

SIX SIGMA GREEN BELT SAMPLE QUESTIONS

1. Which of the following is not true about “Sigma”?

- A. The performance sigma measures the capability of the process to perform defect-free-work
- B. The sigma value is a metric that indicates how well that process is performing
- C. It is a Latin alphabet
- D. Standard deviation

Explanation: It is a Greek alphabet.

2. Sigma Scale is

- A. Conformance performance
- B. Directly correlated with Non-conformance
- C. Inversely correlated to Non-conformance
- D. None of the above

Explanation: When Non-conformance percentage increases the sigma score decreases

3. Which of the following tool that you use when you want to break down the questions and responses into preference categories for analysis?

- A. Pareto Analysis
- B. Affinity Diagram
- C. Dendogram
- D. None of the above

Explanation: Pareto analysis used for selection of a limited number of tasks that produce significant overall effect.

Affinity Diagram can help the team break down questions and responses into preference categories for analysis.

Dendogram is a tree diagram frequently used to illustrate the arrangement of the clusters produced by hierarchical clustering techniques (i.e. this is produced during cluster analysis)

4. In a customer care department, Black belt of the process wanted to see the performance of the service. So the survey questionnaire had been sent to 50 customers. The team received 45 responses. The questionnaire has 5 questions and each question would have Yes or No options. Which of the following graph you would to show the summary to you

Questions:

1. Task forces and teams
2. The establishment of liaison roles
3. A matrix organizational structure
4. Cross functional collaboration

Options:

Are you satisfied with our service, overall?

- A. Pareto Chart
- B. Histogram
- C. **Bar chart**
- D. (a) and (c)

Explanation: The response for the questions is binary and it's a discrete data. Example, Number of customers satisfied with call waiting time.

5. Which of the following is not true about a Process Map

- A. Shows the steps of the flow of the process
- B. May or may not show decisions
- C. **It does not show inputs and outputs**
- D. Helps streamline flow

Explanation: Flow chart does not show inputs and outputs but a Process Map does show inputs and outputs

6. Process mapping does not provide inputs to one of the following

- A. Capability studies
- B. Experimentation
- C. Cause and effect matrix
- D. **Control Charts**

Explanation: Control charts take input from the process data but not the process mapping

7. What is the range of correlation (r) and when correlation between two variables is equals to 0.312 what does it mean?
- A. [Correlation ranges from 0 to 1] & 0.312 indicates that strong positive correlation
 - B. [Correlation ranges from -1 to 1] & 0.312 indicates that weak positive correlation
 - C. [Correlation ranges from 0 to 1] & 0.312 indicates that weak positive correlation
 - D. **[Correlation ranges from -1 to 1] & 0.312 indicates that strong positive correlation** ✓

Explanation: Correlation ranges from -1 to 1. When correlation (r) is

- i. -1 it means that “Strong Negative” correlation between two variables
- ii. +1 it means that “Strong Positive” correlation between two variables
- iii. 0 it means that “No” correlation between two variables
- iv. Closer to 0 means that weak negative or positive correlation according to the sign of the value

8. The physiotherapist finds the relationship of given X (Height) and Y (Weight) value by the linear relation $Y = a + bX$. ‘b’ stands for
- A. Average change in Y, per unit change in X.
 - B. **Average change in X, per unit change in Y.** ✓
 - C. ‘b’ is a constant.
 - D. None of the above.

Explanation: $Y = a + bX$

‘Y’ - Dependent variable

‘X’ - Independent variable

‘a’ - Constant

‘b’ - Slope (Average change in X, per unit change in Y)

9. Which one of the following is used to measure how well a stable process can meet customer expectations
- A. Measurement System Analysis
 - B. **Capability Analysis** ✓
 - C. Analysis of Variance
 - D. All of the above

Explanation:

- The Measurement system Analysis is a specially designed experiment that seeks to identify the components of variation in the measurement
- Capability Analysis is used to calculate the metrics in the Measure, Improve and control Phases to measure the process capability
- Analysis of Variance (ANOVA) - is a statistical technique that is used to compare whether samples are drawn from populations that have the same mean (average), or whether the population means are significantly different.

10. A good control plan strategy will have the one of the following

- A. Minimizes process tampering & clearly states the reaction plan to out-of-control conditions
- B. (b) Signals when kaizen activities are needed
- C. (c) Describes training needs for standard operating procedure & maintenance schedule requirements
- D. (d) All of the above**

Explanation: A good control plan clearly describes what action to take, when to take them and who should take them. It will have the following strategy

- Minimizes process tampering
- Clearly states the reaction plan to out-of-control conditions
- Signals when kaizen activities are needed
- Describes training needs for standard operating procedure
- Maintenance schedule requirements