

U.G. 4th Semester Examination - 2021**STATISTICS****[HONOURS]****Generic Elective (GE)****Course Code : STAT-H-GE-T-2****[Applied 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.*

1. Answer any **five** questions: 1×5=5
- Define rate of a vital event.
 - Write down Paasches' index number formula. Mention its differences with Laspeyre's index number formula.
 - How would you detect that a process is "out of control"?
 - What is seasonal fluctuation in time series data?
 - What does GRR interpret?

- What is wholesale price index number?
- Write down two limitations of index number.
- What is Infant Mortality Rate?

2. Answer any **one** question: 5×1=5
- Why it is necessary to choose proper weights to define an index number?
 - Discuss ratio-to-trend method to measure seasonal variations.
 - What is the difference between 'defect' and 'defective'? Describe p chart in the context of process control.
3. Answer any **one** question: 10×1=10
- What is life table? Discuss the different columns of a complete life table.
 - Discuss different index number formulas in the light of tests they satisfy.
 - Describe the components of a time series. Describe curve fitting method to detrend a time series.

(Internal Assessment : 5)
