UNIVERSITY OF NORTH BENGAL

B.Sc. Programme 6th Semester Examination, 2021

DSE2-STATISTICS

Full Marks: 60

ASSIGNMENT

The figures in the margin indicate full marks.
All symbols are of usual significance.

1. Answer any ***four*** questions from the following: 3×4 = 12

   (a) What do you mean by time series?

   (b) What are the different components of a time series?

   (c) What are the two different relationships among different components of a time series?

   (d) Write down the uses of time series.

   (e) Write down the different measurement of trend.

   (f) What do you mean by irregular fluctuation?

2. Answer any ***four*** questions from the following: 6×4 = 24

   (a) Explain the necessity of analyzing time series data.

   (b) Write down the merits and demerits of moving average method.

   (c) Reduce the trend equation $y_t = 144 + 8t$ (origin at 1995 and unit of t is 1 year) for yearly totals to quarterly trend equation.

   (d) Write down the merits and demerits of fitting mathematical curve.

   (e) Trend equation for certain production data is $y = 240 + 36x$, where y = annual production and x = time with origin at year 1980, unit 1 year. Estimate the trend value for March 1982.

   (f) Discuss the various uses of seasonal index in time series analysis.

3. Answer any ***two*** questions from the following: 12×2 = 24

   (a) Write a note on the different components of a time series.

   (b) Describe the various methods used in isolating secular trend in time series.

   (c) Describe the ratio-to-moving average method for computing a seasonal index for time series data.

   (d) Write a short note on methods of monthly averages and ratio-to-trend method.

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