FOURTH SEMESTER B.A. DEGREE EXAMINATION, APRIL/MAY 2015

(UG—CCSS)

Core Course—Economics

EC 4B 05—QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS—II

(2009-2012 Admissions)

Time : Three Hours   Maximum : 30 Weightage

Part A

*Answer **all** questions.*

1. **To represent the split up of a total we use:**

    (a) Bar diagram.   **(b) Multiple bar diagram.**

    (c) Pie diagram.   **(d) Less** than ogive.

2. The x value of the intersection point of less than and greater than ogives gives

    (a) Mean.   (b) Median.

    (c). Mode.   (d) Correlation.

3. If the Arithmetic mean is 12 and median is 14, then the mode is :

    (a) 16.   (b) 18.

    (c) 15.   (d) 10.

4. The relative measure of variance is :

    (a) HM.   (b) GM.

    (c) Coefficient of variation.   (d) Mean deviation,

5. When mean > median > mode, skewness is :

    (a) Zero.   (b) Positive.

    (c) Negative.   (d) Symmetric.

6. Correlation between price and supply is :

    (a) 0.   (b) Positive.

    (c) 1.   (d) Negative.

7. If the two regression equations are $X = 2 + 0.8Y$ and $Y = 4 + 0.2X$, then the correlation coefficient between X and Y is :

    (a) 0.1.   **(b) 0.4.**

    (c) —0.4.   **(d) —0.2.**

Turn over

8. The average which is commonly used in index number is :

    (a) A.M.   (b) G.M.

    (c) H.M.   (d) Mode.

9. In Laspeyer's index number the weight is :

    (a) Current year quantity.   (b) Base year quantity.

    (c) Current year price.   (d) Base year price.

10. Making allowances for the effect of changing price levels is called :

    (a) Splicing.   (b) Deflating.

    (c) Base shifting.   (d) None of these.

11. If in a population of 1000 people, male death is 180 and female death is 220, then CDR is :

    (a) 22.   (b) 180.

    (c) 220.   (d) 400.

12. The relation between general reproduction rate and net reproduction rate is :

    (a) $NRR \quad GRR$.   (b) $NRR > GRR$.

    (c) $NRR / GRR > 1$.   (d) $GRR / NRR = 0$.

                                                  (12 x   = 3 weightage)

Part B (Short Answer Questions).

Answer all questions.

13. What is a Histogram ?

14. Define frequency distribution.

15. Define arithmetic mean.

16. What are quartiles ?

17. What is scatter diagram ?

18. Give the regression equations of X on Y and Y on X.

19. Define index numbers.

20. What are the different components of time series ?

21. What are the commonly used mortality rates ?

                                                  (9 x 1 = 9 weightage)

Part C (Short Essay Paragraph Questions).

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

22. What are the commonly used diagrams in Statistics. How you draw Histogram ?

23. Distinguish between average and dispersion. What are the commonly used measures of dispersion ?

24. Calculate the median and mode of the data given below. Using them find arithmetic mean :

Marks	10	20	30	40	50	60
No. of students :	8	23	45	65	75	80

25. For a moderately skewed data, the arithmetic mean is 200, the coefficient of variation is 8 and Karl Pearsons coefficient of skewness is 0.3. Find the mode and the median.

26. Define correlation. What are the different types of correlation.

27. What is secular trend? Give the commonly used measures of trend.

28. What are the sources of vital statistics ?

(5 x 2 = 10 weightage)

Part D (Essay Questions).

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

29. Draw the less than ogive for the following data given below and answer the following from the graph :

Marks	No. of students	Marks	No. of students
0-10	5	50-60	65
10-20	20	60-70	50
20-30	40	70-80	35
30-40	70	80-90	20
40-50	85	90-100	10

(a) Determine the median and the two quartiles.

(b) If the pass mark is 40, what percentage of candidates pass in the examination ?

30. From the prices of shares of X and Y below, find out which is more stable in value :

X :	35	54	52	53	56	58	52	50	51	49
Y	108	107	105	105	106	107	104	103	104	101

31. Calculate (i) GFR ; (ii) SFR ; (iii) TFR and (iv) general reproduction rate from the following data :

Age group of child bearing females	:	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Number of women('000)	:	16	16.4	15.8	15.2	14.8	15	14.5
Total births	:	260	2244	1894	1320	916	280	145

(2 x 4 = 8 weightage)