Q1.

a) Load the set of data "airquality" in the package "datasets" in R.

b) Compute summary measurements for the quantitative variables and interpret your results. (Note: Avoid the effect of missing values if they exist)

c) Identify the shape of the distributions of the quantitative variables using a suitable graphical method and comment on your findings.

d) According to the results obtained in part c, name a suitable variable that can be approximated to normal distribution.

e) Compute a 95% confidence interval for the variable mentioned in part (d) and interpret your result.

Q2.

a) Generate a set of 100 random data from a normal distribution with mean and variance, 10 and 2 respectively.

b) Estimate the 95% confidence interval for the data and interpret the interval.

Q3.

a) Load the data set named "Milk" in the package "nlme" in R.

b) Assuming the population standard deviation is 0.3; compute the 95% confidence interval for the population mean of protein level.

c) Calculate the margin of error and estimate interval for the diet type "barley" proportion at 95% confidence level.