LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – STATISTICS

FIFTH SEMESTER – APRIL 2013

ST 5506/ST 5502 - APPLIED STATISTICS

Date: 11/05/2013 Dept. No.   Max. : 100 Marks
Time: 9:00 - 12:00

PART – A

Answer **ALL the** questions: (10x2=20 Marks)

1. What are the tests that are to be satisfied by a good index number?
2. Distinguish between weighted and unweighted index numbers.
3. What is the need for time series analysis?
4. What are the merits of simple average method for measuring seasonal variations?
5. Define the term vital statistics.
6. What do you mean by the fertility of a population?
7. Distinguish between partial and multiple correlation coefficients.
8. Write any two properties of multiple regressions.
9. Write any two uses of NSSO.
10. What is labor statistics?

PART – B

Answer any **FIVE** questions: (5x8=40 Marks)

11. Construct Quantity Index numbers taking 2005 as the base:

Commodity	Average Price	Production			
		2005	2006	2007	2008
A	10	62	65	66	90
B	15	138	120	110	80
C	2.5	500	540	580	800
D	22.5	10	10	10	10

12. What is the cost of living index number? How is it constructed?
13. Explain how you would fit a parabolic trend to given time series data.
14. Describe the method of link relatives in evaluating seasonal indices.
15. Describe multiple correlation and its properties.
16. Explain the purpose and procedures for standardizing death rates.
17. Calculate the general fertility rate, total fertility rate and the gross reproduction rate from the following data, assuming that for every 100 girls 106 boys are born.

Age of women	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Number of women	212,619	198,732	162,800	145,362	128,109	106,211	86,753
Age SFR (per 1000)	98.0	169.6	158.2	139.7	98.6	42.8	16.9

18. Explain CSO and their main activities in India.

PART – C

Answer any **TWO** questions: **(2x20=40 Marks)**

19. (a) Discuss briefly the problems faced in the construction of an index number of prices

    (b) What are the uses cost of living index numbers? Explain Aggregate Expenditure method, using an example.

20. (a) Explain the components of time series.

    (b) Explain the method of measuring trend by semi-average method and give an example.

21. (a) Describe the indirect method of standardizing death rates

    (b) Explain life table in detail.

22. (a) Explain the functions of NSSO.

    (b) Write short note on national income statistics and financial statistics.

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