) none of these

8. Pearson's correlation coefficient measures ..... relationship between variables.

a) Linear b) Curvilinear c) Both linear and Non-linear d) None of these

9. The equation of the hyperbola is :

a) $xy = c$ b) $y = mx + c$ c) $y = mx$ d) none of these

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

a) Discrete Variable b) Random Variable c) Continuous Variable d)None of these

11. When $r = 0.98$, we say that the correlation between x and y is

a) High b) Moderate c) Low d) None

Turn Over

12. In a symmetrical distribution the value of mean, median and mode will be

a) Equal b) Deviate c) Could not be determined d) None of these

(12 x ½ = 6 Marks)

Section B

Very short answer type questions.

Answer ***any ten*** questions not exceeding in ***one paragraph.***

13. Solve the quadratic equation $x^2 - 13x + 40 = 0$
14. Distinguish between population and sample.
15. Define the following

a) Symmetric matrix b) Orthogonal Matrix

16. If A = B = Find 2A+5B
17. Define Regression
18. What is meant by Scatter Diagram
19. Define range
20. What is coefficient of Determination?
21. Write short note on Quartiles?
22. What are regression coefficients?
23. What are the merits of median?
24. What do you mean by Ogive?

(10 x 2 = 20 Marks)

Section C

Short Answer Type Questions.

Answer ***any six*** questions not exceeding *in* ***one page.***

25. If $a^x=b^y=c^z$ and $b^2=ac$ show that
26. Find the maximum and minimum values of $x^3 - 3x^2 - 9$.
27. Distinguish correlation and regression
28. Solve using Crammer's rule $2x + 3y=13$ and $5x - 2y = 4$
29. Calculate standard deviation from the following data

Income	No of families:
0----1000	18
1000----2000	26
2000----3000	30
3000----4000	12
4000----5000	10
5000----6000	4

30. What are regression lines? Why there are two regression lines?
31. Find the rank of the following matrix A =
32. Find Karl Pearson's coefficient of correlation from the following data?

Age of Husband: 23 27 28 29 30 31 33 35 36

Age of Wife: 18 20 22 27 21 29 27 28 29

(6 x 5 = 30 Marks)

Section D

Essay Type Questions.

Answer ***any two*** questions not exceeding *in* ***three pages***.

33. What is correlation? Explain the scatter diagram method of studying correlation
34. Evaluate the determinant = (a-b)(b-c)(c-a)
35. Discuss Lorenz curve and explain the different steps in the construction of Lorenz curve
36. Calculate the spearman's rank correlation for the following data.

Rank in Maths : 1 2 3 4 5 6 7 8 9 10

Rank in Stat : 4 8 2 3 5 7 6 9 10 1

(2 x 12 = 24 Marks)

****