

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).

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.

- 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 β_0 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