

D-9/2110

5543-NJ

Applied Statistics
Paper – CSM-233 Semester -III

Note: Students need to attempt any four questions in all. All questions will carry equal marks.

Time: 02:00 hours

Marks: 30

Section – A

I Explain the any two components of time series.

II Fit a linear trend to the following data by the least square method.

Year	1990	1992	1994	1996	1998
Production	18	21	23	27	16

(in thousands)

Also estimate the production for 1999.

III What are seasonal variations? Explain any method of determining these.

IV What are various mathematical models for time series? Discuss.

Section – B

V Describe briefly a method of constructing cost of living index numbers.

VI Discuss the problems faced while constructing an index number.

VII What do you understand by (i) Factor reversal test and (ii) Time reversal test. Prove that Fisher's Index number satisfies both the tests.

VIII Describe demand and supply curves. Mention the use and limitations of these curves.

Section – C

IX (a) Define price elasticity of demand and income elasticity of demand. Point out their uses in economic analysis.

(b) For a data Lasperrey's index number is 120 and fisher's index number is 125. Calculate Paasche's index number.