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Courses » Total Quality Management - I

Announcements **Course** Ask a Question Progress Mentor FAQ

## Unit 8 - Week 7 - Process Capability Analysis and ISO 9000 basics

### Course outline

How to access the portal & Assignment - 00

Week-1  
Introduction to Total Quality Management

Week  
2-Introduction to Total Quality Management - II

Week 3-Tools for Quality Assurance

Week 4 - Acceptance Sampling and Brief Introduction to R

Week 5 - Control Charts for Variables

Week 6 - Control Charts for Attributes

Week 7 - Process Capability Analysis and ISO 9000 basics

### 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 \_\_\_\_\_ **1 point**

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

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

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

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

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

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

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? **1 point**

0.0414

0.0221

0.0

-0.0513

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National Programme on  
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In association with

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Funded by

Gauge  
Capability
 Introduction to  
ISO 9000

 Quiz :  
Assignment -  
07

 Assignment -  
07 (Solution)

 WEEK 7 -  
FEEDBACK -  
Total Quality  
Management - I

**Week 8 - Basic  
of ISO 9000,  
CUSUM and  
EWMA charts**

 Slides and  
Reading

 DOWNLOAD  
VIDEOS

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**

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

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

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

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

- $\bar{t} + 3\sqrt{\bar{t}}$
- $\bar{t}$
- $\bar{t} - 3\sqrt{\bar{t}}$
- $\bar{t} - 0.5\sqrt{\bar{t}}$

**No, the answer is incorrect.****Score: 0****Accepted Answers:** $\bar{t}$ 6) What is the center line value for the average number of events control chart, when there is no standard given? **1 point**

- $\frac{t}{n}$
- $\frac{2t}{3n}$



$$\frac{2t}{n}$$



$$\frac{t}{2n}$$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$\frac{t}{n}$$

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,  $(C_{pl}) \approx 0.67$ , what will be the estimate of the process standard deviation? **1 point**



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  $C_p$  will \_\_\_\_\_. **1 point**



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  $C_p$ ? **1 point**



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  $C_p$  is 1.532, what percentages of the specification band will be used by the process? **1 point**



65.27%



75.11%

44.21%

21.42%

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

65.27%

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