Exam. Code: 0005
Sub. Code: 0446

1029

B.A./B.Sc. (General), 5th Semester

Statistics

Paper – 301: Demography and Economic Statistics

Time allowed: 3 Hours **Max. Marks: 65**

Note: Attempt five questions in all, including Question No. I which is compulsory, and selecting two questions each from Unit I – II.

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I. Attempt the following questions:-

a) What do you understand by infant mortality rate and cause of death rate? (2)

b) Differentiate between additive and multiplicative models of time series. (2)

c) What are limitations of index numbers? (2)

d) Write a note on log normal distribution. (2)

e) What are important properties of Pareto distribution? (2)

f) Distinguish between aggregative and weighted average methods of index numbers. (1½)

g) Discuss price elasticity of demand, in brief. (1½)

UNIT – I

II. Explain crude and standardized death rates. In what way is standardized death rate superior to crude death rate? Give briefly the direct and indirect method of finding standardized death rates. (13)

III. What are various uses of a complete life table? Also discuss the description of this life table. (13)

IV. Explain clearly what is meant by trend of a time series? Describe moving average method for determining trend. Explain how this method is related to the method of fitting curves by the principle of least squares. (13)

V. Calculate seasonal indices by the ratio to moving average method from the following data:-

Year / Quarter	1990	1991	1992	1993
Q_1	75	86	90	100
Q_2	60	65	72	78
Q_3	54	63	66	72
Q_4	59	80	85	93

(13)

UNIT – II

VI. What is an index number? Discuss various problems in the construction of an index number. (13)

P.T.O.

VII. The table below relates to the daily pay of the wage earners on a company's pay roll. Construct an index of daily earnings based on 1980 as base showing the rise of earnings of all employees as on figure –
(Use Laspeyre's and Paasche's formulae)

		April 1980		April 1985	
		Number	**Total Pay (Rs.)**	**Number**	**Total Pay (Rs.)**
1.	Man aged 21 and over	350	2500	300	4200
2.	Women aged 18 and over	400	1600	1200	8000
3.	Youth and Boys	150	450	100	560
4.	Girls	100	250	400	1540
		1000	**4800**	**2000**	**14300**

(13)

VIII. Outline the mathematical tests for an ideal index number. Illustrate these w.r.t. Fisher's ideal number. (13)

IX. Write an essay on the cost of living index number. (13)

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