

2209T122

**B. Voc. Tool and Die Manufacturing**  
**Subject: Statistical Quality Control**  
**Subject Code: CBSC-110**  
**Semester: Fifth**  
**Session: - September 2022**  
**Theory (External): 35 Marks**  
**Time: 03 Hours**

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**Instructions to the Students**

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labeled

**Roll Number**

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**SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)**  
(10x1= 10 Marks)

- A. What is mean by mode?
- B. What is the statistical average?
- C. What do you mean by SQC?
- D. Explain c charts for no. of defects.
- E. Explain ISO 9000.
- F. What are the disadvantages of acceptance sampling by variables.
- G. Give interpretation of 'low spot' on C chart.
- H. State any two advantage of sampling inspection.
- I. Distinguish between control and quality control?
- J. Write a short note on warning limits.

**SECTION –B (ESSAY TYPE QUESTIONS)**  
(5x5= 25 Marks)

1. What do you mean by standard deviation? Explain its usefulness. Highlight its important properties.
2. Under what circumstance Poisson distribution is observed?
3. Distinguish clearly between the Binomial and Poisson distribution?
4. Discuss briefly SQC needs and utility in industry? Discuss the causes of variation in quality?
5. What are the three components of the ISO 9000:2005 standard?
6. Draw an OC curves for the single sampling plan  $N=2000$ ,  $n=100$ ,  $c=1$  by taking  $p=0.01, 0.05, 0.07, 0.09$ . Also explain how you will obtain producer's risk for AQL 2% using OC curves.
7. Distinguish between chance causes and assignable cause of variation.
8. What do you mean by double sampling plan? How it is different from single sampling plan.

==END OF PAPER==