Exam Number/Code:MSC-431

Exam Name: Lean Six Sigma Black
Belt

Version: Demo

QUESTION NO: 1

You are about to run a t-test on shield thickness from 2 suppliers when you determine the data from one group is not normally distributed and cannot be transformed.

Your next step would be to?

A. Use the Shapiro-Wilk test
B. Proceed with the t-test
C. Use a non - parametric test
D. Discontinue the analysis

Answer: C

QUESTION NO: 2

A manufacturing test process has 3 parallel machines performing exactly the same test. The data from this test process can be assumed to be normally distributed and the variances within each machine are the same. To understand if there is a significant statistical difference in the average test value between machines, what test should be used?

A. Kruskal - Wallis
B. Chi-Square
C. ANOVA
D. Bartlett or Levene

Answer: C

QUESTION NO: 3

Which of the following is a commonly used test that examines the association between multiple discrete variables?

A. Kruskal-Wallace Test
B. Shapiro-Wilkes Test
C. Student's t-Test
D. Chi-Square Test

Answer: D

QUESTION NO: 4

The four basic objectives for experiments, which are a vital part of Lean Six Sigma, include Screening, Optimization, and which of the following?

A. Result, Comparison
B. Comparison, Robust Design
C. Reduced Variance, Parsimony
D. Comparison, Result

Answer: B

QUESTION NO: 5
Which of the following statistical procedures is appropriate when there is one continuous input variable variable (X) and one continuous output variable (Y)?

A. T-test
B. Chi-Square test
C. One-Way ANOVA
D. Correlation

Answer: D

QUESTION NO: 6
In a statistical analysis, the beta risk () is:

A. The probability of rejecting the null hypothesis when it is true
B. Always equal to 0.10
C. Driven by the cost of sampling
D. The probability of failing to reject the null hypothesis when it is false

Answer: D

QUESTION NO: 7
Sigma Saving and Loans processes loans and leases from around the world. The CEO wants to know if the current cycle time for processing is less than 9.5 days on average. To test the claim that the average cycle time is less than 9.5 days, use:

A. A 1-sample T-test
B. A 2 sample T-test
C. A One-way ANOVA
D. A Chi-square test of means

Answer: A

QUESTION NO: 8

Two different samples were pulled randomly from the same population. One sample is size n=10 and the other is size n=100. A two-sided confidence interval for the mean was calculated separately for each.

How will the intervals compare?

A. The confidence interval for size n=10 will be smaller.
B. The confidence interval for size n=10 will be larger.
C. The confidence intervals will be the same for both n=10 and n=100.
D. There is not enough information given.

Answer: B

QUESTION NO: 9

The purpose of a screening experiment using DOE is to?

A. Optimize the response by determining the best levels for the input factors
B. Separating the "vital few from the trivial many"
C. Comparing various levels for one factor
D. Finding a set of levels for the inputs that produce a robust product

Answer: B

QUESTION NO: 10

Which of the following experimental designs could you run if you had 5 factors and a maximum of 21 experimental units?

A. 26-2with 6 center points
B. 25with 3 center points
C. 25-1with 5 center points
D. 24with 5 center points

Answer: C