

- The following data shows defects found during 100% inspection of different components produced by the same mould in injection moulding process.

Day	Part No	No of Defects	Day	Part No	No of Defects
1	A	16	3	C	47
	A	10		C	45
	A	15		C	53
	A	8		C	41
2	A	12		C	48
	B	24	4	D	6
	B	21		D	8
	B	28		D	10
	B	35		D	9
B	27	D		11	

Develop a suitable control chart to arrive at the control limit and comment about the process. [10]

- A machine has three heads and the following data shows the dimension of 15 round of production. Analyze the data with a suitable control chart method.

Round	Head 1	Head 2	Head 3
1	50	51	49
2	46	50	50
3	51	46	50
4	49	50	53
5	53	51	52
6	53	50	48
7	46	49	50
8	52	54	48
9	55	50	54
10	47	48	50
11	46	48	49
12	50	50	51
13	48	55	53
14	49	51	53
15	51	52	50

Submit the control limit and comment about the process. [10]

3. Calculate the AQL and LTPD of the following sampling plans and comment about their performance.

a) $n = 5, c = 0$

b) Chain sampling plan, $n=5, i=3$ [10]

4. Compute the AQL, LTPD and AOQL values of the following continuous sampling plan

$i = 50, f = 1/3$ [10]

5. Submit the first three sequential sampling plan for the following values

$p_1 = 0.02, p_2 = 0.10, \alpha = 05, \beta = 0.10$ [10]