FOURTH SEMESTER B.A. DEGREE EXAMINATION, MARCH 2013

(CCSS)

Economics

EC4 B05—QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS—II

Time : Three Hours   Maximum : 30 Weightage

Part I (Objective Type Questions)

(Include Multiple Choise, Fill in the blanks and answer in single word).
Answer **all** *twelve questions.*

1. The presence of extreme items effects :

    (a) Mode.   (b) AM.

    (c) Median.   (d) None of these.

2. The point of intersection of less than and greater than ogive is :

    (a) Mean.   (b) Median

    (c) Mode.   (d) GM.

3. Mean deviation is minimum when taken about :

    (a) Median.   (b) A.M.

    (c) G.M.   (d) Mode.

4. The mean of 7 numbers is 13 and the mean of 13 numbers is 7. What is the mean of all 20 numbers ?

    (a) 18.2.   (b) 9.37.

    (c) 10.   (d) 9.1.

5. Cost of living index is also known as ————.

6. The best average for index number construction is ————.

7. Lorenz curve is used to measure ————.

8. When the measure of Kurtosis is less than 3, the distribution is ————.

9. What is the G.M. of 2 and 32 ?

10. Variance can be denoted as.

11. Which index number has base year quantity as weight ?

12. Write the formula for calculating price relative.

$(12 \times \frac{1}{4} = 3$ weightage$)$

Part II (Short Answer Type Questions)

Answer all **nine** *questions.*

13. What is "Vital Statistics"?

14. What is chain base index number? How is it computed?

15. Define Systematic Sampling.

16. If the regression line of y on x is $y = 11.9 - 0.65\,x$ and that x on y is $x = 16.4 - 1.3\,y$. Find the correlation coefficient.

17. Define Gross Reproduction Rate.

18. Define Fisher's ideal index.

19. Define Bowley's coefficient of skewness.

20. Estimate mode given that mean is 25 and median is 27.

21. What do you mean by regression?

$(9 \times 1 = 9 \text{ weightage})$

Part III (Short Essay or Paragraph Questions)

Answer any **five** *questions.*

22. Explain skewness. What are the different measures of skewness?

23. The following data give the number of finished articles turned out per day by different number of workers in a factory:

No. of articles :	18	19	20	21	22	23	24	25	26	27
No. of workes :	3	7	11	14	18	17	13	8	5	4

Find mean and standard deviation.

24. How do you construct consumer price index number?

25. Draw a Lorenz curve for the following data :—

Income (Rs.) ...	10	15	20	25	30	35
No. of persons ...	4	12	15	18	9	3

26. What are the mathematical properties of Arithmetic mean?

27. Calculate the mode from the following series using grouping and analysis tables :

Marks ...	0–10	10–20	20–30	30–40	40–50	50–60	60–70
No. of students ...	5	7	19	18	16	10	5

28. Draw a histogram to the following frequency distribution :—

Age :	10–15	15–20	20–30	30–40	40–50	50–75	75–100
Frequency :	4	12	20	18	14	25	10

$(5 \times 2 = 10 \text{ weightage})$

Part IV (Essay Questions)

Answer any **two** *questions.*

29. Construct Fisher's Ideal Index for the following data and show how it satisfies. Time Reversal test and Factor Reverse test :

	2002		2003	
Commodities	*Quantity*	*Price*	*Quantity*	*Price*
A	20	12	30	14
B	13	14	15	20
C	12	10	20	15
D	8	6	10	4
E	5	8	5	6

30. Explain the meaning and significance of correlation. Which are the important methods of studying correlation ?

31. From the data given below calculate (i) Gross Reproduction Rate ; (ii) Net Reproduction Rate :

Age Group		Female Population	Female Births	Survival Factor
15–19	...	1400000	15130	0.969
20–24	...	1420000	94150	0.967
25–29	...	1520000	102670	0.963
30–34	∴	1750000	72490	0.958
35–39	...	1450000	31400	0.952
40–44	...	1690000	10640	0.942
45–49	...	1670000	700	0.928

(2 × 4 = 8 weightage)