

U.G. 5th Semester Examination - 2021**STATISTICS****(HONOURS)****Discipline Specific Elective (DSE)****Course Code : STAT(H)DSE-1****[PRACTICAL]****(Statistical Quality Control-Lab)**

Full Marks : 25(20+5)

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give answers in their own words as far as practicable.**Notations and symbols have their usual meaning.*

1. Suppose a tyre supplier ships tyres in lots of size 400 to the buyer. A single sampling plan with $n = 15$ and $c = 0$ is being used for the lot inspection. The supplier and the buyer's quality control inspector decide that $AQL = 0.01$ and $LTPD = 0.10$. Compute the producer's risk and consumer's risk for this single sampling plan. 4
2. Weld defects occasionally occur in automobiles. An automobile manufacturing company collects 20 random samples each of size 50 metal sheets to be used for the manufacturing process. The samples

are taken during a certain period of time. The number of sheets with weld defects are given below:

Sample	No. of defective sheets	Sample	No. of defective sheets
1	4	11	2
2	3	12	6
3	1	13	0
4	0	14	2
5	5	15	1
6	2	16	6
7	3	17	2
8	1	18	3
9	4	19	1
10	2	20	5

Construct a p-chart and comment on the state of control. 6

3. Practical Note book. 5
4. Viva-voce 5

[Internal Assessment: 5]

[Turn Over]