Assignment - 07

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2018-09-26, 23:59 IST.

1) The 3-sigma upper limit for a control chart for average number of nonconformities per unit, is expressed by _________________.

- $UCL = \bar{u} + 3\sqrt{\frac{u}{n}}$
- $UCL = \bar{u} - 3\sqrt{\frac{u}{n}}$
- $UCL = \bar{u} - 2\sqrt{\frac{u}{n}}$
- $UCL = \bar{u} - 3/2\sqrt{\frac{u}{n}}$

No, the answer is incorrect.
Score: 0
Accepted Answers:
- $UCL = \bar{u} + 3\sqrt{\frac{u}{n}}$

2) For a sample size of 50, if the average number of nonconformities per unit per sample is 0.074, what will be the lower control limit for the u-chart?

- 0.0414
- 0.0221
- 0.0
- -0.0513

No, the answer is incorrect.
Which of the statements are TRUE?

- Only I
- I and II
- Only II
- None of these

No, the answer is incorrect. Score: 0

Accepted Answers: I and II

4) The expression of the Centerline and the UCL of g chart is given by: 1 point

\[ \text{CL} = n \left( \frac{1-p}{p} + a \right), \quad \text{UCL} = n \left( \frac{1-p}{p} + a \right) + L \sqrt{\frac{n(1-p)}{p^2}} \]

No, the answer is incorrect. Score: 0

Accepted Answers:

\[ \text{CL} = n \left( \frac{1-p}{p} + a \right), \quad \text{UCL} = n \left( \frac{1-p}{p} + a \right) + L \sqrt{\frac{n(1-p)}{p^2}} \]

5) What is the value of center line of g-chart when there is no standard given? 1 point

- \( t + 3\sqrt{t} \)
- \( t \)
- \( t - 3\sqrt{t} \)
- \( t - 0.5\sqrt{t} \)

No, the answer is incorrect. Score: 0

Accepted Answers:

- \( t \)

6) What is the center line value for the average number of events control chart, when there is no standard given? 1 point

- \( \frac{1}{n} \)
- \( \frac{2}{\sqrt{n}} \)
- \( \frac{3}{\sqrt{n}} \)

No, the answer is incorrect. Score: 0

Accepted Answers:

- \( \frac{1}{n} \)
7) If the Lower specification limit for one quality characteristic of one product, is 200, and the mean of the process is estimated to be 264 with an estimate of one sided process capability ratio, $(C_{pl}) = 0.67$, what will be the estimate of the process standard deviation?

- 43
- 59
- 32
- 18

No, the answer is incorrect.
Score: 0
Accepted Answers: 32

8) PCR is a measure of _______________. If the LSL of the quality characteristic increases, the process capability ratio $Cp$ will ________________.

- The ability of the process to manufacture the products that meet the specifications. Decrease
- The ability of the operator to remove the variability. Increase
- The probability of the mean to be equal to the USL. Remains same
- The probability of the mean to be equal to the LSL. Can't say (can increase as well as decrease)

No, the answer is incorrect.
Score: 0
Accepted Answers: The ability of the process to manufacture the products that meet the specifications. Decrease

9) Which of these is a necessary assumption made for the calculation of the PCR $Cp$?

- The quality characteristic has a normal distribution
- The quality characteristic has a lognormal distribution
- The quality characteristic has an exponential distribution
- The quality characteristic has a Poisson distribution

No, the answer is incorrect.
Score: 0
Accepted Answers: The quality characteristic has a normal distribution

10) If the process capability ratio $Cp$ is 1.532, what percentages of the specification band will be used by the process?

- 65.27%
- 75.11%

No, the answer is incorrect.
Score: 0
Accepted Answers: 65.27%