

Quality Methods

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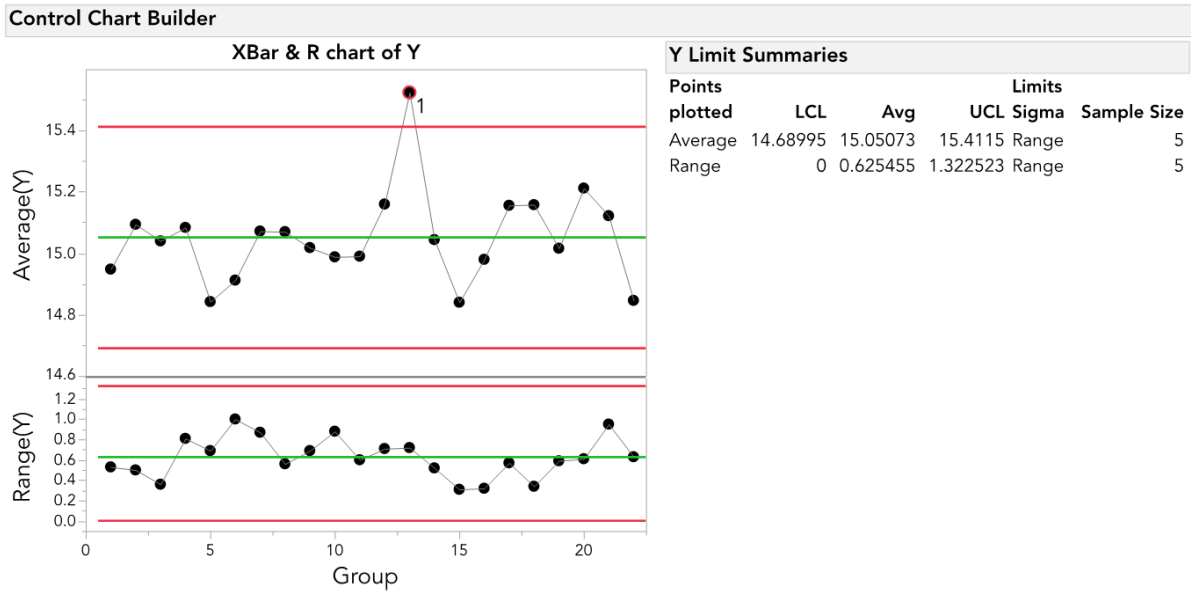
Started on	Tuesday, June 2, 2020, 7:36 PM
State	Finished
Completed on	Tuesday, June 2, 2020, 7:43 PM
Time taken	7 mins 49 secs
Grade	90 out of 100

Question
1

Incorrect

0 points out of 10

Use the control chart shown below to answer this question. This process can be best described as which of the following?



Select one:

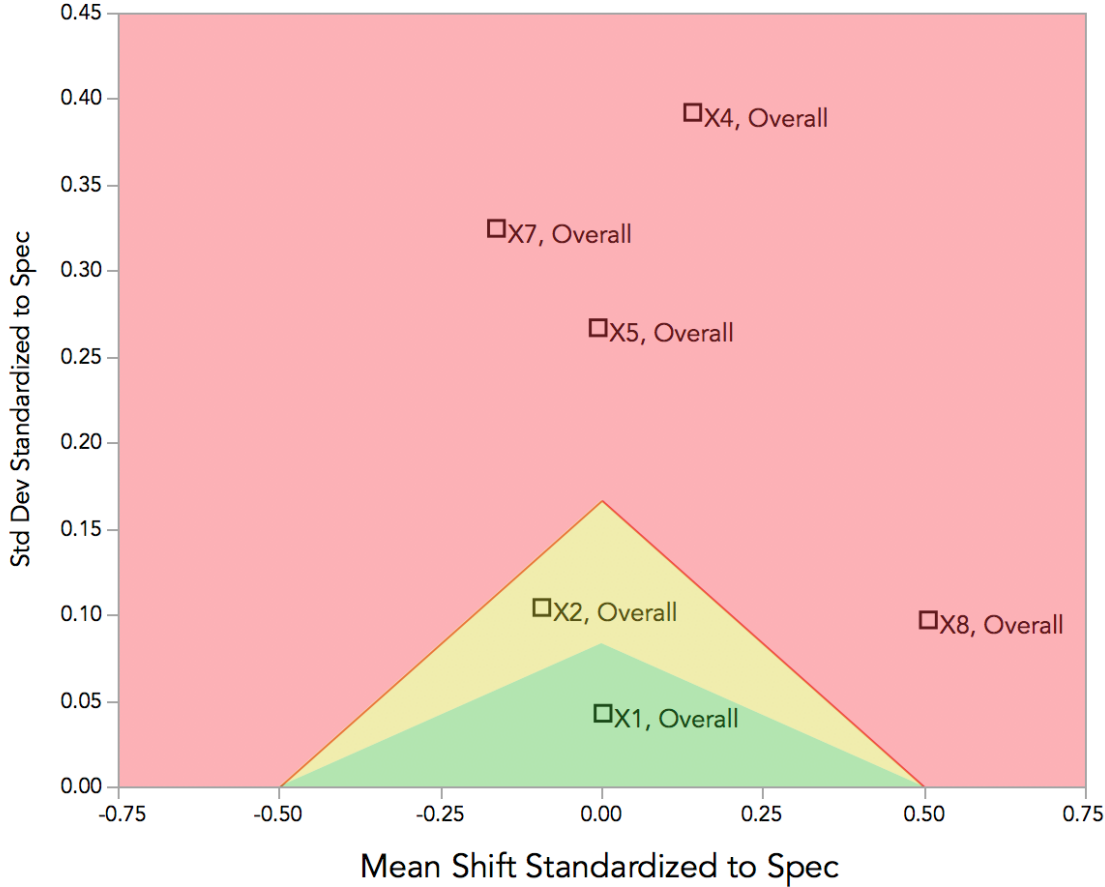
- ☒ a. stable ❌
- ☐ b. capable
- ☐ c. in control
- ☐ d. unstable

Question
2

Correct

10 points out of 10

A capability study was conducted for six variables. Use the goal plot below to answer this question. Which of the following statements is true?

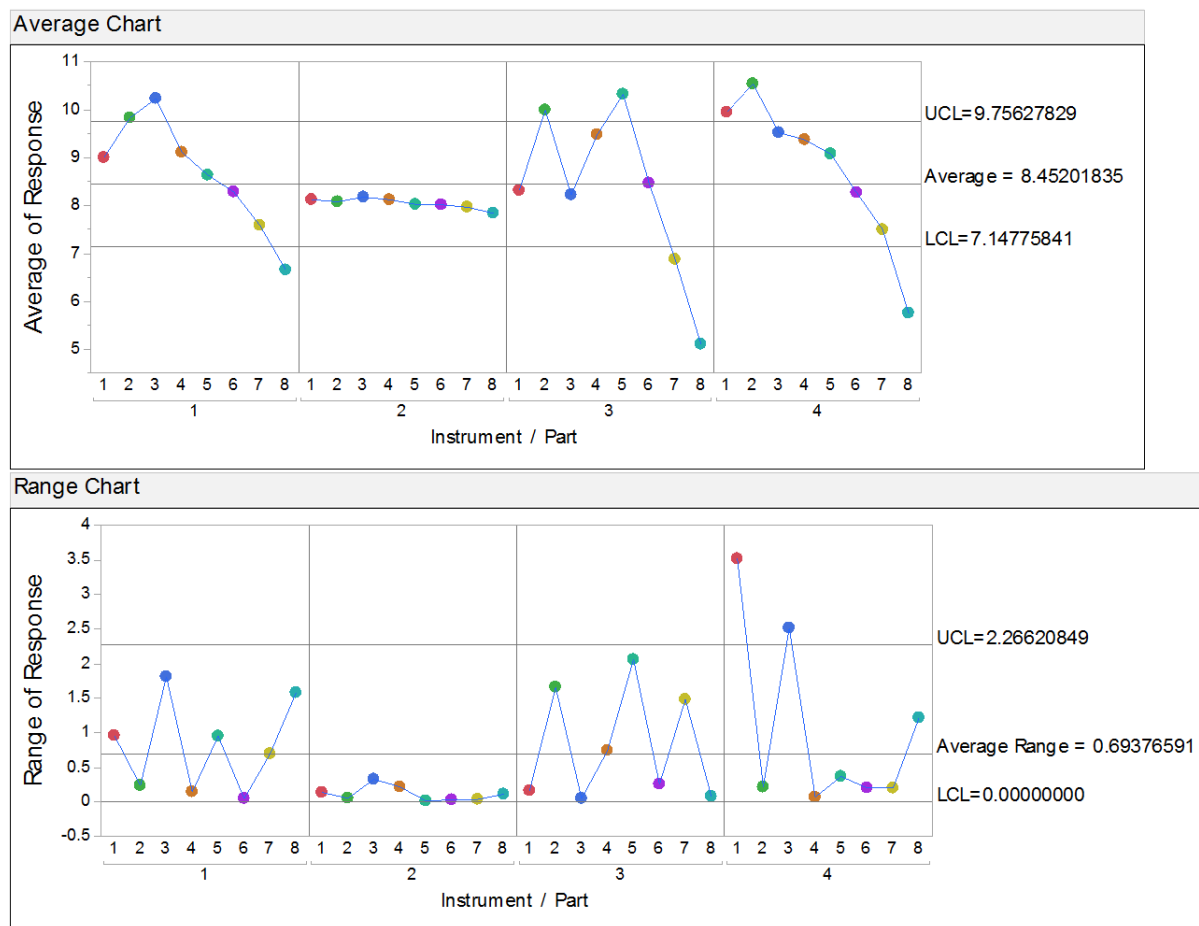


Question 3

Correct

10 points out of 10

In a measurement system study, four measurement instruments are studied. Eight parts spanning the range of possible measurements were measured twice with each of the four instruments. The results are shown using the Average and Range chart below. Which of the following statements is true?



Select one:

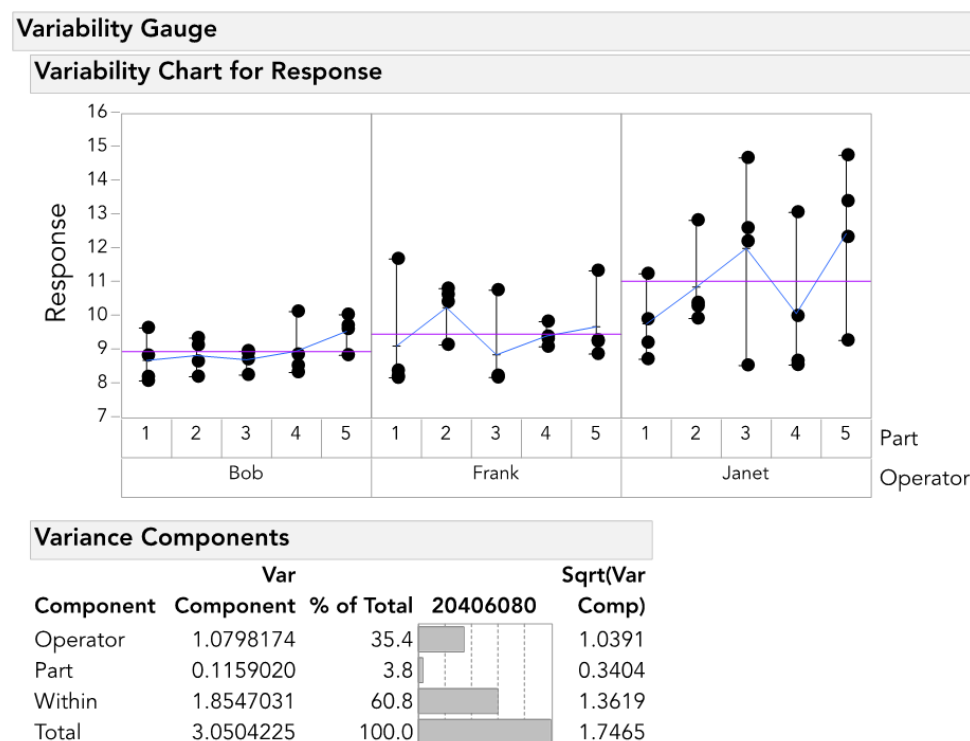
- ☐ a. Instrument 3 is biased.
- ☐ b. The measurement system is capable.
- ☒ c. Instrument 2 is incapable of detecting the difference between the parts. ✓
- ☐ d. For a given part, all four instruments are producing the same measurement on average.

Question 4

Correct

10 points out of 10

An MSA was conducted with three operators and five parts. Each operator measured each part four times. Based on the output shown, what can you conclude?



Select one:



Question 5

Correct

10 points out of 10

What are five characteristics that can be studied in a measurement system study?

Select one:

- ☒ a. bias, reproducibility, linearity, stability, and repeatability ✓
- ☐ b. reproducibility, bias, gauge, linearity, and repeatability
- ☐ c. repeatability, stability, reproducibility, homogeneity, and bias
- ☐ d. linearity, capability, bias, repeatability, and reproducibility

Question 6

Correct

10 points out of 10

Which of the following statements about a stable process is true?

Select one:

- ☐ a. A stable process has an acceptable amount of variation.
- ☐ b. A stable process represents the voice of the customer.
- ☐ c. A stable process meets customer expectations.
- ☒ d. A stable process is predictable. ✓

Question 7

Correct

10 points out of 10

Which situation would indicate that the process is centered within the spec limits?

Select one:

- ☐ a. C_{pk} is greater than C_p .
- ☐ b. C_{pk} is negative.
- ☒ c. C_p is equal to C_{pk} . ✓
- ☐ d. C_p is greater than C_{pk} .

Question 8

Correct

10 points out of 10

How are the control limits on an individuals chart calculated?

Select one:

- ☐ a. using an estimate of the overall standard deviation of all the data
- ☐ b. using an interval of ± 2 standard deviations from the mean
- ☒ c. using an estimate of the standard deviation from the moving ranges ✓
- ☐ d. using the customer specification limits

Question 9

Correct

10 points out of 10

Which statistic is referred to as the *potential process capability*?

Select one:

- ☐ a. P_{pk}
- ☐ b. C_{pk}
- ☒ c. C_p ✓
- ☐ d. C_{pm}

Question 10

In a capability study, C_{pk} is 1.0 and C_p is 1.3. Which of the following statements is true?

- ☒ d. The spec limits are wider than the process spread. ✓