Vendor: ASQ

Exam Code: CSSBB

Exam Name: Six Sigma Black Belt Certification - CSSBB

Version: Demo

QUESTION 1
A _____ is used primarily to track the stability of the average value of a metric of interest.

A. NP Chart
B. Xbar-R Chart
C. I-MR Chart
D. C Chart

Correct Answer: B

QUESTION 2
For her injection molding project a Belt needed to track the percentage of defectives of a particular sample set so she used a _____ to display the data?

A. Individual Chart
B. C Chart
C. Xbar Chart
D. P Chart

Correct Answer: D

QUESTION 3
Which of these graphs demonstrates conditions which would be sufficient to enable OCAP for the process?

A. Xbar Chart
B. Time Series Chart
C. Neither
D. Both

Correct Answer: A

QUESTION 4
Control Charts were developed by Dr. Shewhart to track data over time. To detect Special Cause variation the Control Charts use which of these?

A. Data shift analysis
B. Outlier analysis methods
C. Center Line and Control Limits
D. None of the above

Correct Answer: C

QUESTION 5
Common and _____ Cause Variation are the focus of Statistical Process Control.

A. Uncommon
B. Ordinary
C. Special
D. Selective

Correct Answer: C

QUESTION 6
Special Cause Variation falls into which two categories?

A. Natural & Unnatural
B. Short Term & Long Term
C. Assignable & Pattern
D. Attribute & Discreet

Correct Answer: C

QUESTION 7
Range Charts are the technique used to determine if Special Causes are occurring within the subgroups of the _____.

A. Histograms
B. SPC Charts
C. NP Charts
D. Pareto Charts

Correct Answer: B

QUESTION 8
If the production is for higher volume and monitoring and the Mean and variability is to be monitored for four machines producing product and the characteristic to be monitored is Variable Data, which SPC Chart is best to be selected?

A. Xbar-R Chart
B. Individual-MR Chart
C. NP Chart
D. CUSUM Chart

Correct Answer: A

QUESTION 9
When a Belt Poka-Yoke's a defect out of the process entirely then she should track the activity with a robust SPC system on the characteristic of interest in the defect as an early warning system.

A. True
B. False

Correct Answer: B

QUESTION 10
Following the completion of a LSS project the Belt not only creates a Control Plan he also develops a _____ so those involved in the process know what to do when the critical metrics move out of spec.

A. Response Plan
B. Call List
C. Chain-of-Command
D. Defect Analysis Plan

Correct Answer: A

QUESTION 11
The Control Limits width varies if the sample size varies for which type of chart?

A. P Charts
B. NP Charts
C. Xbar-R Charts
D. Time Series Charts

Correct Answer: A

QUESTION 12
Which of these elements are not included in Implementation plans?

A. Work breakdown structure
B. Risk management plans
C. Cost/Benefit ratios
D. Planned audits of work completion

Correct Answer: C

QUESTION 13
Upon completion and validation of an improvement to a process a Belt and the Project Team create a Control Plan that contains which of these?

A. Standard operating work description of the process change
B. Description of the monitoring system in place to assure continued compliance
C. Summary of the targeted critical metrics for process performance measurement
D. All of the above

Correct Answer: D

QUESTION 14
What conclusion is most correct about the Experimental Design shown here with the response in the far right column?

Adv	Bev	Des	Crux	Response
-1	-1	-1	-1	20
1	-1	-1	1	14
-1	1	-1	1	17
1	1	-1	-1	10
-1	-1	1	1	19
1	-1	1	-1	13
-1	1	1	-1	14
1	1	1	1	10

A. No factor has enough statistical confidence greater than 95% to have an impact on the response rate
B. Constant, Adv and Bev are the only factors statistically affecting the response rate with 95% confidence or more
C. If the Adv is increased from the low level to the high level, the response rate increases
D. The response level is statistically concluded to only need the Adv and Bev factors set at the low level to get the largest response rate
E. This design does not have enough experimental runs to conclude anything as evidenced by the lack of P-values in the MINITABTM output

Correct Answer: D

QUESTION 15
Which statement(s) are correct about the Factorial Plot shown here? (Note: There are 3 correct answers).

Cube Plot (data means) for Tool Age
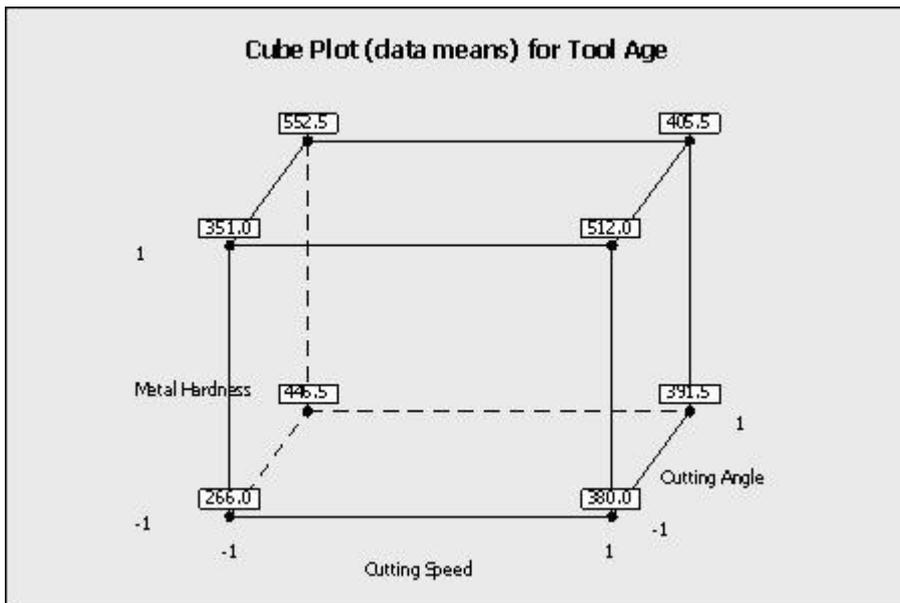
A. When the cutting speed increased from low to high level, the tool age increases
B. The coefficient of the metal hardness is positively related to the output of tool age
C. The coded coefficient is lower for cutting speed than the cutting angle related to the output of tool age
D. These plots prove a statistically significance factor with 95% confidence
E. These plots are an example of interaction plots

Correct Answer: ABC

QUESTION 16
How many experimental runs exist in a Full Factorial and fully randomized design for 4 factors with 2 replicates for the Corner Points and no Center Points? The factors in the experiment are only at 2-levels.

A. 10
B. 32
C. 256
D. 64

Correct Answer: B

QUESTION 17
If an experiment has 5 factors and no replicates for a 2-level Experimental Design with 16 experimental runs which statement is incorrect?

A. The Experimental Design is half-fractional
B. The Main Effects are confounded with only 4-way interactions
C. The Main Effects for the 5 factors are not aliased or confounded but the 2-way interactions are confounded with the 3-way interactions
D. The experiment has 8 experimental runs with the first factor at the high level

Correct Answer: C

QUESTION 18
Which statement(s) are correct about the Pareto Chart shown here for the DOE analysis? (Note: There are 2 correct answers).

Pareto Chart of the Standardized Effects
(response is % Reacted, Alpha = .05)
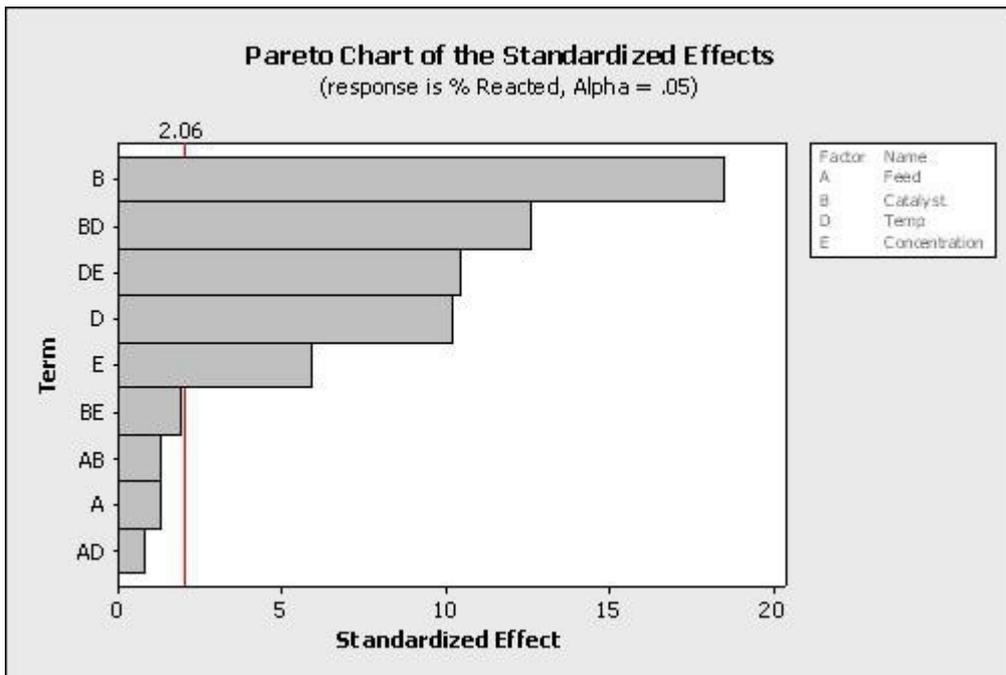
A. It is unknown from this graph how many factors were in the Experimental Design
B. The factors to keep in the mathematical model are E, D, DE, BD and B with an alpha risk equal to 2.06
C. The effects to keep in the mathematical model are E, D, DE, BD and B with an alpha risk equal to 0.05
D. The factors to keep in the mathematical model with a 5% alpha risk are BE, AB, A and AD

Correct Answer: AC

QUESTION 19
Fractional Factorial, _____and Response Surface Method are types of planned experiments.

A. Multi-Vari Analysis
B. Baldridge Channels
C. One Factor at a Time or OFAT
D. Factorial Design

Correct Answer: D

QUESTION 20
Relative to a Design of Experiments the term _____ refers to variables being a linear combination of each other.

A. Mirror Image
B. Directly Parallel
C. Collinear
D. None of the above

Correct Answer: C

QUESTION 21
Which statement(s) are incorrect about Fractional Factorial Designs?

A. A Half Fractional Design for 5 factors has the same number of experimental runs as a Full Factorial Design for 4 factors assuming no repeats or replicates or Center Points
B. Quarter Fractional experiments can exist for those with 4 factors
C. Resolution V design is desired while controlling costs of experimentation

D. Half Fractional experiments do not exist for those designs with only 2 factors

Correct Answer: C

QUESTION 22
If in an experiment all possible variable pairs sum to zero the design is Orthogonal.

A. True
B. False

Correct Answer: A

QUESTION 23
Which Experimental Design typically is most associated with the fewest number of input variables or factors in the design?

A. Fractional Factorial design
B. Full Factorial design
C. Simple Linear Regression
D. Response Surface Design

Correct Answer: D

QUESTION 24
The method of Steepest Ascent guides you toward a target inside the original inference space.

A. True
B. False

Correct Answer: B

QUESTION 25
Situations where standardized work needs to be incorporated include all of these except _____.

A. Machines continually operating to reduce the labor cost per piece
B. Lack of a system to assure proper inventory levels at repair stations
C. Changeover instructions incomplete
D. Process flow for the same product assembly taking various cycle time for completion

Correct Answer: A

QUESTION 26
The Lean toolbox includes all of these items except _____.

A. Mistake Proofing
B. Visual Factory
C. Design of Experiments
D. Inventory Management

Correct Answer: C

QUESTION 27
Questions that can be best answered by a Visual Factory include all of these except _____.

A. Are downtime issues easily noted?
B. Can extra inventory be seen easily?

C. Are unneeded tools or supplies easily noted?

D. Are setups optimized for lower scrap levels?

Correct Answer: D

QUESTION 28
If a Six Sigma project was to reduce repair station inventory and the team found the inventory was creeping up over time which Lean tools should be considered in the Control Phase to reestablish and sustain the project success?

A. Review the Visual Factory to assure inventory in excess of desired visible

B. Improve the lighting to assure adequate visibility

C. Analyze data from supplier deliveries

D. Reword the standardized work instructions to use active verbs and not passive phrases

Correct Answer: A

QUESTION 29
When a Belt implements an improvement that is automated thus requiring no particular understanding for use he has applied which Lean tool?

A. Mistake Proofing

B. Kaizen Event

C. 5S

D. None

Correct Answer: A

QUESTION 30
Kaizens or Kaikakus and Six Sigma projects are intended to create incremental process improvements versus breakthrough, significant improvements.

A. True

B. False

Correct Answer: B

QUESTION 31
Which of these items contribute to what is necessary for successful Kaizen events?

A. Analysis tools

B. Management support

C. Operator support

D. All of these answers are correct

Correct Answer: D

QUESTION 32
Kanban establishes a means of monitoring production, conveyance and delivery information such that efficient flow is established. The method used by Kanban is to require a _____ before anything moves.

A. Sign-off

B. Signal

C. Bell to ring

D. Work order

Correct Answer: B

QUESTION 33

When a Belt decides to use written procedures and visual controls to improve the consistency of the tasks that must occur in the process he is improving he has utilized the _____ activity of 5S.

A. Sustaining
B. Sorting
C. Standardizing
D. Straightening

Correct Answer: C

QUESTION 34

SPC Charts are used extensively in different business and decision-making environments. In this example a vendor is being selected based on speed of delivery. Which of the conclusions would help you pick a vendor for your needs regarding lead-time of delivery from your vendors? (Note: There are 4 correct answers).

Xbar-R Chart of Speed by Vendor

Tests performed with unequal sample sizes
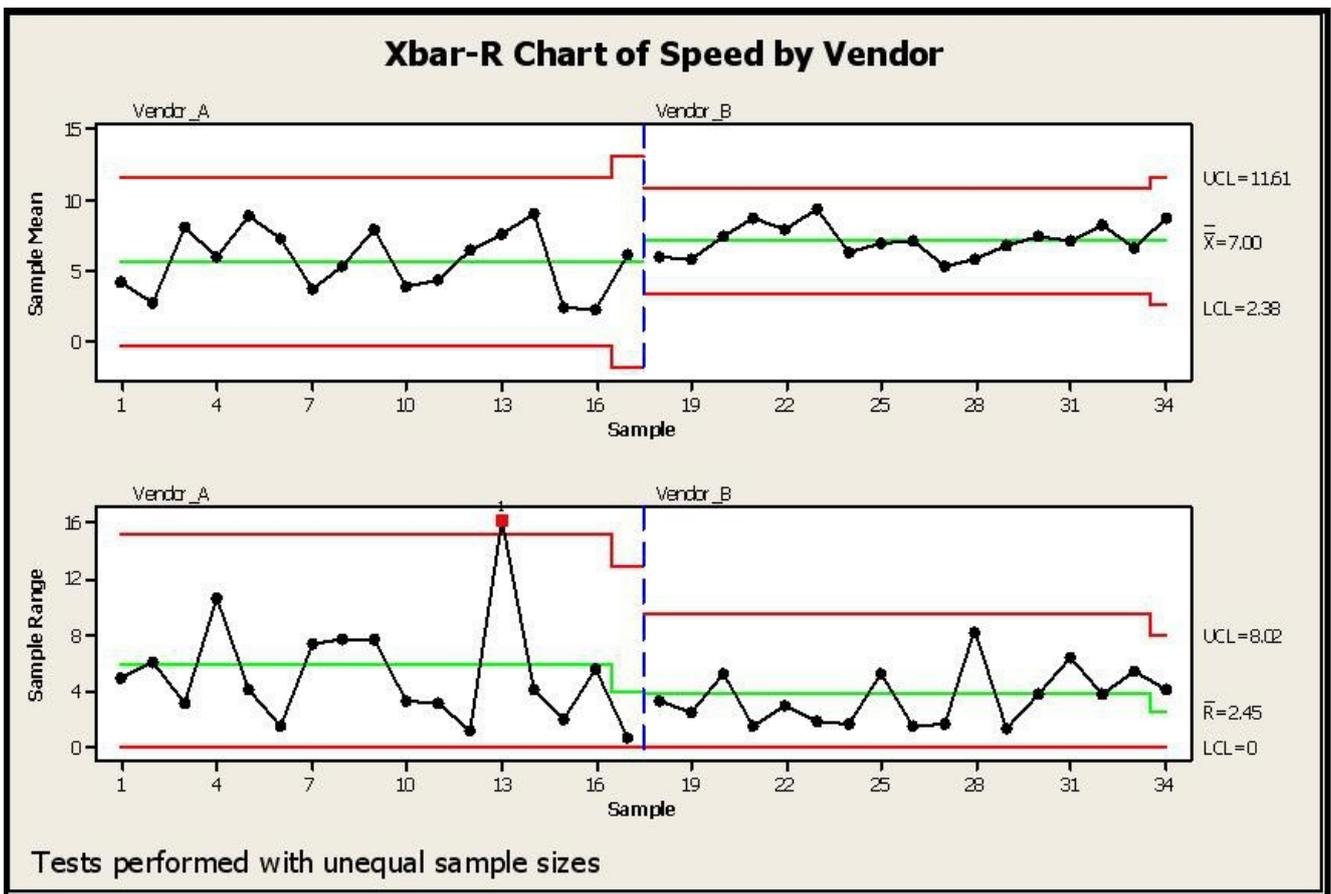
A. Vendor A with a much shorter lead time in delivery
B. Vendor B as it has a better consistency (lower variance) on lead time
C. Vendor B as Vendor A shows a situation out of control as shown in red

D. Vendor B as the Control Limits are much narrower than Vendor A

E. Vendor B with higher lead time, but a process with much narrower Control Limits

Correct Answer: BCDE

QUESTION 35
Fractional Factorial designs are used to reduce the _____ because the number of runs has been lowered.

A. Time and cost of experiments
B. Number of people involved
C. Number of data measurement points
D. Output summary

Correct Answer: A

QUESTION 36
Fractional Factorial Designs are used to analyze factors to model the output as a function of inputs if Hypothesis Testing in the Analyze Phase was inadequate to sufficiently narrow the factors that significantly impact the output(s).

A. True
B. False

Correct Answer: A

QUESTION 37
A Factorial Experiment based on a Level 2 Design with 6 factors would require 16 runs to fully assess the interactions.

A. True
B. False

Correct Answer: B

QUESTION 38
A Full Factorial experiment using a 3 level 3 factor approach has been proposed to test the viability of an extrusion machine experiment. How many treatment combinations will this approach involve?

A. 6
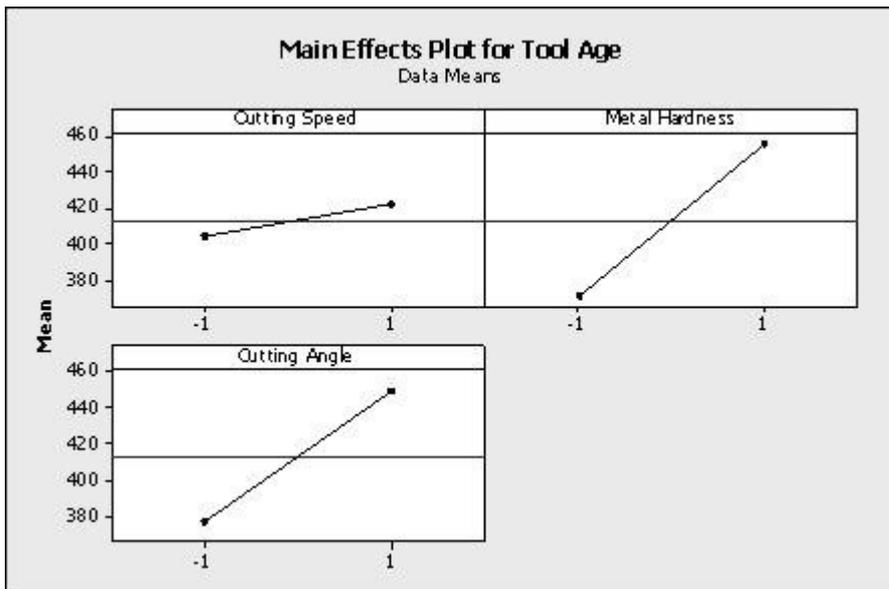B. 9
C. 27
D. 54

Correct Answer: C

QUESTION 39
Screening experiments are the proper choice when a Belt is faced with the situation of highly Fractional Factorial Designs.

A. True
B. False

Correct Answer: A

QUESTION 40
Which statement(s) are correct about the DOE Factorial plot output here? (Note: There are 3 correct answers).

Main Effects Plot for Tool Age
Data Means

A. Two factors were operated at 3 levels each
B. The highest tool age was achieved with metal hardness at high level while keeping the cutting speed at the low level
C. The design indicated above is a 32 factorial design
D. The cutting speed and cutting angle are at the low level for the least tool age achieved
E. All factors had 2 levels in the experiment

Correct Answer: BCE

QUESTION 41
Which statement(s) are incorrect for the Regression Analysis shown here? (Note: There are 2 correct answers).

```
Regression Analysis: Turbine Output versus Air-Fuel Ratio, % steam, ...
The Regression Equation is
TurbineOutput = 16.5 + 3.21 Air-Fuel Ratio + 0.386 % methane
               + 0.0166 SteamExitTemp

Predictor           Coef    SE Coef      T      P
Constant          16.488      2.918   5.65  0.000
Air-Fuel Ratio     3.2148     0.2377 13.52  0.000
% methane          0.38637    0.07278  5.31  0.000
SteamExitTemp      0.016576   0.004273 3.88  0.004

S = 0.508616   R-Sq = 98.6%    R-Sq(adj) = 98.2%
Analysis of Variance
Source          DF      SS       MS       F       P
Regression       3  170.003   56.668  219.06  0.000
Residual Error   9    2.328    0.259
Total           12  172.331

Source          DF   Seq SS
Air-Fuel Ratio   1  159.048
% methane        1    7.062
SteamExitTemp    1    3.892
```

A. The air-fuel ratio explains most of the TurbineOutput variation
B. The Regression explains over 98% of the process variation
C. This Multiple Linear Regression has three statistically significant independent variables
D. If the air-fuel ratio increases by 1, the TurbineOutput more than triples
E. The SteamExitTemp explains the most variation of the TurbineOutput

Correct Answer: DE

QUESTION 42
Which statement(s) are most correct for the Regression Analysis shown here?

```
Regression Analysis: Turbine Output versus Air-Fuel Ratio, % steam, ...
The Regression Equation is
TurbineOutput = 16.5 + 3.21 Air-Fuel Ratio + 0.386 % methane
              + 0.0166 SteamExitTemp

Predictor           Coef   SE Coef      T      P
Constant          16.488     2.918   5.65  0.000
Air-Fuel Ratio    3.2148     0.2377 13.52  0.000
% methane        0.38637    0.07278  5.31  0.000
SteamExitTemp   0.016576   0.004273  3.88  0.004

S = 0.508616   R-Sq = 98.6%   R-Sq(adj) = 98.2%
Analysis of Variance
Source          DF       SS      MS       F      P
Regression       3  170.003  56.668  219.06  0.000
Residual Error   9    2.328   0.259
Total           12  172.331

Source          DF   Seq SS
Air-Fuel Ratio   1  159.048
% methane        1    7.062
SteamExitTemp    1    3.892
```

A. The Regression explains 50.8% of the process variation
B. The air-fuel ratio explains most of the TurbineOutput variation
C. This Simple Linear Regression explains 98+% of the process variation
D. This Multiple Linear Regression has four statistically significant independent variables

Correct Answer: B

QUESTION 43
A valid mathematical Regression represents all of the characteristics shown except
_____.

A. The residuals when plotted follow a Normal Distribution
B. The sum of the residuals is zero
C. All of the standardized residuals will be within ±3 Standard Deviations
D. Most standardized residuals are within ±2 Standard Deviations

Correct Answer: C

QUESTION 44
When a Belt conducts a Linear Correlation Analysis and finds that as an X increases the Y also increase then he has proven a _____ correlation.

A. Negative
B. Positive
C. Monomial
D. Single alignment

Correct Answer: B

QUESTION 45
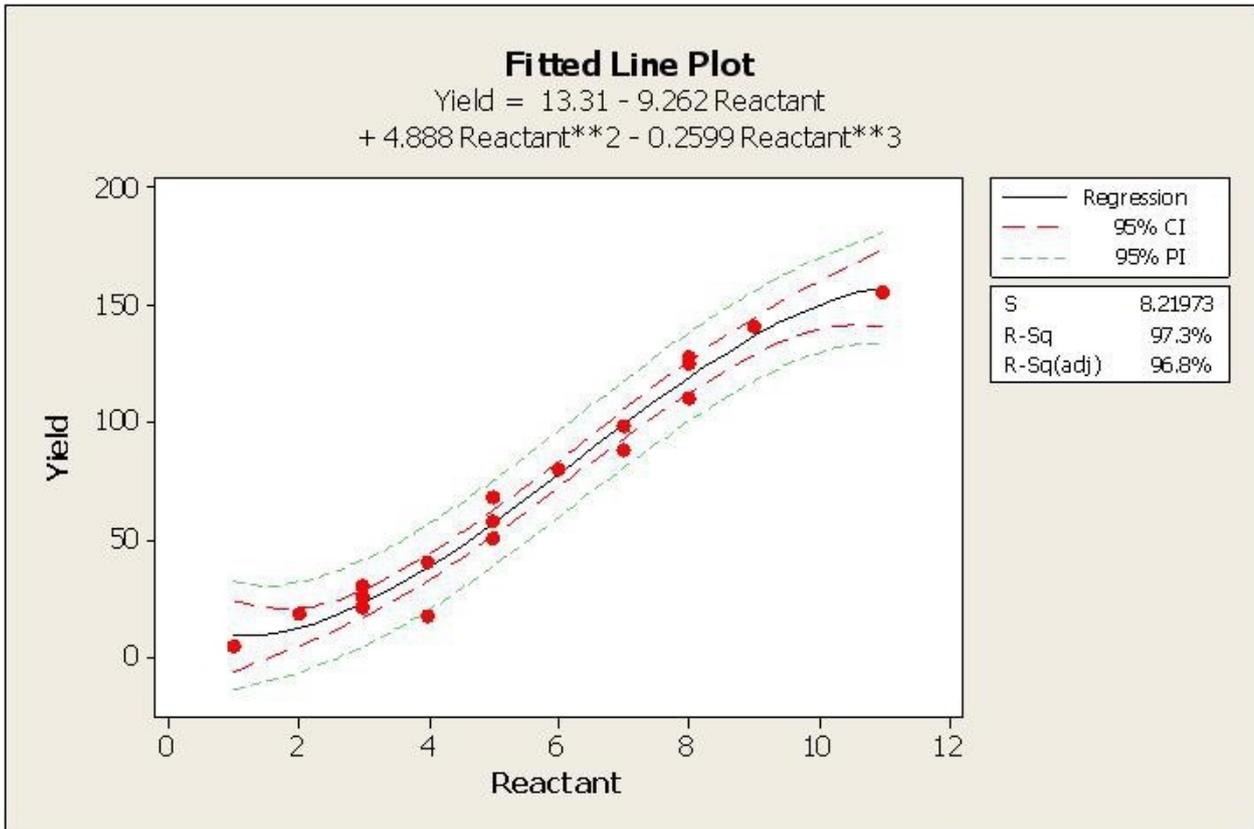A valid Multiple Linear Regression (MLR) is characterized by all of these except
_____.

A. It is an assumption that the X's (inputs) are not correlated to each other
B. The X's (inputs) are assumed to be independent of each other

C. MLR is conducted based on a deliberate form of experimentation
D. The Residuals from MLR analysis have to be Normally Distributed

Correct Answer: C

QUESTION 46
Which statement is NOT correct about the Fitted Line Plot shown here?

Fitted Line Plot
Yield = 13.31 - 9.262 Reactant
+ 4.888 Reactant**2 - 0.2599 Reactant**3

S	8.21973
R-Sq	97.3%
R-Sq(adj)	96.8%

A. The independent variable is the reactant
B. If the reactant was 6 units, with 95 % confidence we would expect a minimum yield of 100 units
C. With at least 95% confidence, we can expect less than 10 units of Yield when the reactant is at a value of 1
D. A reactant value between 2 and 4 units yields around 20 to 40
E. When the reactant increases, the expected yield would increase

Correct Answer: D

QUESTION 47
When doing Hypothesis Testing on Non-normal data Belts will use a _____ to compare more than two sample proportions to each other.

A. Z score Table
B. Sakami Table
C. Mean-to-Mode Analysis
D. Contingency Table

Correct Answer: C

QUESTION 48
It would be more likely than not for a Belt conducting a Regression Analysis to find that the
_____.

A. r2 value is smaller than the absolute value of r
B. Correlation Coefficient equals r2
C. Coefficient of Determination is less than r2
D. Correlation Coefficient equals r divided by 2

Correct Answer: A

QUESTION 49
When a Belt properly analyzes the results of an experiment he must examine the Residuals in expectation of finding all of the following except _____.

A. Some Residuals higher than others
B. Some Residuals lower than others
C. All Residuals within 2 Standard Deviations of the Mean
D. Residuals will represent a Linear Regression

Correct Answer: D

QUESTION 50
Which statement(s) are correct about the Regression shown here? (Note: There are 2 correct answers).
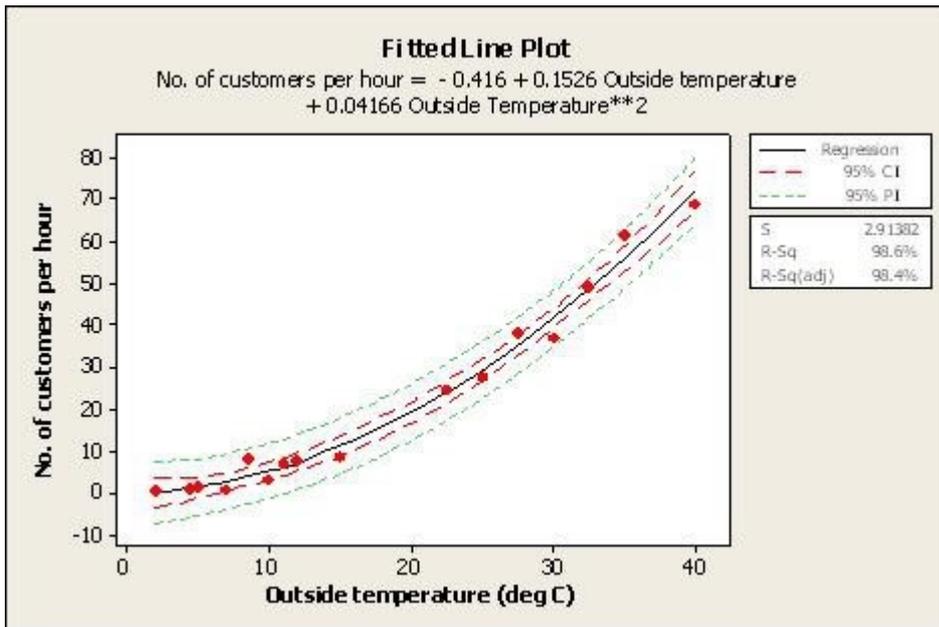
A. The dependent variable is the outside temperature
B. The relationship between outside temperature and number of customers per hour is a Linear Regression
C. The dashed lines indicate with 95% confidence where all of the process data should fall between
D. The dashed lines indicate with 95% confidence the estimate for the Quadratic Regression Line
E. The predicted number of customers per hour is close to 5 if the outside temperature is 10 deg C

Correct Answer: DE

QUESTION 51
Which of these might contribute to similar distributions having Unequal Variance?

A. Extreme tails

B. Outliers

C. Multiple Modes

D. All of the above

Correct Answer: D

QUESTION 52
A Belt working in a supply chain environment has to make a decision to change suppliers of critical raw materials for a new product upgrade. The purchasing manager is depending on the Belt's effort requiring that the average cost of an internal critical raw material component be less than or equal to $4,200 in order to stay within budget. Using a sample of 35 first article components, a Mean of the new product upgrade price of $4,060, and a Standard Deviation of $98 was estimated. Select the answer that best states the Practical Problem.

A. If the average cost per component is $4,200 or less, then the purchase manager will introduce the new product upgrade with new components.

B. If the average cost per component is greater than $4,200, then the purchase manager will introduce the new product upgrade with new components.

C. Only if the average cost per product upgrade is $4,060, will the purchase manager introduce new product upgrades with new components.

D. If the average cost per new product upgrade is less than $180, then the purchase manager will introduce the new product upgrade with new components.

Correct Answer: C

QUESTION 53
A Belt working in a supply chain environment has to make a decision to change suppliers of critical raw materials for a new product upgrade. The purchasing manager is depending on the Belt's effort requiring that the average cost of an internal critical raw material component be less than or equal to $4,200 in order to stay within budget. Using a sample of 35 first article components, a Mean of the new product upgrade price of $4,060, and a Standard Deviation of $98 was estimated. The Alternative Hypothesis in the above example is?

A. The Standard Deviation is equal to $300.

B. The Mean is less than $4,320.

C. The Mean is equal to $4,060.

D. The Mean is less than $4,200.

E. The Mean is greater than $ 4,200.

Correct Answer: E

QUESTION 54
A Belt working in a supply chain environment has to make a decision to change suppliers of critical raw materials for a new product upgrade. The purchasing manager is depending on the Belt's effort requiring that the average cost of an internal critical raw material component be less than or equal to $3,600 in order to stay within budget. Using a sample of 42 first article components, a Mean of the new product upgrade price of $3,200 and a Standard Deviation of $180 was estimated. Based on the data provided, the Z value for the data assuming a Normal Distribution is?

A. 1.11

B. 2.22

C. 4.30

D. 5.42

Correct Answer: B

QUESTION 55
Sally and Sara sell flower pots at their garage sale. Sally motivates Sara mentioning that they will sell a minimum of 15 pots per day if the outside temperature exceeds 60o F. From a sample, whose population

Trying our product !

★ **100%** Guaranteed Success

★ **100%** Money Back Guarantee

★ **365 Days** Free Update

★ **Instant Download** After Purchase

★ **24x7** Customer Support

★ Average **99.9%** Success Rate

★ More than **69,000** Satisfied Customers Worldwide

★ Multi-Platform capabilities - **Windows, Mac, Android, iPhone, iPod, iPad, Kindle**

Need Help

Please provide as much detail as possible so we can best assist you.
To update a previously submitted ticket:

One Year Free Update
Free update is available within One Year after your purchase. After One Year, you will get 50% discounts for updating. And we are proud to boast a 24/7 efficient Customer Support system via Email.

Money Back Guarantee
To ensure that you are spending on quality products, we provide 100% money back guarantee for 30 days from the date of purchase.

Security & Privacy
We respect customer privacy. We use McAfee's security service to provide you with utmost security for your personal information & peace of mind.

Guarantee & Policy | Privacy & Policy | Terms & Conditions