



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours/Programme 4th Semester Examination, 2023

STSHGEC04T/STSGCOR04T-STATISTICS (GE4/DSC4)

APPLIED STATISTICS

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

Answer any **four** questions from the following

5×4 = 20

1. Write down one advantage and one disadvantage of each of the moving average and the mathematical curve fitting methods for estimating trend. Mention any other method for estimating trend and one advantage of it. (2×2)+1
2. Describe factor reversal test. Give two formula of index number one of which does and does not satisfy the test. 2+(1½×2)
3. What do you mean by Statistical Quality Control (SQC)? Describe a typical control chart with a pictorial illustration. 2+3
4. Discuss the construction of standardised death rate (SDR). 5
5. State the Edgeworth-Marshall's formula for the price and quantity index. Mention the advantages of chain based method over the fixed base index. 3+2
6. Define gross and net reproduction rates. 5

Answer any **two** from the following questions

10×2 = 20

7. Discuss with examples seasonal and cyclical fluctuations in a time series. Describe the method of ratio-to-moving average in measuring seasonal fluctuations. 2+2+6
8. (a) Distinguish between process control and product control. 4+6
(b) Explain when and how we use fraction defective chart.
9. (a) What is a consumer price index number (CPI)? 3+3+4
(b) Mention important uses of CPI.
(c) Write in short, major steps in the construction of CPI for jute mill workers in West Bengal.
10. Define general, age-specific and total fertility rates. Compare them briefly. 6+4

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