

## **Six Sigma ICGB**

Number: ICGB  
Passing Score: 800  
Time Limit: 120 min  
File Version: 5.0

### **Six Sigma ICGB**

**IASSC Lean Six Sigma - Green Belt**

**Version 5.0**

**Exam A****QUESTION 1**

A Belt will occasionally do a quick experiment referred to as an OFAT which stands for \_\_\_\_\_.

- A. Only a Few Are Tested
- B. Opposite Factors Affect Technique
- C. One Factor At a Time
- D. Ordinary Fractional Approach Technique

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 2**

Which statement(s) are correct for the Regression Analysis shown here? (Note: There are 2 correct answers).

### Regression Analysis: HeatFlux versus %Cu, Thickness

The Regression Equation is

$$\text{HeatFlux} = 484 + 4.80 \% \text{Cu} - 24.2 \text{ Thickness}$$

Predictor	Coef	SE Coef	T	P
Constant	483.67	39.57	12.22	0.000
%Cu	4.7963	0.9511	5.04	0.000
Thickness	-24.215	1.941	-12.48	0.000

S = 8.93207 R-Sq = 85.9% R-Sq(adj) = 84.8%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	2	12607.6	6303.8	79.01	0.000
Residual Error	26	2074.3	79.8		
Total	28	14681.9			

Source	DF	Seq SS
%Cu	1	184.5
Thickness	1	12423.1

Unusual Observations

Obs	%Cu	HeatFlux	Fit	SE Fit	Residual	St Resid
1	40.6	271.80	274.74	5.08	-2.94	-0.40 X
22	36.3	254.50	230.91	2.39	23.59	2.74R

R denotes an observation with a large standardized residual.

X denotes an observation whose X value gives it large influence.

- A. This Regression is an example of a Multiple Linear Regression.
- B. This Regression is an example of Cubic Regression.
- C. %Cu explains the majority of the process variance in heat flux.
- D. Thickness explains over 80% of the process variance in heat flux.
- E. The number of Residuals in this Regression Analysis is 26.

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

### QUESTION 3

The Regression Model for an observed value of Y contains the term  $\beta_0$  which represents the Y axis intercept when  $X = 0$ .

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

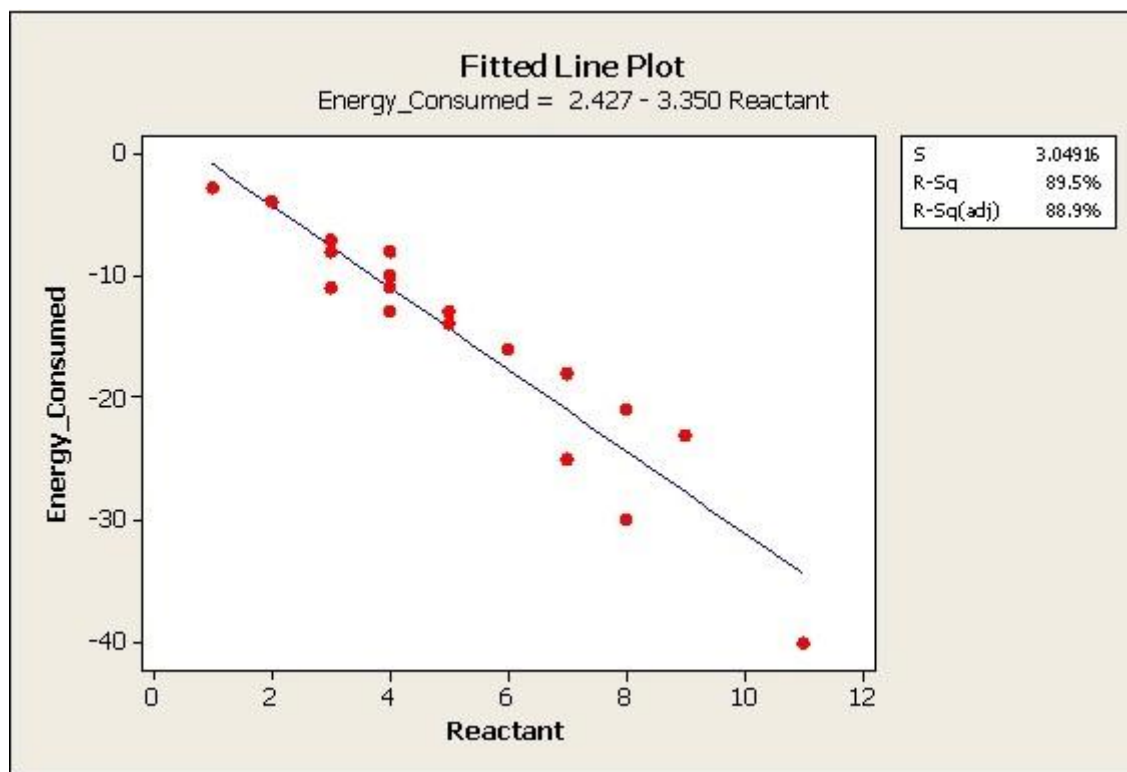
**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 4**

Which statement(s) are true about the Fitted Line Plot shown here? (Note: There are 2 correct answers).



- A. When Reactant increases, the Energy Consumed increases.

- B. The slope of the equation is a positive 130.5.
- C. The predicted output Y is close to -18 when the Reactant level is set to 6.
- D. Over 85 % of the variation of the Energy Consumed is explained by the Reactant via this Linear Regression.

**Correct Answer:** CD

**Section:** (none)

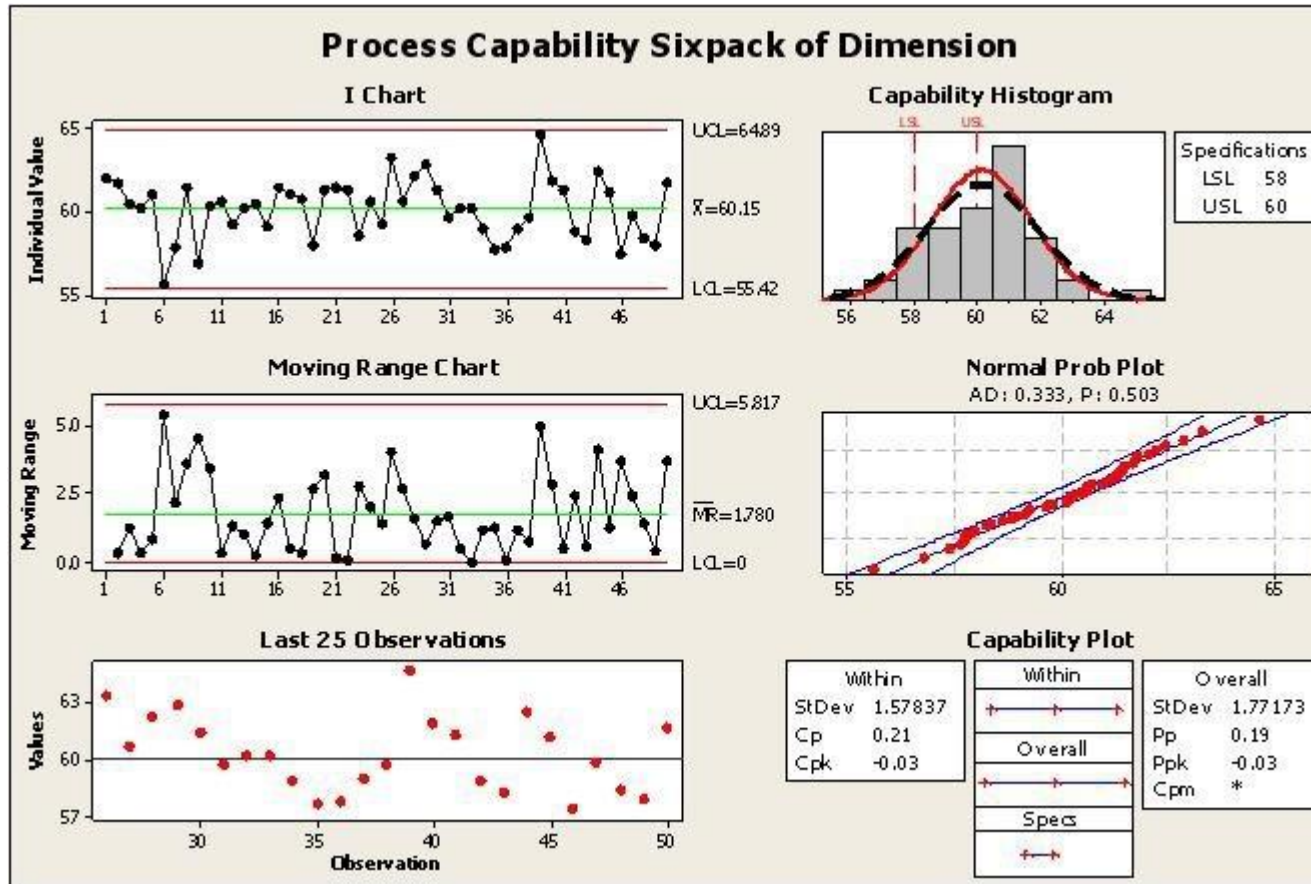
**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 5**

After reviewing the Capability Analysis shown here select the statement(s) that are untrue.



- A. The process is properly assumed to be a Normal process
- B. The Mean of the process moving range is 1.78
- C. The process is out of Control
- D. This Capability Analysis used subgroups
- E. Majority of the dimensional values are outside of the tolerance than within

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 6**

The actual experimental response data varied somewhat from what a Belt had predicted them to be. This is the result of which of these?

- A. Inefficiency of estimates
- B. Residuals
- C. Confounded data
- D. Gap Analysis

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 7**

Multiple Linear Regressions (MLR) is best used when which of these are applicable? (Note: There are 3 correct answers).

- A. Non-linear relationships between the inputs X's and output Y
- B. Uncertainty in the slope of the linear relationship between an X and a Y
- C. Relationships between Y (output) and more than one X (Input)
- D. Preventing the use of a Designed Experiment if unnecessary
- E. We assume that the X's are independent of each other

**Correct Answer:** CDE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 8**

The generation of a Regression Equation is justified when we \_\_\_\_\_. (Note: There are 4 correct answers).

- A. Expect the relationship to be Linear between the output and inputs
- B. Know that there is a non-linear relationship between output and input(s)
- C. Need to understand how to control a process output by controlling the input(s)

- D. Experience several process defects and have no other way to fix hem  
 E. When it is very expensive or too late to measure the output

**Correct Answer:** ACDE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

### QUESTION 9

Which statement(s) are correct for the Regression Analysis shown here? (Note: There are 2 correct answers).

#### Regression Analysis: HeatFlux versus %Cu, Thickness

The Regression Equation is

$$\text{HeatFlux} = 484 + 4.80 \% \text{Cu} - 24.2 \text{ Thickness}$$

Predictor	Coef	SE Coef	T	P
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R denotes an observation with a large standardized residual.

X denotes an observation whose X value gives it large influence.

- A. This Regression is an example of a Multiple Linear Regression.  
 B. This Regression is an example of Cubic Regression.



- C. %Cu explains the majority of the process variance in heat flux.
- D. Thickness explains over 80% of the process variance in heat flux.
- E. The number of Residuals in this Regression Analysis is 26.

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 10**

The Regression Model for an observed value of Y contains the term  $\beta_0$  which represents the Y axis intercept when  $X = 0$ .

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

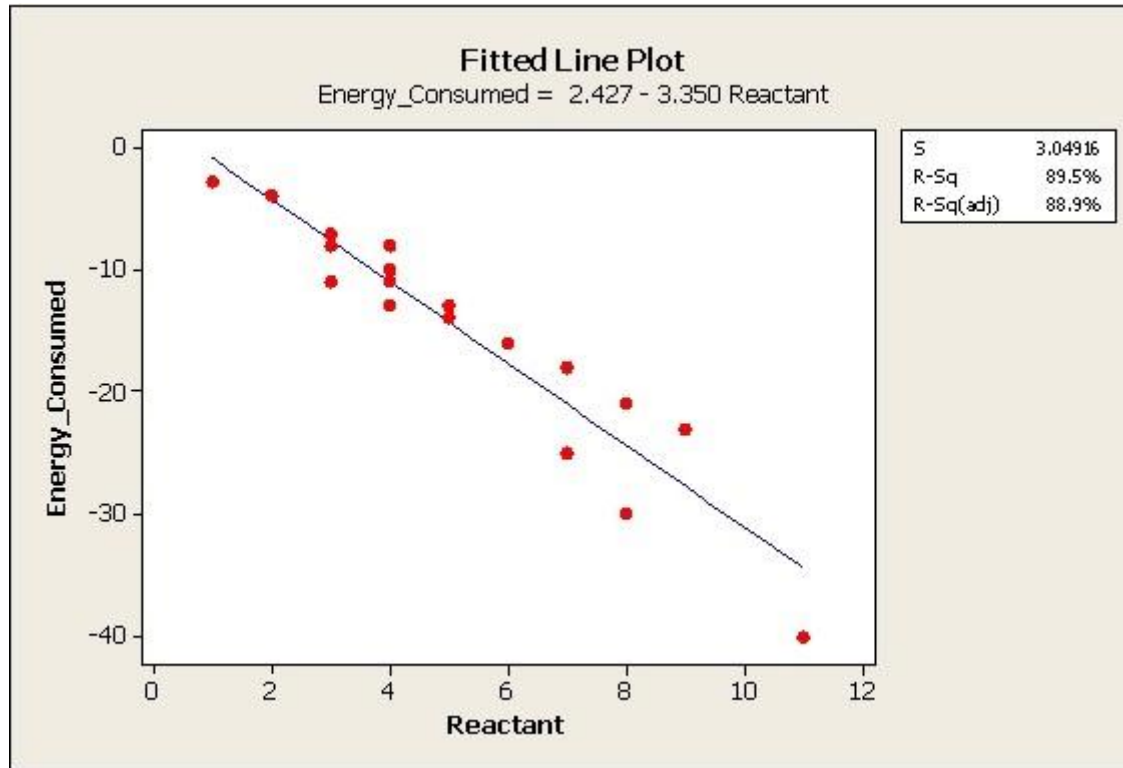
**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 11**

Which statement(s) are true about the Fitted Line Plot shown here? (Note: There are 2 correct answers).



- A. When Reactant increases, the Energy Consumed increases.
- B. The slope of the equation is a positive 130.5.
- C. The predicted output Y is close to -18 when the Reactant level is set to 6.
- D. Over 85 % of the variation of the Energy Consumed is explained by the Reactant via this Linear Regression.

**Correct Answer:** CD

**Section:** (none)

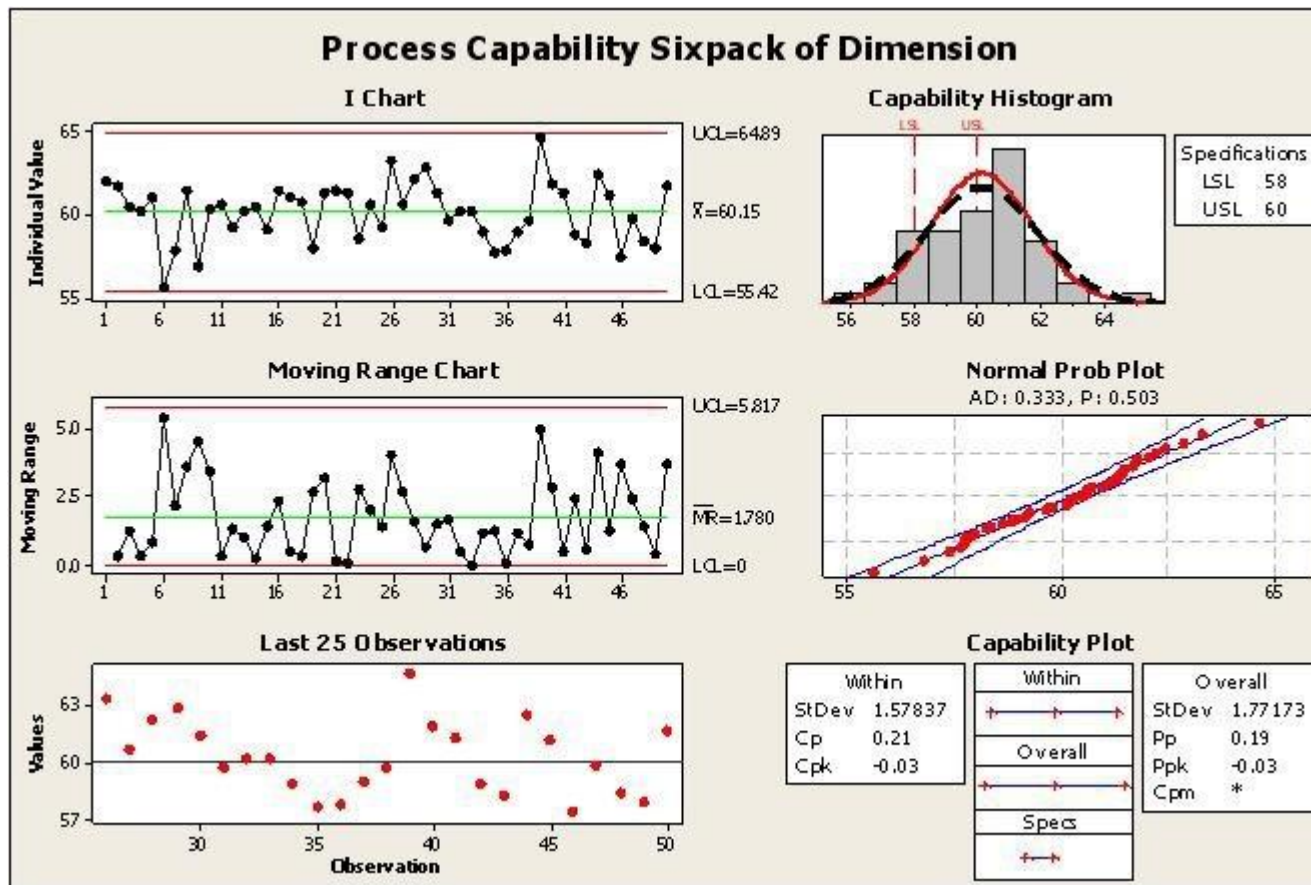
**Explanation**

**Explanation/Reference:**

Explanation:

#### QUESTION 12

Select all the statements that are true after reviewing the Capability Analysis shown here. (Note: There are 4 correct answers).



- A. The process is out of Control.
- B. The process is properly assumed to be a Normal process.
- C. The Mean of the process moving range is 1.78.
- D. This Capability Analysis used subgroups.
- E. Majority of the dimensional values are outside of the tolerance than within.

**Correct Answer:** BCDE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 13**

A Six Sigma tool that helps to screen factors by using graphical techniques to logically subgroup multiple discrete X's plotted against a continuous Y is known as a \_\_\_\_\_ Chart.

- A. SIPOC
- B. Multi-Vari
- C. Box Plot
- D. Whisker

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 14**

A primary benefit of using a Multi-Vari Chart is it provides a visual presentation of two-way interactions.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 15**

\_\_\_\_\_ Distributions occur when data comes from several sources that are supposed to be the same yet are not.

- A. Skewed
- B. Bimodal
- C. Gaussian
- D. Tri-peaked

**Correct Answer:** A  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 16**

Bias in Sampling is an error due to lack of independence among random samples or due to systematic sampling procedures.

- A. True
- B. False

**Correct Answer:** A  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 17**

To draw inferences about a sample population being studied by modeling patterns of data in a way that accounts for randomness and uncertainty in the observations is known as \_\_\_\_\_.

- A. Influential Analysis
- B. Inferential Statistics
- C. Physical Modeling
- D. Sequential Inference

**Correct Answer:** B  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 18**

For a Normal Distribution the Mean, Median and Mode are the same data point.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 19**

When two Inputs have an impact on the Output together yet seem to have no or little impact on their own this is called a/an \_\_\_\_\_.

- A. Interaction
- B. Oddity
- C. Coincidence
- D. Impossibility

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 20**

Hypothesis Testing can save time and help avoid high costs of experimental efforts by using existing data.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 21**

It is a Type II error if we decide to reject the Null Hypothesis when it is actually true.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 22**

A Belt experienced an Alpha of .05 and a Beta of .10 and knew these are the most common risk levels when running a Statistical test.

A. True

B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 23**

Inferential Statistics is largely about Significance. There are both Practical and \_\_\_\_\_ Significance to consider during an analysis of data in a Lean Six Sigma project.

A. Problematic

B. Impractical

C. Usable

D. Statistical

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 24**

The Central Limit Theorem helps us understand the \_\_\_\_\_ we are taking and is the basis for using sampling to estimate population parameters.

A. Analysis

- B. Kurtosis
- C. Risk
- D. Route

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 25**

Hypothesis Tests determine the probabilities of differences between observed data and the hypothesis being solely due to \_\_\_\_\_ based on the result of the P-values.

- A. Human error
- B. Measurement error
- C. Shift differences
- D. Chance

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 26**

The Alpha level of a test (level of significance) represents the yardstick against which P-values are measured and the Null Hypothesis is rejected if the P-value is which of these?

- A. Less than the Alpha level.
- B. Greater than the Alpha level.
- C. Greater than the Beta and Alpha level.
- D. Less than one minus Alpha.
- E. Less than the power of one minus Beta.

**Correct Answer:** A

**Section:** (none)

**Explanation**



**Explanation/Reference:**

Explanation:

**QUESTION 27**

A 1-Sample t-test is used when you want to compare the Median of one distribution to a target value.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 28**

When a Belt is analyzing sample data she should keep in mind that 95% of Normally Distributed data is within +/- 2 Standard Deviations from the Mean.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 29**

The Standard Deviation for the distribution of Means is called the \_\_\_\_\_ and approaches zero as the sample size reaches 30.

- A. Standard Error
- B. Mean Deviation
- C. Mean Spread
- D. Mean Error

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 30**

Due to excessive pollution, GREEN Solutions Inc. is considering subsidizing public transportation to work for its employees. According to the manager it takes an average weekday commute of 39 minutes with a Standard Deviation of 7 minutes for the employees to get to work while they use their personal vehicles for their office commute while the management set a policy of not more than 40 minutes for their daily one-way commute. A survey conducted one day on 70 employees showed an average of 34 minutes commuting time using the metro public transportation system with a Standard Deviation of 21 minutes. Assuming a Normal Distribution for the commute times by either personal or public transportation, which of these is true?

- A. The probability that they would arrive on time using personal vehicles is much higher than using the metro public transportation system (MPTS)
- B. The probability that they would arrive on time using the MPTS is much higher than using their personal vehicles
- C. The two probabilities are about the same excepting in one case the consistency is higher than the other
- D. We need to compile more data around weekends to incorporate for traffic differences
- E. When Standard Deviation is higher the probability goes down and so the MPTS is worse

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 31**

According to a manager it takes an average weekday commute of 39 minutes with a Standard Deviation of 7 minutes for the employees to get to work when they use their personal vehicles for their office commute while management set a policy of not more than 40 minutes for their daily one-way commute. A survey conducted one day on 70 employees showed an average of 34 minutes commuting time using the metro public transportation system with a Standard Deviation of 21 minutes. For the employees choosing to increase their chances to come on time using personal transportation their variation should be reduced to \_\_\_\_\_?

- A. 1 minute
- B. 6 minutes
- C. 3.5 minutes
- D. Eliminate it to 0.0 minutes

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

### QUESTION 32

According to a manager it takes an average weekday commute of 39 minutes with a Standard Deviation of 7 minutes for the employees to get to work while they use their personal vehicles for their office commute while the management set a policy of not more than 40 minutes for their daily one-way commute. A survey conducted one day on 70 employees showed an average of 34 minutes commuting time using the metro public transportation system with a Standard Deviation of 21 minutes. If the Standard Deviation is uncontrollable then the other option to increase the probability of coming in on time via personal vehicles to work could be \_\_\_\_\_?

- A. Increase the average time of commute
- B. Maintain the average time of commute and change route to work
- C. Reduce average commute time to work by departing earlier
- D. Change policy at work and request for flexible times based on location

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

### QUESTION 33

Which of the following is used to test the significance for the analysis of a Variance Table?

- A. t Test
- B. F Test
- C. Chi Square Test
- D. Acid Test

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

### QUESTION 34

Non-parametric testing is done when which of these are applicable? (Note: There are 3 correct answers).

- A. When the traditional t tests don't produce the results we need
- B. A Hypothesis Test for the Median of the population is in question

- C. It does not require data to come from Normally Distributed populations
- D. They look at the Median rather than the Mean of populations
- E. When there are no parameters to measure in the process

**Correct Answer:** BCD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 35**

The Mann-Whitney Test is used to test if the Means for two samples are different.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 36**

Contingency Tables are used to perform which of these functions?

- A. Illustrate one-tail proportions
- B. Analyze the "what if" scenario
- C. Contrast the Outliers under the tail
- D. Compare more than two sample proportions with each other

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 37**

For the data shown here a Belt suspects the three grades are supplying the same results.

Grade A	Grade B	Grade C
0.917	1.1	0.63
0.68	0.173	4.17
1.74	0.24	0.6
0.3	0.67	0.84
0.33	6.94	0.22
4.13		

Which statement(s) are true for proper Hypothesis Testing?

- A. The most appropriate Central Tendency to test is the Means
- B. An appropriate test to test Central Tendency is the Levene's test
- C. An appropriate test to test Central Tendency is the ANOVA test
- D. An appropriate test to test Central Tendency is the Mood's Median test

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 38**

A Six Sigma tool that helps to screen factors by using graphical techniques to logically subgroup multiple discrete X's plotted against a continuous Y is known as a \_\_\_\_\_ Chart.

- A. SIPOC
- B. Multi-Vari
- C. Box Plot

D. Whisker

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 39**

A primary benefit of using a Multi-Vari Chart is it provides a visual presentation of two-way interactions.

A. True

B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 40**

Skewed, or Mixed, Distributions occur when data comes from several sources that are supposed to be the same yet are not.

A. True

B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 41**

When two Inputs have an impact on the Output together yet seem to have no or little impact on their own this is called a/an \_\_\_\_\_.

A. Interaction

B. Oddity

C. Coincidence

D. Impossibility

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 42**

To draw inferences about a sample population being studied by modeling patterns of data in a way that accounts for randomness and uncertainty in the observations is known as \_\_\_\_\_.

- A. Influential Analysis
- B. Inferential Statistics
- C. Physical Modeling
- D. Sequential Inference

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 43**

The perfect sample size is the minimum number of data points required to provide exactly 6% overlap or risk if one wants a 95% confidence level.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 44**

Bias in Sampling is an error due to lack of independence among random samples or due to systematic sampling procedures.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 45**

The Central Limit Theorem helps us understand the \_\_\_\_\_ we are taking and is the basis for using sampling to estimate population parameters.

- A. Analysis
- B. Kurtosis
- C. Risk
- D. Route

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 46**

Hypothesis Testing can help avoid high costs of experimental efforts by using existing data.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 47**

Hypothesis Tests determine the probabilities of differences between observed data and the hypothesis being solely due to chance. This is determined based on the result of the \_\_\_\_\_.



- A. Random acts
- B. P-values
- C. Standard Deviations
- D. R-values

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 48**

It is a Type I error if we reject the Null Hypothesis when it is actually true.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 49**

Inferential Statistics is largely about Significance. There are both Practical and \_\_\_\_\_ Significance to consider during an analysis of data in a Lean Six Sigma project.

- A. Problematic
- B. Impractical
- C. Usable
- D. Statistical

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 50**

Having an Alpha of .05 and a Beta of .10 are the most common risk levels when running a Statistical test.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 51**

The Alpha level of a test (level of significance) represents the yardstick against which P-values are measured and the Null Hypothesis is rejected if the P-value is which of these?

- A. Less than the Alpha level.
- B. Greater than the Alpha level.
- C. Greater than the Beta and Alpha level.
- D. Less than one minus Alpha.
- E. Less than the power of one minus Beta.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 52**

A 1-Sample t-test is used when you want to compare the Median of one distribution to a target value.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 53**

A 1-Sample t-test is used to compare an expected population Mean to a target.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 54**

Unequal Variances can be the result of differing types of distributions.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 55**

Due to excessive pollution, GREEN Solutions Inc. is considering subsidizing public transportation to work for its employees. According to the manager it takes an average weekday commute of 39 minutes with a Standard Deviation of 7 minutes for the employees to get to work while they use their personal vehicles for their office commute while the management set a policy of not more than 40 minutes for their daily one-way commute. A survey conducted one day on 70 employees showed an average of 34 minutes commuting time using the metro public transportation system with a Standard Deviation of 21 minutes. Assuming a Normal Distribution for the commute times by either personal or public transportation, which of these is true?

- A. The probability that they would arrive on time using personal vehicles is much higher than using the metro public transportation system (MPTS)
- B. The probability that they would arrive on time using the MPTS is much higher than using their personal vehicles
- C. The two probabilities are about the same excepting in one case the consistency is higher than the other
- D. We need to compile more data around weekends to incorporate for traffic differences

E. When Standard Deviation is higher the probability goes down and so the MPTS is worse

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 56**

According to a manager it takes an average weekday commute of 39 minutes with a Standard Deviation of 7 minutes for the employees to get to work when they use their personal vehicles for their office commute while management set a policy of not more than 40 minutes for their daily one-way commute. A survey conducted one day on 70 employees showed an average of 34 minutes commuting time using the metro public transportation system with a Standard Deviation of 21 minutes. For the employees choosing to increase their chances to come on time using personal transportation their variation should be reduced to \_\_\_\_\_?

- A. 1 minute
- B. 6 minutes
- C. 3.5 minutes
- D. Eliminate it to 0.0 minutes

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 57**

According to a manager it takes an average weekday commute of 39 minutes with a Standard Deviation of 7 minutes for the employees to get to work while they use their personal vehicles for their office commute while the management set a policy of not more than 40 minutes for their daily one-way commute. A survey conducted one day on 70 employees showed an average of 34 minutes commuting time using the metro public transportation system with a Standard Deviation of 21 minutes. If the Standard Deviation is uncontrollable then the other option to increase the probability of coming in on time via personal vehicles to work could be \_\_\_\_\_?

- A. Increase the average time of commute
- B. Maintain the average time of commute and change route to work
- C. Reduce average commute time to work by departing earlier
- D. Change policy at work and request for flexible times based on location

**Correct Answer:** C

**Section: (none)**  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 58**

Which of the following is used to test the significance for the analysis of a Variance Table?

- A. t Test
- B. F Test
- C. Chi Square Test
- D. Acid Test

**Correct Answer: B**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 59**

Non-parametric testing is done when which of these are applicable? (Note: There are 3 correct answers).

- A. When the traditional t tests don't produce the results we need
- B. A Hypothesis Test for the Median of the population is in question
- C. It does not require data to come from Normally Distributed populations
- D. They look at the Median rather than the Mean of populations
- E. When there are no parameters to measure in the process

**Correct Answer: BCD**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 60**

The Mann-Whitney Test is used to test if the Means for two samples are different.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 61**

Contingency Tables are used to do which of these? (Note: There are 2 correct answers).

- A. Illustrate one-tail proportions.
- B. Compare more than two sample proportions with each other.
- C. Contrast the Outliers under the tail.
- D. Analyze the "what if" scenario.
- E. Applicable to data that is Attribute in nature

**Correct Answer:** BE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 62**

For the data shown here a Belt suspects the three grades are supplying the same results.

Grade A	Grade B	Grade C
0.917	1.1	0.63
0.68	0.173	4.17
1.74	0.24	0.6
0.3	0.67	0.84
0.33	6.94	0.22
4.13		

Which statement(s) are true for proper Hypothesis Testing?

- A. The most appropriate Central Tendency to test is the Means
- B. An appropriate test to test Central Tendency is the Levene's test
- C. An appropriate test to test Central Tendency is the ANOVA test
- D. An appropriate test to test Central Tendency is the Mood's Median test

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 63**

The higher the sigma level of a process the better the performance.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 64**

The Six Sigma methodology had its origins at \_\_\_\_\_ in the late 1980's when William Smith coined the name for quality related work being done there.

- A. Motorola
- B. Allied Signal
- C. General Electric
- D. Honeywell

**Correct Answer:** A

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 65**

Training cost is \$4,000 and a project required an initial investment of \$30,000. If the project yields monthly savings of \$2,000 beginning after 3 months, what is the payback period in months (before money costs and taxes)?

- A. 10
- B. 20
- C. 27
- D. 33

**Correct Answer:** B

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 66**

Lean Six Sigma's general approach to solving significant challenges related to a process is called \_\_\_\_\_.

- A. DOE



- B. SIPOC
- C. DMAIC
- D. FMEA

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 67**

Voice of the Customer is a Lean Six Sigma technique to determine \_\_\_\_\_ attributes of a product or service.

- A. At least 6
- B. The profitable
- C. Critical-to-Quality
- D. The majority of the

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 68**

Those who are trained to the skill levels of a Black Belt are typically utilized to apply Lean Six Sigma methodologies what percentage of their time?

- A. 25%
- B. 50%
- C. 75%
- D. 100%

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 69**

A process can be defined as a repetitive and systematic series of steps or activities where inputs are modified or assembled to achieve a customer desired result.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 70**

Customers make a purchase decision based on a number of factors. In Lean Six Sigma we refer to these decision points as CTQ's or as \_\_\_\_\_.

- A. Critical-to-quality
- B. Conscious thought qualities
- C. Conspicuous time quandaries
- D. Cost of the quantity

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 71**

Cost of Poor Quality (COPQ) can be classified as Tangible (Visible) Costs and Hidden Costs.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 72**

An employee of ACME Corporation noticed that every loan application that gets approved is copied four times and is stored in different locations in the company for no apparent reason. This would be an example of \_\_\_\_\_.

- A. Internal Failure Costs
- B. Appraisal Costs
- C. External Failure Costs
- D. Prevention Costs

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 73**

The 80:20 rule is associated with which of these tools?

- A. Pareto Chart
- B. Simon's Cross-Functional Tool
- C. SIPOC
- D. Framing Tool

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 74**

One of the metrics commonly used in Lean Six Sigma is DPU. This acronym stands for \_\_\_\_\_.

- A. Deferred planned usage
- B. Defects per unit
- C. Decreased production utilization

D. Downtime per unit

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 75**

According to the definition of Rolled Throughput Yield which of these items best describe the purpose of RTY?

- A. A function of  $Y=f(x)$
- B. Accounts for losses due to rework and scrap
- C. Isolates the increase throughput
- D. Determines incremental Growth

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 76**

What is the Cycle Time, in seconds, for a process having a Throughput of 7,200 units per hour?

- A. 0.5
- B. 2
- C. 4
- D. 10

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 77**

The following Business Case is constructed properly. "In business unit A there are too many flashlight returns and flashlight sales have decreased by 25

percent."

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 78**

To create standardization of financial benefit calculations project savings are typically based on savings over what period of time?

- A. 6 months
- B. 12 months
- C. 24 months
- D. The remainder of the calendar year
- E. The remainder of the fiscal year

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 79**

The essence of Lean is to concentrate effort on removing waste while improving process flow to achieve speed and agility at lower cost.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 80**

Lean had its origins in the development and practice of the \_\_\_\_\_ Production System.

- A. Honda
- B. Toyota
- C. Ford
- D. Motorola

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 81**

Lean removes many forms of \_\_\_\_\_ so Six Sigma can focus on reducing \_\_\_\_\_.

- A. Waste, variability
- B. Inventory, defects
- C. Waste, cost
- D. Movement, variation

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 82**

Which element of waste best describes "the unnecessary movement of materials and/or goods"?

- A. Overprocessing
- B. Motion
- C. Conveyance
- D. Correction

**Correct Answer:** C

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 83**

Which element of waste best describes "the cost of an idle resource"?

- A. Waiting
- B. Motion
- C. Inventory
- D. Correction

**Correct Answer:** A

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 84**

The proper functioning of a Visual Factory is dependent upon which of these?

- A. Technically skilled workers
- B. Work space with active 5S
- C. Availability of visual tools
- D. Breakthrough projects

**Correct Answer:** C

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 85**

Lean focuses on the sequence of activities and work required to produce a product or a service. This flow is called a \_\_\_\_\_.

- A. Value-add Flow
- B. Production Map

- C. Value Stream
- D. Operating Procedure

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 86**

Lean Enterprise is based on the premise that anywhere work is being done which of these is also occurring?

- A. Money is being spent
- B. Waste is being generated
- C. People are producing value added product
- D. Waste is being eliminated

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 87**

When constructing a Fishbone Diagram using the \_\_\_\_\_ approach is the most classic arrangement.

- A. 6M
- B. 4M
- C. 5M
- D. Alphabetical

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:



**QUESTION 88**

The 5 Why Analysis is only useful if the possible independent variable can be broken down into five possible causes.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 89**

The purpose of a Process Map is to identify the complexity of the process and to assist in identifying critical steps in the process.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 90**

The very best way to begin an effort to map a process is to do which of these?

- A. Interview the process owner
- B. Interview the manager of the department
- C. Walk the actual process from beginning to end
- D. Take pictures of the factory floor at each shift

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 91**

The X-Y Diagram is a tool used to identify/collate potential X's and assess their relative impact on multiple Y's.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 92**

The term FMEA is an abbreviation for Failures Measure Effective Automation.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 93**

When utilizing Statistics the population is defined as a collection of all the individual data points of interest.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 94**

Which of these is Discrete data?

- A. Train arrived at 4:17 pm.
- B. Race car consumed 23 gallons of fuel.
- C. Of the 42 people on the bus, 12 went into the station.
- D. It took 3 hours and 32 minutes to complete the marathon.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 95**

Nominal Scale data consists of names, labels or categories and cannot be arranged in any mathematical ordering scheme. Complex arithmetic functions cannot be easily applied to Nominal Data:

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 96**

When looking at a distribution graph, the Mean is defined as the \_\_\_\_\_.

- A. Average based on the sample size
- B. Aggression measured
- C. Total sample size
- D. Measurement based off a quarter of the sample size

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 97**

The difference between the largest observation and the smallest observation in the data set is known as the \_\_\_\_\_.

- A. Breadth
- B. Range
- C. Spread
- D. Median

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 98**

The Empirical Rule is important because it provides an estimate of the probability of an event occurring depending on the Standard Deviation from the Mean.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 99**

The Z score is a measure of the distance in Standard Deviations of a sample data point from the Median of the sample population.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 100**

Long-term Data represents all the variation that one can expect within the subject process.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 101**

If a Histogram displays two peaks the distribution would likely be \_\_\_\_\_.

- A. Transformed
- B. Multi-skewed
- C. Bimodal
- D. Bi-attribute

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 102**

A Belt gathered the following defect data for a shoe production line and wanted to assemble it into a Pareto Chart. The correct order from left to right in the chart would be:

Data:

Cutting38

Forming17

Stitching56

Sealing42

- A. Forming, Sealing, Cutting, Stitching
- B. Sealing, Stitching, Forming, Cutting
- C. Stitching, Sealing, Cutting, Forming
- D. Forming, Cutting, Sealing, Stitching

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 103**

Measurement error is defined as the effect of all sources of measurement variability that caused an observed or measured value to deviate from the \_\_\_\_\_.

- A. Standard Deviation
- B. Mean
- C. Median
- D. True value

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 104**

Measurement System Analysis is a procedure used to quantify variation of the method or system used for taking measurements.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 105**

The Accuracy of a Measurement System addresses \_\_\_\_\_.

- A. Stability, Bias & Linearity
- B. Repeatability & Reproducibility
- C. Stability & Sensitivity
- D. Precision & Sensitivity

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 106**

As a type of measurement error, Linearity describes a change in accuracy through the expected operating range of the measurement instrument.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 107**

The deviation of the measured value from the actual value is known as \_\_\_\_\_.

- A. Bias
- B. Linearity
- C. Repeatability
- D. Movement

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 108**

The ability to repeat the same measurement obtained with one measurement instrument used several times by one appraiser while measuring the identical characteristic on the same part is known as \_\_\_\_\_.

- A. Repeatability
- B. Bias
- C. Linearity
- D. Reproducibility

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 109**

Process Capability is a function of which of these?

- A. Customer requirements
- B. Process performance
- C. Output over time
- D. All of these answers are correct

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 110**

If a process has Outliers which pair of charts is most preferable if subgroups will exist for the Continuous Data?

- A. Individual-Moving Range
- B. Xbar-R Charts



- C. Xbar-S Charts
- D. nP and P Charts

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 111**

After a Belt has put data through the smoothing process which chart would be used to look for trends in the data?

- A. Moving Average Chart
- B. Multi-Vari Chart
- C. X bar Chart
- D. Pareto Chart

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 112**

A Belt concludes a Lean Six Sigma project with the creation of a Control Plan. At what point can the Control Plan be closed?

- A. Never, a Control Plan is a living document
- B. As soon as the Champion signs off
- C. Within 30 days of the LSS project review team meeting
- D. After the project has been presented at the recognition event

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 113**

Six Sigma refers to a process whose output has at least 80% of its data points within +/- 6 Standard Deviations from the Mean.

- A. True
- B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 114**

In the late 1980's William Smith coined the name Six Sigma for a methodology that had its origins at \_\_\_\_\_ for quality related work being done there.

- A. Honeywell
- B. Allied Signal
- C. General Electric
- D. Motorola

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 115**

Training cost \$6,500 and a project required an initial investment of \$47,500. If the project yields monthly savings of \$3,500 beginning after 4 months, what is the payback period in months, before money costs and taxes?

- A. 9.7
- B. 15.4
- C. 19.4
- D. 23.7

**Correct Answer:** C

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 116**

The acronym for the defined approach taken by Lean Six Sigma to solve significant challenges related to a process is which of these?

- A. DOE
- B. DMAIC
- C. SIPOC
- D. FMEA

**Correct Answer:** B

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 117**

Voice of the Customer is a Lean Six Sigma technique to determine \_\_\_\_\_ attributes of a product or service.

- A. At least 6
- B. The profitable
- C. Critical-to-Quality
- D. The majority of the

**Correct Answer:** C

**Section:** (none)

**Explanation****Explanation/Reference:**

Explanation:

**QUESTION 118**

Typically a person who is trained to the skill level of a Black Belt is nearly 80% dedicated to applying Lean Six Sigma methodologies towards process solutions.

- A. True

B. False

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 119**

A process can be defined as a repetitive and systematic series of steps or activities where inputs are modified or assembled to achieve a \_\_\_\_\_ result.

- A. Revenue total
- B. Month end
- C. Customer desired
- D. Budgeted

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 120**

Customers make a purchase decision based on a number of factors. In Lean Six Sigma we refer to these decision points as CTQ's which stands for \_\_\_\_\_.

- A. Cost of the quantity
- B. Conscious thought qualities
- C. Conspicuous time quandaries
- D. Critical-to-quality

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 121**

Cost of Poor Quality (COPQ) can be classified as either Tangible (Visible) Costs or Hidden Costs.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 122**

The Purchase Orders for Glenn Manufacturing Company were being copied by an employee and sent to four different departments yet only one department took an action based on the information in the PO. This is an example of \_\_\_\_\_.

- A. External Failure Costs
- B. Appraisal Costs
- C. Internal Failure Costs
- D. Prevention Costs

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 123**

According to the definition of Rolled Throughput Yield which of the following items best describe the purpose of RTY?

- A. A function of  $Y=f(x)$
- B. Determines incremental Growth
- C. Isolates the increase throughput
- D. Accounts for rejects and reworks

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 124**

One of the metrics commonly used in Lean Six Sigma is DPU. This acronym stands for \_\_\_\_\_.

- A. Deferred planned usage
- B. Defects per unit
- C. Decreased production utilization
- D. Downtime per unit

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 125**

The 80:20 rule is associated with which of these tools?

- A. Pareto Chart
- B. Simon's Cross-Functional Tool
- C. SIPOC
- D. Framing Tool

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 126**

What is the Cycle Time, in minutes, for a process having a Throughput of 360 units per hour?

- A. 0.167
- B. 0.333
- C. 0.667

D. 1.333

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 127**

The following Business Case is constructed properly. "During fiscal year 2008 the warranty returns for electric razor Model 312 were 1.3%. This represents a gap of 0.5% over target costing the company \$18,500 per month."

A. True

B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 128**

In order to standardize project savings financial calculation such project benefits can be compared the financial savings are typically calculated over what period of time?

A. 12 months

B. 24 months

C. The remainder of the calendar year

D. The remainder of the fiscal year

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 129**

The essence of Lean is to concentrate effort on removing waste while improving process flow to achieve speed and agility at lower cost.

- A. True
- B. False

**Correct Answer:** A  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 130**

Which element of waste best describes "the unnecessary movement of materials and/or goods"?

- A. Overprocessing
- B. Motion
- C. Conveyance
- D. Correction

**Correct Answer:** C  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**  
Explanation:

**QUESTION 131**

Lean removes many forms of \_\_\_\_\_ so Six Sigma can focus on reducing \_\_\_\_\_.

- A. Waste, variability
- B. Inventory, defects
- C. Waste, cost
- D. Movement, variation

**Correct Answer:** A  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**  
Explanation:



**QUESTION 132**

Lean had its origins in the development and practice of the \_\_\_\_\_ Production System.

- A. Honda
- B. Toyota
- C. Ford
- D. Motorola

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 133**

Which element of waste best describes the cost of a resource being in the queue?

- A. Waiting
- B. Motion
- C. Inventory
- D. Correction

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 134**

Lean Enterprise is based on the premise that anywhere work is being done which of these is also occurring?

- A. Money is being spent
- B. Waste is being generated
- C. People are producing value added product
- D. Waste is being eliminated

**Correct Answer:** B

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 135**

Lean focuses on the sequence of activities and work required to produce a product or a service. This flow is called a \_\_\_\_\_.

- A. Value-add Flow
- B. Production Map
- C. Value Stream
- D. Operating Procedure

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 136**

The proper functioning of a Visual Factory is dependent upon which of these?

- A. Technically skilled workers
- B. Work space with active 5S
- C. Availability of visual tools
- D. Breakthrough projects

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 137**

Use of the \_\_\_\_\_ approach is the most classic arrangement when constructing a Fishbone Diagram.

- A. Chronological

- B. 6M
- C. 5M
- D. Alphabetical

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 138**

When creating a Cause and Effect Diagram the team needs to continually broaden their view as well as drill down until they identify all the potential \_\_\_\_\_ impacting their process.

- A. Line operators
- B. Root Causes
- C. Inventory issues
- D. Customer requests

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 139**

The purpose of a Process Map is to identify the complexity of the process and to record all actions and decision points in the process.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 140**

The very best way to begin an effort to map a process is to do which of these?

- A. Interview the process owner
- B. Interview the manager of the department
- C. Walk the actual process from beginning to end
- D. Take pictures of the factory floor at each shift

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 141**

The X-Y Diagram is a tool used to identify/collate potential X's and assess their relative impact on multiple Y's.

- A. True
- B. False

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

#### **QUESTION 142**

The FMEA is used to analyze potential source of defects in the process of interest and stands for \_\_\_\_\_.

- A. Failure Measure for Effective Automation
- B. Failure Modes and Effect Analysis
- C. Focused Mental Efforts Analyze
- D. Failed Manufacturing Efforts Analyzed

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 143**

With the use of Statistics we define the population to be a large enough sample set of data such that you can analyze it and draw conclusions as to all of the data.

- A. True
- B. False

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

**QUESTION 144**

Which of these is Discrete data?

- A. Train arrived at 4:17 pm.
- B. Race car consumed 23 gallons of fuel.
- C. Of the 42 people on the bus, 12 went into the station.
- D. It took 3 hours and 32 minutes to complete the marathon.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation: