IASSC

Exam ICGB

IASSC Lean Six Sigma – Green Belt

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[Total Questions: 200]

Question No : 1

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

A. True
B. False

Answer: A

Question No : 2

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

Answer: A

Question No : 3

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

Answer: B

Question No : 4

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

Answer: B

Question No : 5

When it comes to Control one of the most effective means of eliminating defects is to
_____ .

A. Train personnel often and thoroughly
B. Keep a Six Sigma project going on the process at all times
C. Design defect prevention into the product
D. Have each process consist of no more than five steps

Answer: C

Question No : 6

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

Answer: B

Question No : 7

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

Answer: B

Question No : 8

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.

Answer: A

Question No : 9

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

Answer: B

Question No : 10

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.

Answer: C

Question No : 11

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

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Regression Analysis: HeatFlux versus %Cu, Thickness
The Regression Equation is
HeatFlux = 484 + 4.80 %Cu - 24.2 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.
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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.

Answer: A,D

Question No : 12

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

Answer: A

Question No : 13

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

Answer: A

Question No : 14

Examples of Mistake Proofing for a laptop computer include which of these? (Note: There are 2 correct answers).

A. USB connection for a mouse
B. Open/Close button for CD Drive
C. Battery alignment pins
D. On/Off switch for computer

Answer: A,C

Question No : 15

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

Answer: A

Question No : 16

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

Answer: C

Question No : 17

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

A. True
B. False

Answer: A

Question No : 18

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

Answer: A

Question No : 19

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

Answer: D

Question No : 20

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

Answer: A

Question No : 21

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

Answer: B

Question No : 22

The practice of utilizing Poka-Yoke is also known as _____.

A. Thorough integration
B. Mistake proofing
C. On site inspection
D. Lean controls

Answer: B

Question No : 23

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

Answer: B,C,D

Question No : 24

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

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

Answer: B

Question No : 25

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

Answer: C

Question No : 26

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

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

Answer: A

Question No : 27

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

Answer: A

Question No : 28

If the data displayed in a Histogram displays two peaks the distribution would likely be _____.

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