School of Liberal Arts
Economics
ETE - Jun 2023

Time : 3 Hours   **Marks : 50**

Sem II - ECO5059 - Econometrics
Your answer should be specific to the question asked
Draw neat labeled diagrams wherever necessary

1. A dice is thrown 9000 times and a throw of 3 or 4 is observed 3240 times. Show that the dice cannot be regarded as an unbiased one and demonstrate the limits between which the probability of a throw of 3 or 4 lies.   K2 CO3 (2)

2. Interpret the types of error in hypothesis testing   K2 CO2 (2)

3. Explain the reasons if the following probability distribution is admissible   K2 CO2 (2)

Value of X	-1	0	1
Probability	0.4	0.4	0.3

4. Define mathematical expectation; how it is associated with arithmetic mean   K1 CO1 (2)

5. Associate the binomial distribution and Poisson distribution   K1 CO1 (2)

6. The average hourly wage of a sample of 150 workers in a plant 'A' was Rs. 2·56 with a standard deviation of Rs. 1·08. The average wage of a sample of 200 workers in plant 'B' was Rs. 2·87 with a standard deviation of Rs. 1·28. Can an .applicant safely assume that the hourly wages paid by plant 'B' are higher than those paid by plant 'A' ?   K3 CO4 (6)

7. Illustrate the properties of normal distributionn with the help of suitable examples   K3 CO3 (5)

8. A random variable X has the following probability function   K3 CO1 (5)

Value of X	-2	-1	0	1	2	3
Probability	0.1	0.2	0.3	0.2	0.1	0.1

Compute the mean and variance

9. Critically evaluate the Autocorrelation, Heteroscedasticity and Linearity assumption of OLS Estimator.   K5 CO4 (8)

10. The average weekly sales of cloths was 146·3 per store. After advertisement the average weekly sales in 22 stores for aweek increased to 153·7 and showed a standard deviation of 17·2. Was the advertising campaign successful?   K4 CO3 (8)

11. The theory predicts the proportion of beans in the four groups A, B, C and D should be 9 : 3 : 3 : 1. In an experiment among 1600 beans, the numbers in the four groups were 882, 313, 287 and 118. Does the experimental result support the theory   K4 CO2 (8)