

U.G. 4th Semester Examination - 2021**STATISTICS****[HONOURS]****Course Code : STAT-H-CC-T-10****[Economic Statistics]**

Full Marks : 20

Time : 1 Hour

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.**Notations and symbols have their usual meaning.***Answer all the questions.**

1. Answer any **five** questions: $1 \times 5 = 5$
- What are Giffen goods?
 - What is the difference between weighted price index and weighted average of price relatives'?
 - What is the difference between a weakly stationary process and a strictly stationary process?
 - What is a moving average process?
 - Define price elasticity of demand.

- How an annual trend equation is converted to a quarterly trend equation for even and odd number of years?
- What is the necessity of cost of living index number?
- What is partial autocorrelation function?

2. Answer any **one** question: $5 \times 1 = 5$

- Explain time reversal test and factor reversal test. Which index number formula satisfies both the tests? Justify your answer.
- Write a note on chain base index number.
- Write a note on AR(2) process.

3. Answer any **one** question: $10 \times 1 = 10$

- Discuss income and substitution effects on demand for normal goods, inferior goods and Giffen goods.
 - Discuss how Engel curve is estimated.
- Show that Laspeyres' and Paasche's index numbers can be represented as weighted averages of price relatives.
 - What is purchasing power of money?

 $6+4$ *[Turn over]*

How real wages can be determined using a price index? Give a comparison between Wholesale price index number and Cost of living index number. 5+5

- c) i) What is a stationary time series? What is autocorrelation function? Write down the model for the MA(2) process and derive the autocorrelation function for it.
- ii) Briefly discuss the method of exponential smoothing. 6+4

(Internal Assessment : 5)
