WEST BENGAL STATE UNIVERSITY
B.Sc. Honours/Programme 4th Semester Examination, 2020

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. Define Infant Mortality Rate and mention its uses.	5
2. What is a time series? Discuss with examples, different components of a time series.	2+3
3. Describe age-specific death rate. Find its merits and demerits.	2+3
4. What do you mean by 'process control' and 'product control'?	5
5. What are price index numbers? Discuss the issue of selection of base period for a price index number.	2+3
6. What is a chain index numbers? Discuss its advantages and disadvantages over fixed-based index number.	2+3

Answer any *two* questions from the following	10×2 = 20
7. Describe different tests associated with Index number. Show that Fisher's ideal index number satisfies these tests.	10
8. Discuss the determination of seasonal indices by method of ratio to trend.	10
9. (a) Discuss about control limits for a *p*-chart with assumptions. Give examples of defects for which *p*-chart is applicable.	5+5
(b) Describe the construction of mean chart when standards are not specified.	
10.(a) In the usual notations, show that $q_x = \dfrac{2m_x}{2+m_x}$.	5+5
(b) Discuss gross and net reproduction rate as measures of population growth.	

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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