20P364 (Pages: 1) Name……..

Reg. No……..

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

(CBCSS-PG)

(Regular/Supplementary/Improvement)

CC19P ST3 E10 - STATISTICAL QUALITY CONTROL

(Statistics)

(2019 Admission onwards)

Time: Three Hours Maximum: 30 Weightage

Part A

Answer any ***four*** questions. Each question carries 2 weightage.

1. Briefly explain process capability analysis.
2. Describe C chart.
3. Explain average run length.
4. Distinguish between statistical process control and product control.
5. What is mean by Quality?
6. State the advantages and disadvantages of acceptance sampling plan.
7. Explain trial control limits and modified control limits.

(4 × 2 = 8 Weightage)

Part B

Answer any ***four*** questions. Each question carries 3 weightage.

8. Compare CSP I and CSP II.
9. Explain the significance of CUSUM Chart.
10. Define OC of a sampling plan. For what purpose it is used.
11. How will you prepare median chart?
12. Describe multiple sampling plan.
13. Explain the construction of p chart for the fraction of non-conforming units.
14. What is total quality management? Explain the concept of 3σ limit.

(4 × 3 = 12 Weightage)

Part C

Answer any ***two*** questions. Each question carries 5 weightage.

15. How will you set up control limits for R Chart and mean chart? Explain.
16. Explain variable sampling plan for mean when there is only lower specification limit with σ unknown.
17. Describe EWMA chart for monitoring the process mean.
18. Describe single and sequential sampling plan in quality control and discuss their relative merits and demerits.

(2 × 5 = 10 Weightage)

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