B.Sc. DEGREE EXAMINATION,NOVEMBER 2019
III Year VI Semester
Statistical Quality Control and Reliability

Time : 3 Hours   **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. Define SQC.
2. Define Control chart.
3. State the control limits for X-bar chart.
4. When to use the control charts for attributes?
5. Expand LTPD.
6. What do you mean by consumer's risk?
7. Define sequential sampling plan.
8. Define variable sampling plans.
9. Mention any two failure time distribution.
10. Define Reliability.
11. What is the difference between chance cause and assinable cause.
12. Define ASN.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. State the benefits of SQC.
14. Explain about p- chart.
15. Discuss the single sampling plan.
16. Describe in detail about SPRT.
17. Explain about bath tub curve and its uses.
18. Explain about parallel and standby systems.
19. Discuss the control chart for number of defects per unit.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Discuss the major parts of a control chart.

21. Obtain the control limits for $\overline{X}$ chart.

22. Obtain Average Sample Number (ASN) and Average Total Inspection (ATI) of Double Sampling Plan.

23. Derive the formula for 'n' and 'k' when sigma is known for one-sided specification.

24. Derive the reliability hazard rate, function , MTTF when the failure time distribution follows Weibull distribution.

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