Q.1 A sample of 100 students is taken from a large population. The mean height of the students in this sample is 160 cm. Can it be reasonably regarded that, in the population, the mean height is 165 cm and the SD is 10 cm?

Q.2 The mean breaking strength of the cables (5)
supplied by a manufacturer is 1800 with
SD of 100. By a new technique in the
manufacturing process, it is claimed that th
breaking strength of the cable has increased.
To test this claim, a sample of 50 cables
is tested and it is found that the mean
breaking strength is 1850. Can we support
the claim at 1% LOS?

Q.3 A random sample of 50 items gives the mean 6.2 and SD 10.24. Can it be regarded as drawn from a normal population with mean 5.4 at 5% LOS?

Q.4 The mean height of a random sample of 1000 individuals from a population is 160. The SD of the sample is 10. Would it be reasonable to suppose that the mean height of the population is 165?

Q.5 The mean value of a random sample of 60 item was found to be 145, with a standard deviation of 40. Find the 95% confidence limits for the population mean. What size of the sample is required to estimate the population mean within 5 of its actual value with 95% or more Confidense, using the sample mean?