

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)

Chromepet, Chennai - 600 044.

B.Sc.Statistics - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - VI

23USTET6001 - Statistical Quality Control

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Discuss the merits of Quality control techniques in industry.
2. Explain the concept of 3 sigma and warning limits.
3. Describe the criterion for detecting lack of control in \bar{X} and R charts.
4. Write a note on basis of subgrouping.
5. Distinguish between p and np chart.
6. Explain consumer's risk and producer's risk.
7. Give a brief note on ATI in single sampling plan.
8. Analyse about SPRT.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Explain causes of quality variation and application of runs in quality control.
10. Elucidate the construction of X bar and R chart.
11. Sketch out the purpose of control charts for attributes and the construction of c-chart.
12. Explain the procedure of double sampling plan and explain its OC function.
13. Determine OC curve for the one sided specification in acceptance sampling plan when sigma is known.
