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FIFTH SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2020 (CUCBCSS-UG)
(Regular/Supplementary/Improvement)
CC15U ST5 D01 - ECONOMIC STATISTICS
(Statistics - Open Course)
(2015 Admission onwards)
Time: Two Hours
Maximum: 40 Marks

## Use of Calculator is permitted

## Section A

Answer all questions. Each question carries 1 mark.

1. An increase in the sale of Air Conditioner in summer is an example of $\qquad$ component of a time series
2. ----------------- index number is the geometric mean of Laspeyre's and Paasche's index numbers
3. $\qquad$ Index Number uses current year quantity as weight.

State True/False:
4. All Moving Averages are centered.
5. All Index Numbers satisfies Unit test.

## Section B

Answer all questions. Each question carries 2 marks.
6. State Additive and Multiplicative models used in time series.
7. Briefly explain any two uses of analysis of time series.
8. For a set of five values $12,16,19,20,14,23$ compute three year moving averages.
9. State Time Reversal Test and Factor Reversal Test of Index Numbers.
10. Define Simple Aggregative Index Number.
( $5 \times 2=10$ Marks)

## Section C

Answer any three questions. Each question carries 5 marks.
11. Explain the method of finding seasonal indices using method of ratio to moving averages.
12. Define Index Numbers. Explain the uses of Index Numbers.
13. Compute seasonal indices from the following data using the method of simple average

| Year | Import of Tea (in ‘000 tons) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Quarter I | Quarter II | Quarter III | Quarter IV |
| 1995 | 130 | 125 | 120 | 143 |
| 1996 | 131 | 126 | 123 | 146 |
| 1997 | 134 | 124 | 121 | 141 |
| 1998 | 136 | 129 | 126 | 149 |
| 1999 | 140 | 131 | 128 | 151 |

14. Explain the difference between Fixed Base and Chain Base Index Numbers.
15. Define Cost of Living Index Number. Construct the Cost of Living Index Number from the following data:

| Group | A | B | C | D | E |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Index | 350 | 200 | 240 | 150 | 250 |
| weight | 5 | 2 | 3 | 1 | 2 |

( $\mathbf{3 \times 5} 5 \mathbf{1 5}$ Marks)

## Section D

Answer any one question. The question carries 10 marks.
16. Define Time Series. Explain the components of Time Series.
17. Compute Laspeyre's, Paasche's and Fisher's Index Number using the following data:

| Items | Base year |  | Current year |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Price | Quantity | Price | Quantity |
| A | 10 | 12 | 12 | 15 |
| B | 7 | 15 | 5 | 20 |
| C | 5 | 24 | 9 | 20 |
| D | 16 | 5 | 14 | 5 |

( $\mathbf{1 \times 1 0 = 1 0}$ Marks)

