

School of Liberal Education**Bachelor of Arts Honours in Economics
Semester End Examination - Jun 2024****Duration : 180 Minutes
Max Marks : 100****Sem IV - K1UB407C - Advance Statistics***General Instructions**Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Four cards are drawn at random from a pack of cards. Find the probability of getting a king or a queen. K1(2)
- 2) Differentiate between discrete and continuous probability distributions. K2(4)
- 3) Describe how the poisson distribution is a limiting case of binomial distribution and the circumstances in which it is used. K2(6)
- 4) Discuss the practical implications of understanding sampling distributions in statistical analysis. K3(9)
- 5) Describe the process of finding Z-scores and discuss their significance in statistical analysis. Provide an example to illustrate their use. K3(9)
- 6) Elaborate on the concept of constructing confidence intervals for a population variance. Discuss the implications of having a wider or narrower interval. K5(10)
- 7) Discuss the application of the F-test and ANOVA in statistical analysis. Provide an example where a one-way ANOVA would be suitable, and explain the interpretation of the results. K4(12)
- 8) Explain the characteristics of the standard normal distribution. Describe how normal areas are computed and how they are used in statistical analysis. K5(15)
- 9) How can you use the binomial distribution to calculate cumulative probabilities? K5(15)
- 10) What is the z-score, and how is it used in the normal distribution? K6(18)