

U.G. 4th Semester Examination - 2020**STATISTICS****[HONOURS]****[Economic Statistics]****Course Code : STAT(H)-CC-T-10**

Full Marks : 40

Time : $2\frac{1}{2}$ Hours*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.*

1. Answer any **five** questions: $2 \times 5 = 10$
- What is Engel's law?
 - Is stationarity a desirable property for a time series process? Explain.
 - What is the difference between the moving average method with odd number of time points with that having even number of time points?
 - What is the sum of weights in exponential smoothing?
 - Explain what you mean by auto covariance function.

[Turn Over]

- What is weekly stationary time series?
 - Give an overview of fitting a demand curve.
 - What is meant by auto regressive model? Why is it needed in time series analysis?
2. Answer any **two** questions: $5 \times 2 = 10$
- Given that the cost of living index of 2004 with 1991 as the base year is 250, will a person attain same level of satisfaction if his income rises to Rs. 12000 in 2004 as compared to Rs. 5000 in 1991? Explain.
 - Describe the steps regarding the choice of base period and the choice of commodities in connection with the construction of index numbers.
 - Write a note on exponential smoothing.
 - What is income elasticity of demand?
3. Answer any **two** questions: $10 \times 2 = 20$
- What is cost of living index number?
 - How can one construct the cost of living index number for middle class families of Hyderabad? $4 + 6$
 - Compare the performance of Laspeyre's and Pasche's formula for estimating the true cost of living index number.

- ii) Briefly discuss which one of the above two has upward bias and which has downward bias and why? 6+4
- c) i) Discuss the different components of a time series.
- ii) Write a note on correlogram. 6+4
- d) i) What do you mean by price elasticity of demand? Explain with an example.
- ii) Briefly discuss how you will fit a demand curve with a given elasticity. 6+4
