# Six Sigma Yellow Belt/ Six Sigma Green Belt Exam questions and answers with explanation

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**Question:**

**Quality and the Critical-to-Quality (CTQ's) are both subjective terms that are defined by the _____.**

Management team
Line Supervisor
Customer
Design team

**Question:**

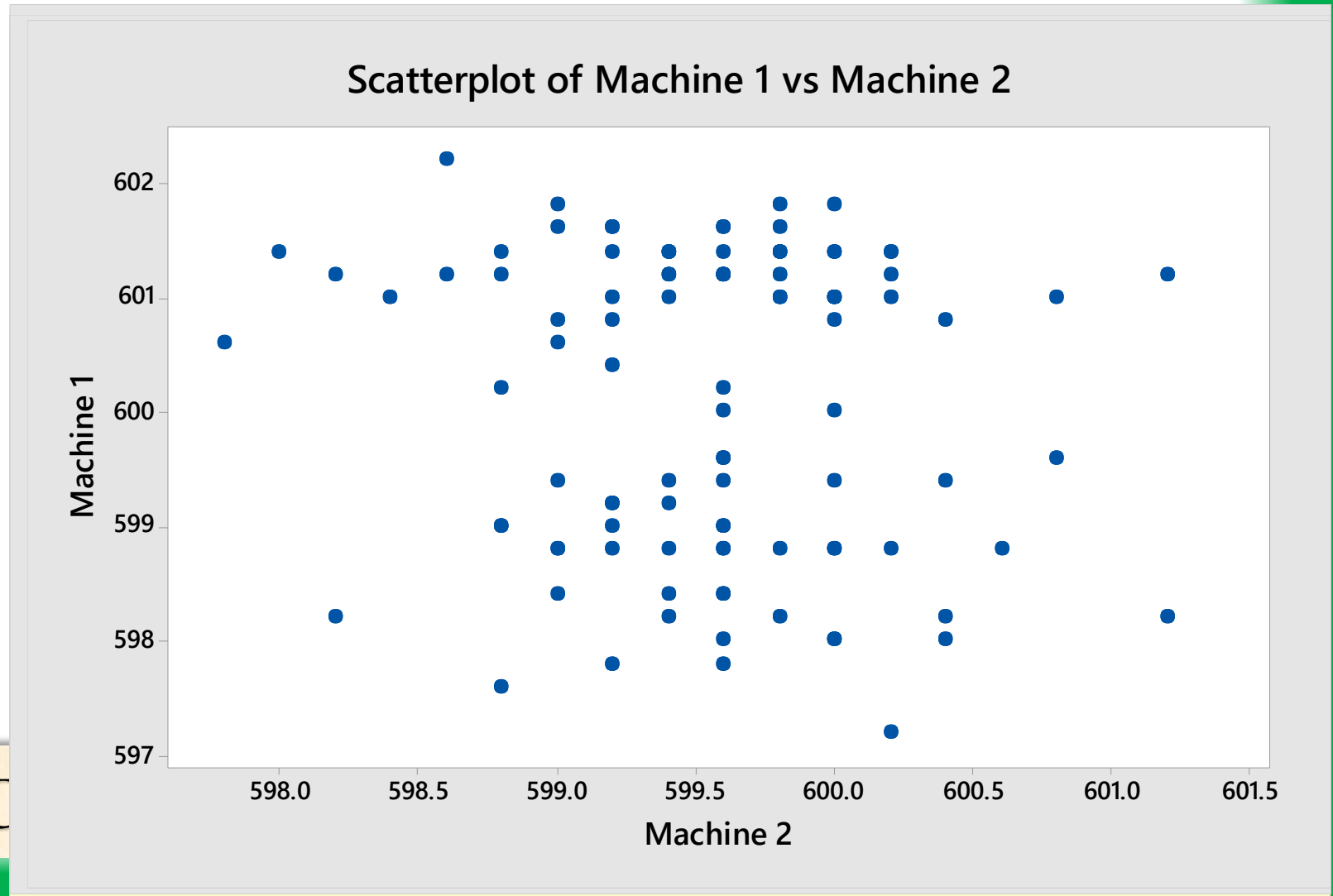
**Which of the following tools indicates a relationship between X and Y variables, and provides a visual correlation coefficient.**

Cause (X) and Effect (Y) Diagram

Pareto Chart

Scatter Diagram

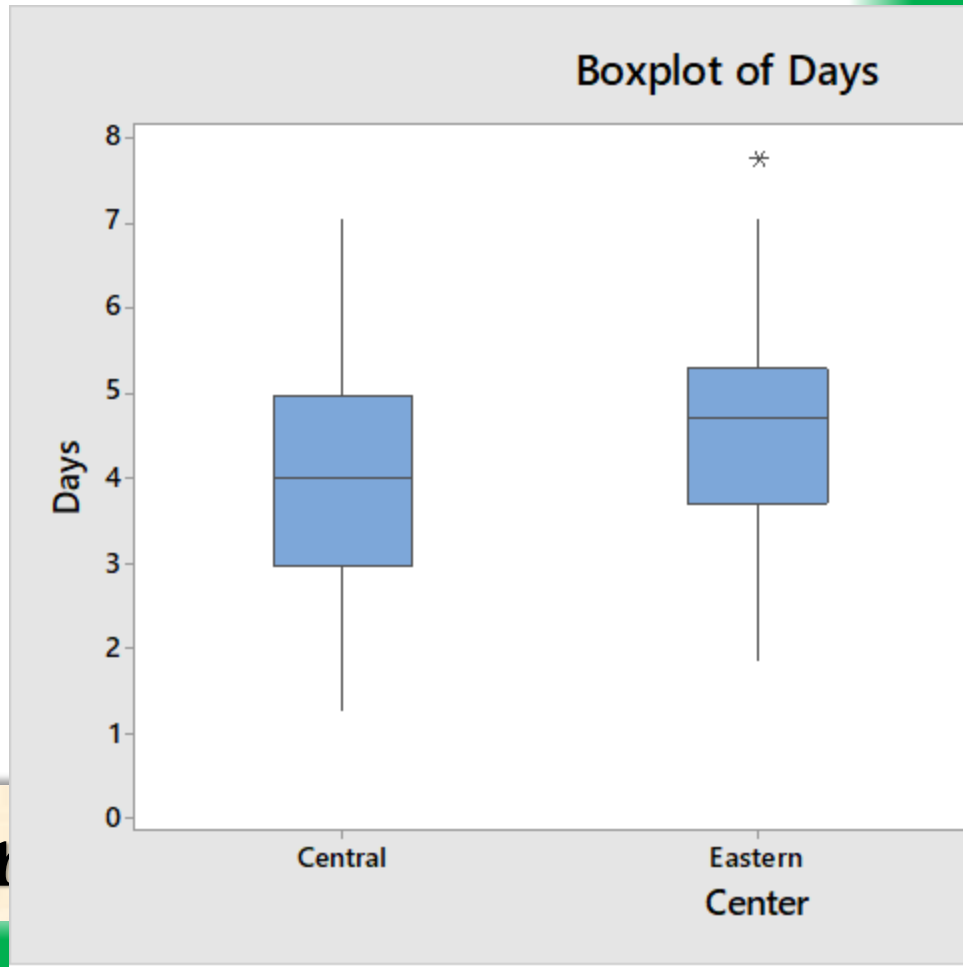
Control Chart



**Question:**

**Box Plot Graph is used to_____ . [multiple choice]**

1. Identify outliers
2. Differentiate before and after Improvements.
3. It is suited for time ordered data and parametric distribution.
4. B and C only



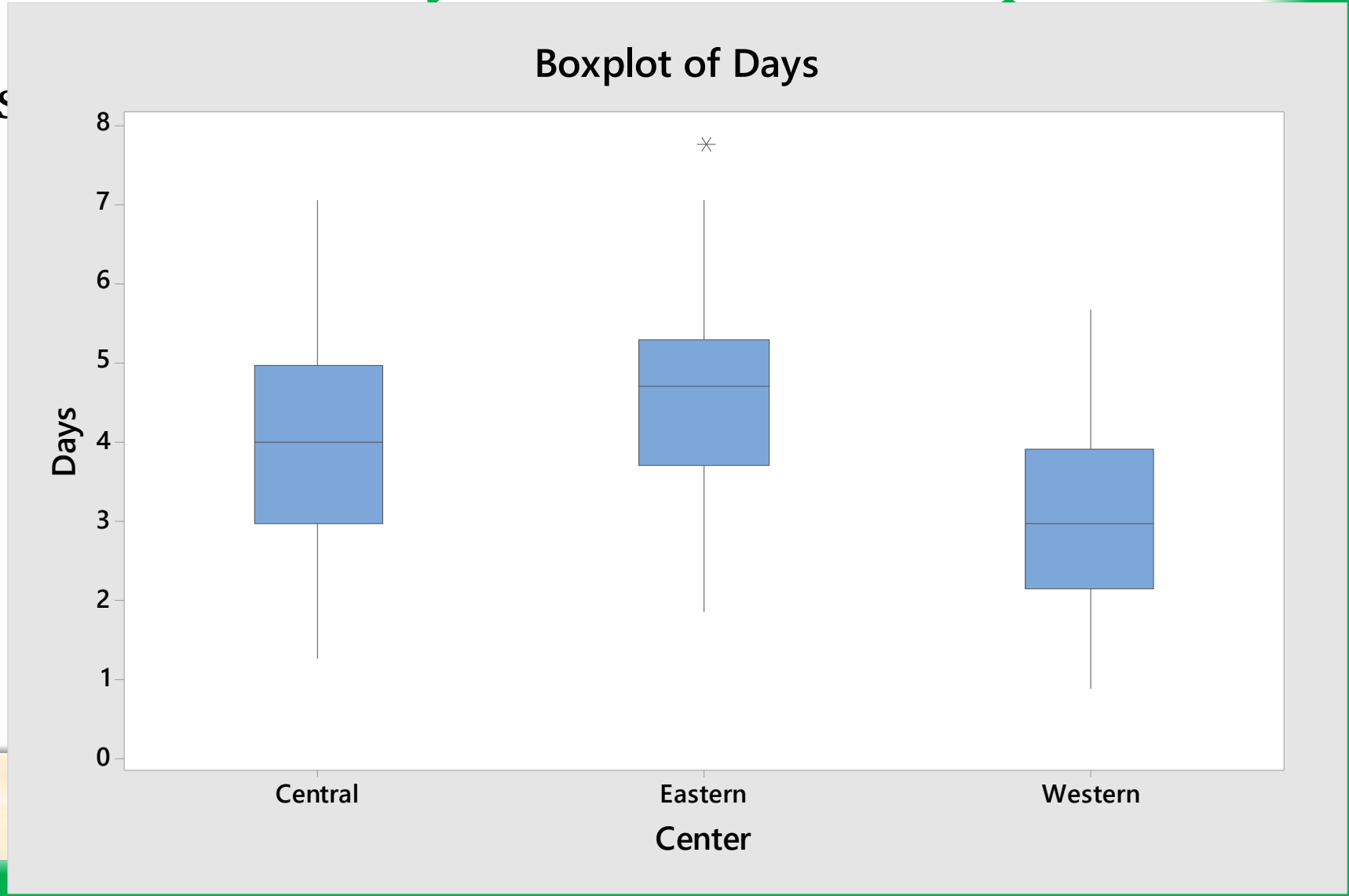
**Question:**

**You are a Project Manager wanting to compare on time delivery (%) of Team Leads across 3 teams, your choice of technique would be?**

Hypothesis Tes
Histograms
Pareto chart
Box Plots

**Answer:**

**Explanation:**



**Question:**

**What kind of Graph would help us to analyze stability of non parametric (NO assumption) distribution of data points**

P Chart
I-mR Chart
C Chart
Box Plot

**Question:**

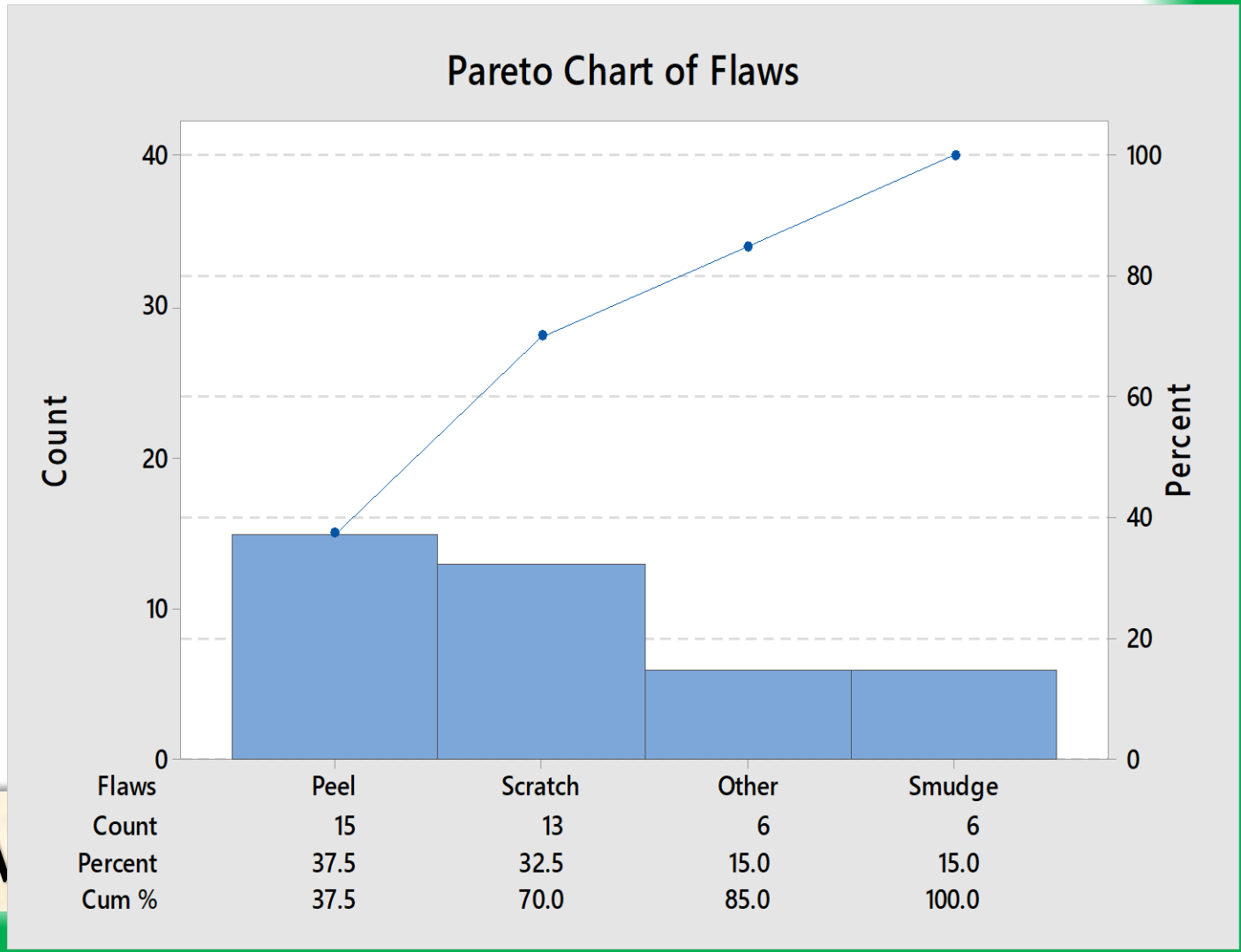
**The distance between Quartile1 (Q1) and Quartile3 (Q3) is called as _____ and it helps to understand _____ of process variation.**

Inter Quartile Range and Width
Quartile Range and Height
Quartile 2 and Width
Median and Width

**Question:**

**The Pareto Graph is used to represent _____ scale of measurement.**

Nominal
Ordinal
Ratio
Interval

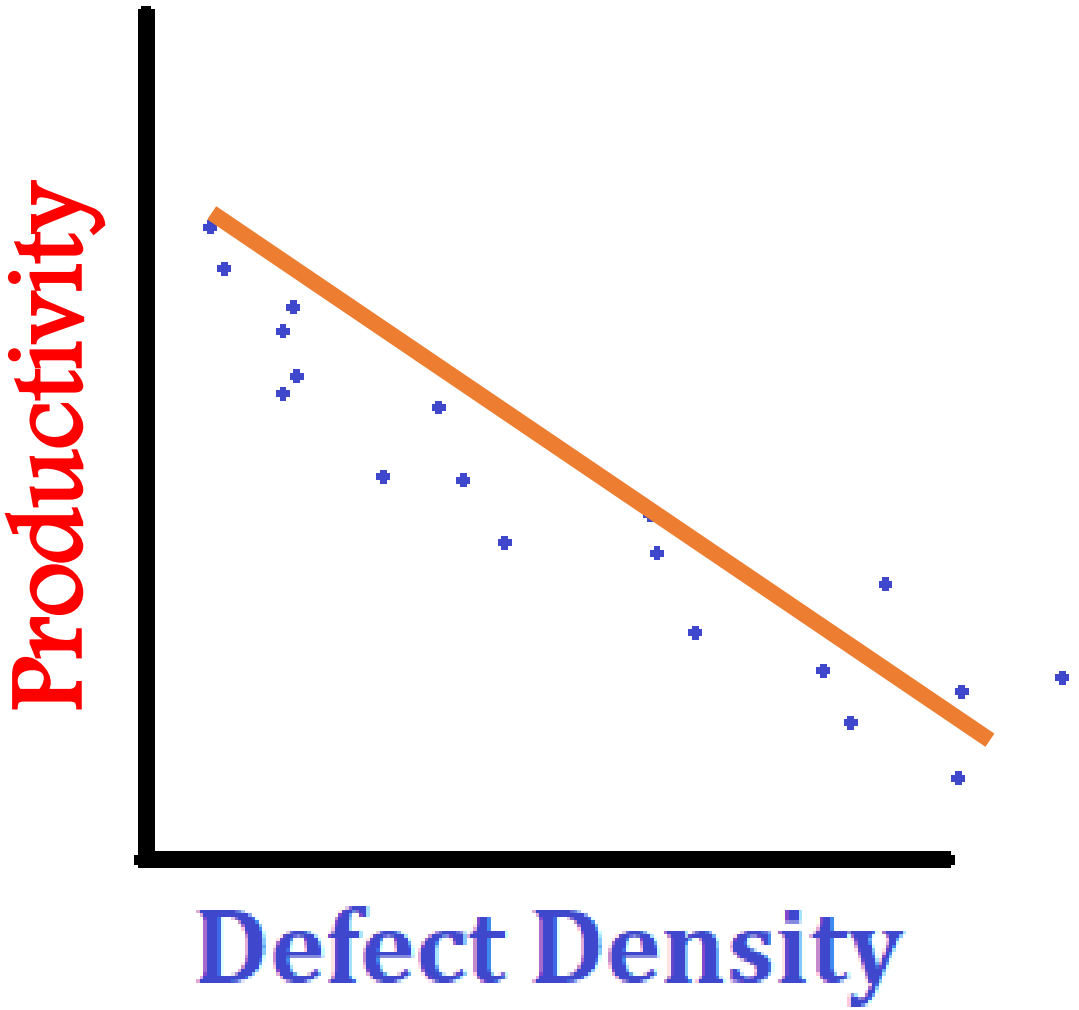



Data V

**Question:**

**In a project, defect density increases and Productivity decreases in subsequent releases. Indicate what kind of relationship that you can interpret in this pair (x, y)?**

Weak Positive Correlation
Strong Negative Correlation
No relation
Strong Positive Correlation



**Question:**

**Answer:**

**Explanation:**

**Question:**

**Which of the following are characteristics of the inputs to a process?**

[Multiple choice]

- These are referred to as the x variables
- These are the "causes" that create the effect
- A process output is a function of its inputs
- None of the above

**Question:**

**Six Sigma is a term used to indicate that there are 6 Standard Deviations below and above the process Mean and within upper and lower specification limits.**

True

False

**Question:**

**What is the percentage of perfection in a process operating at +/- 3 Sigma level**

99.999660 %
99.999999. %
99.976700 %
3.4 DPMO

**Question:** **Which of the following is NOT an advantage of using a median?**

1. Extreme values do not affect the median as strongly as they affect Mean
2. A median can be calculated for qualitative descriptions
3. Median is easy to understand
4. Median can be calculated even for open-ended classes

**Question:** **Which of the following is not a Measure of Central Tendency**

Geometric Mean
Median
Mode
Arithmetic Mean

**Question:**

**Ratio and Interval Scale of measurements are based on _____type of data**

Discrete & Attribute

Discrete & Continuous

Variable & Continuous

Continuous & Attribute

**Question:**

**The Graph which helps to identify and prioritize problems to be solved**

Control Chart

Histogram Chart

Fish Bone Graph

Pareto Chart

**Question:**

**The design and code review effort is high (process is effective) in a project, and it results in less number of defects injected in UAT phase. Identify the appropriate type of correlation between review effort and number of defects. (Assume that "r" value is good).**

Positive Correlation
Strong Negative Correlation
Non linear Correlation
Strong Positive Correlation


Data Visualization

**Question:**

**If the effort variance of your project shows a negatively skewed normal distribution curve, what will you infer from the following?**

This means that the project is proactively finishing ahead of time

Project is in control

Project is influenced by lot of special causes

None of the above

**Question:**

**---------- helps to understand Process behavior for parametric distribution.**

Median
Range
Mean
Variance

**Question:**

**"If P value is >=0.5, then the process is said to be Normal" – Indicate what type of statistics is being used?**

Descriptive
Inferential
Expression
None of the above

**Question:**

**Three Standard Deviations on left and right side of the mean would include what % of the total data points in Normal Distribution?**

68 %
97 %
99 %
95 %

**Answer:**

**Explanation:**

**Question:**

**In your project, Review effort (hrs, X) and defect rate (no. of defects per hour, Y) show a negative correlation. It means :**

As Defect rate increases, Review effort also increases

Negative correlation does not infer any relationship between Review effort and defect Factors

As Defect Rate decreases, Review effort also decreases

As Defect Rate increases, Review Effort Hrs decreases

**Question:**

**If you are a Team Lead encountering a positively skewed normal distribution curve for Defect Leakage Rate, then what will you conclude from the following?**

Process is stable
Process is within limits
Process needs Corrective action over Defects
Process is influenced by special cause variation

**Question:**

**The measure which helps to understand the spread of variation is called as _____**

Quartile 1
Cpk
Mode
Variance

**Question:**

**One of the most popular measures of variability in a data set or population is _____.**

Dispersion
Variation
Mean
Standard Deviation

**Question:**

**Answer:**

**Explanation:**

**Question:**

**_____determines the nature of relationship which would help us to make predictions.**

Correlation Analysis
Regression Analysis
Stability Analysis
Capability Analysis

**Question:**

**A software development process has UAT Defect density as Y, percent review effectiveness as X1 and percent design phase effort as X2. Indicate the type of regression model Y= -0.1320 X1 + 0.16 X2 + 23.200**

Single Linear Regression
Dummy Variable Regression
Multi Linear Regression
Logistic Regression

**Question:**

**Which of the below statistical tests helps in decision making based on data inferences?**

Mode
Hypothesis Test
Skewness
Stability Test

**Question:**

**What is the outcome of Hypothesis Testing, where P Value > = 0.05 ?**

Accept Alternate Hypothesis
Reject Null
Accept Null Hypothesis
Data is normal

**Answer:**

**Explanation:**

**Question:**

**Answer:**

**Explanation:**