

Mansoura university

final 1st term exam (January 2013)

Faculty of engineering

QUALITY CONTROL (WEAVING)

Textile engineering Dept. 4th year

Answer the following questions

- 1 – Classify all types of control charts showing a guide for selection of method of analysis
- 2 – what are the main advantages of using quality control charts ?
- 3 – describe with drawing the different cases that you can conclude the process out of control
- 4 – construct the suitable control chart for the following data, does the process exhibit a state of statistical control ?

Production in units per day	% of second quality	Production in units per day	
600	5	600	4
610	5.2	610	4.2
590	5	590	5
595	5.2	595	5.2
605	5	605	8
610	5.2	610	4.8
600	5	600	5
610	5.2	610	5
590	5.2	590	5.2
595	5	595	5
605	5.2	605	5.2
610	8	610	8

- 5 – calculate the \bar{X} and \bar{R} control limits for the data in the following table. And construct the control charts . Does the process exhibits a state of statistical control.

n	2	3	4	5	6	7	8	9	10
d2	1.128	1.693	2.059	2.326	2.534	2.704	2.847	2.97	3.0775
A2	1.88	1.023	0.729	0.577	0.483	0.419	0.373	0.337	0.308

(1)

المسألة ورقية

		Tenacity	Grams / denier		
1	2.1	2.2	2.1	2.2	2.1
2	2.2	2.2	2.2	2.2	2.2
3	2.3	2.2	2.3	2.2	2.3
4	2.2	2.2	2.2	2.2	2.2
5	2.1	2.2	2.1	2.2	2.1
6	2.2	2.2	2.2	2.2	2.2
7	2.3	2.3	2.3	2.3	2.3
8	2.2	2.1	2.2	2.1	2.2
9	2.2	2.2	2.2	2.2	2.2
10	2.2	2.3	2.2	2.3	2.2
11	2.2	2.3	2.2	2.3	2.2
12	2.2	2.2	2.2	2.2	2.2
13	2.1	2.1	2.1	2.1	2.1
14	2.2	2.1	2.2	2.1	2.2
15	2.2	2.1	2.2	2.1	2.2
16	2.3	2.3	2.3	2.3	2.3
17	2.2	2.2	2.2	2.2	2.2
18	2.1	2.1	2.1	2.1	2.1
19	2.2	2.2	2.2	2.2	2.2
20	2.2	2.2	2.2	2.2	2.2

Tenacity of 150 Denier Viscose Rayon at standard conditions

With my best wishes

Dr. Eng. Aly Saker

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