

U.G. 5th Semester Examination - 2021**STATISTICS****(HONOURS)****Course Code : STAT(H)CC-11****[PRACTICAL]****Statistical Inference-II (Lab)**

Full Marks : 25(20+5)

Time : 2 Hours

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

1. A random sample of size 10, drawn from a normal population with unknown mean μ and standard deviation 3.85, yields the following observations:

34.25, 32.33, 29.47, 30.82, 38.66, 35.10, 37.63,
28.77, 27.19, 31.51.

Using Likelihood Ratio approach, decide at 5% level of significance whether you accept or reject the null hypothesis $H_0: \mu=30.00$ against the alternative $H_1: \mu=30.00$. In case H_0 is rejected, give a 95% confidence interval for μ . 5

2. X follows Poisson distribution with parameter θ . Find the SPRT of $H_0: \theta=1$ against $H_1: \theta=2$ with

$\alpha=\beta=0.1$. Carry out the test if the following values of X are observed sequentially:

1, 1, 3, 0, 2, 2, 1, 4, 1, 0, 2.

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3.	Practical Note Book	5
4.	Viva-voce	5

[Internal Assessment: 5]
