

ASSIGNMENT – III

Q1: The mean yield for one acre plot is 562 kilos with SD of 28 kilos. Assuming normal distribution, how many one acre plots in a batch of 1000 plots would you expect to yield

- a) over 600 kilos
- b) below 550 kilos

Q 2: The average heights of group of trees is 40 m with standard deviation 5 m. It is decided to sample the cluster so that 90 % of the sample trees are within 1 m of the average, Find the minimum sample size.

Q3: Total area of a plantation is 37 ha. Measurements of volumes have been taken in 12 sample plots of 0.02 ha area each. Data gathered is as follows:

| | | | | | | | | | | | | |
|------|-----|-----|-----|-----|---|-----|---|-----|-----|-----|-----|-----|
| Plot | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Vol. | 4.7 | 4.4 | 3.8 | 5.1 | 4 | 4.6 | 4 | 4.6 | 4.8 | 6.1 | 5.6 | 4.3 |

(in cum)

Find out confidence limit for total volume with 95% probability. Assume that population and sample distribution is normal.