

B.Sc. (Honours) Examination, 2018
Semester-V
Statistics
Course: BSE-54
(Economic Statistics (BSE-2))

Time : 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin

Answer **any four** questions

1. What is meant by an index number? Describe the different problem faced in the construction of index numbers. 10
 2. What is a chain index? Discuss its advantage and disadvantages over a fixed base index numbers. Show that Fisher's index number lies between Laspeyres' and Paasche's index numbers. 10
 3. (a) Show that Laspeyres' and Paasche's index number may be looked upon as weighted averages of price relatives. 4
(b) What purpose is served by an index number? Show that the factor reversal test and time reversal test are not satisfied by Laspeyres' and Paasche's index numbers. Further, show that both these tests are satisfied by Fisher's ideal index number. 6
 4. Discuss the different components of a time series. What purpose is served by analyzing a time series? 10
 5. Discuss the different methods of determining trend in a time series. What are their relative merits and demerits? 10
 6. Discuss the ratio to trend method for determining seasonal variation in a time series. Discuss how one can fit a polynomial trend equation in a time series. 5+5
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