2709N580

Candidate's Seat No :_____

B.Sc Sem.-6 (Rep) Examination

CC 309

Statistics

Time : 2-30 Hours] **September-2024** **[Max. Marks : 70**

Q.1 (A) Write a note on theory of run and its application to detecting the lack of control. **(07)**

(B) Explain the concept of 3σ limits in statistical quality control. **(07)**

OR

(A) What is quality and statistical quality control. Discuss its importance. **(07)**

(B) What is variation in quality? Explain the type of variation in quality of product. **(07)**

Q.2 (A) Explain the construction of $\bar{X}$ -chart and σ-chart. **(07)**

(B) Explain the difference between charts of variable and attributes. **(07)**

OR

(A) Write a note on p-chart and np-chart. **(07)**

(B) What is chart for variable? Explain the chart for number of defect per unit. **(07)**

Q.3 (A) Define the acceptance sampling plan. State its advantages and limitations. **(07)**

(B) Write a short note on OC curve. **(07)**

OR

(A) In a single sampling plan with parameters (1000, 100, 2), calculate ATI, AOQ, ASN producer risk, and consumer risk for a fraction defective of 2%. **(07)**

(B) What is double sampling plan? state its advantage. **(07)**

Q.4 (A) What is operating characteristics curve? Explain how OC curve obtain for single sampling plan. **(07)**

(B) Write a short note on AQL and LTPD. **(07)**

OR

(A) What is sampling plan by variable? Explain the one-sided specification (Upper when is given) when σ is Unknown **(07)**

(B) Explain the single sampling plan with example. **(07)**

P.T.O

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Q.5 Answer the following Question. (Any Seven). **(14)**

1. Single sampling plan
2. Average Outgoing Quality (single sampling)
3. Average total inspection (ATI)
4. Probability of acceptance lot P_a.
5. Producer Risk and Consumer Risk
6. Define lower spots in attribute chart.
7. What does C-chart indicate.
8. Which control chart should be used before constructing $\bar{X}$-Chart.
9. State an example of chance cause.
10. Control limit
11. Modified limit
12. Quality Control
13. When the process is said to be out of control even if all the points are within the control limits?
14. Define the specified limits.

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