

# PRACTICE EXAM 6: SIX SIGMA GREEN BELT (100 QUESTIONS)

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*This original practice exam contains 100 applied multiple-choice questions across Six Sigma Green Belt concepts. Select the single best answer for each item. Review the answer key and explanations after completing the exam to identify study priorities. This study resource is not an official certification examination.*

1. During a manufacturing improvement project, which response gives the most accurate definition of a Six Sigma project charter?
  - A. A final inspection activity performed after all process work is complete.
  - B. A one-time kickoff meeting held before the team begins collecting data.
  - C. A concise authorization that states the business case, scope, goals, and roles.
  - D. A customer survey summary written after the improvement is deployed.
  
2. In a healthcare workflow study, the team must select the best completion: a process is said to be in control when it is characterized primarily by.
  - A. Only common-cause variation within stable control limits.
  - B. A one-time kickoff meeting held before the team begins collecting data.
  - C. A customer survey summary written after the improvement is deployed.
  - D. A routine accounting report prepared only for monthly financial close.
  
3. While preparing a DMAIC project review, which response best explains what a critical-to-quality requirement represent means?
  - A. A customer survey summary written after the improvement is deployed.
  - B. A routine accounting report prepared only for monthly financial close.
  - C. A final inspection activity performed after all process work is complete.

D. A measurable customer need that strongly affects perceived quality.

4. A Green Belt team is reviewing a service process. the team asks the following applied question: The voice of the customer is most useful for identifying?

- A. A routine accounting report prepared only for monthly financial close.
- B. Customer needs, priorities, and definitions of value.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

5. During a manufacturing improvement project, the team asks the following applied question: In DMAIC, the primary purpose of the Define phase is to?

- A. Clarify the problem, customers, scope, goals, and project team.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

6. In a healthcare workflow study, the team must select the best completion: a SIPOC diagram is most useful early in a project because it.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. Maps suppliers, inputs, process, outputs, and customers at a high level.

7. While preparing a DMAIC project review, the team asks the following applied question: Operational definition means?

- A. A customer survey summary written after the improvement is deployed.
- B. A precise, repeatable rule for measuring or classifying something.

- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**8.** A Green Belt team is reviewing a service process. the team must select the best completion: a measurement system analysis is performed to determine whether.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. The measurement process is sufficiently reliable for its intended use.
- D. A one-time kickoff meeting held before the team begins collecting data.

**9.** During a manufacturing improvement project, the team asks the following applied question: Repeatability in a gauge study describes variation caused by?

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. The same appraiser measuring the same item repeatedly.
- D. A customer survey summary written after the improvement is deployed.

**10.** In a healthcare workflow study, the team asks the following applied question: Reproducibility in a gauge study describes variation caused by?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. Different appraisers measuring the same items.

**11.** While preparing a DMAIC project review, the team must select the best completion: a sampling frame is.

- A. A customer survey summary written after the improvement is deployed.

- B. The complete list or source from which a sample can be drawn.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**12.** A Green Belt team is reviewing a service process. the team asks the following applied question: Stratified sampling is especially useful when?

- A. Important subgroups should each be represented in the sample.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**13.** During a manufacturing improvement project, the team must select the best completion: a check sheet is primarily used to.

- A. Collect and tally data consistently at the point of occurrence.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**14.** In a healthcare workflow study, the team must select the best completion: a run chart displays.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. Data in time order without calculated control limits.

**15.** While preparing a DMAIC project review, the team must select the best completion: a Pareto chart is based on the principle that.

- A. A customer survey summary written after the improvement is deployed.

- B. A routine accounting report prepared only for monthly financial close.
- C. A relatively few categories often account for much of the effect.
- D. A final inspection activity performed after all process work is complete.

**16.** A Green Belt team is reviewing a service process. the team must select the best completion: a cause-and-effect diagram is used to.

- A. A routine accounting report prepared only for monthly financial close.
- B. Organize possible causes of a problem into logical categories.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**17.** During a manufacturing improvement project, the team asks the following applied question: The five-whys technique is intended to?

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. Probe progressively from a symptom toward an underlying cause.
- D. A customer survey summary written after the improvement is deployed.

**18.** In a healthcare workflow study, the team must select the best completion: a scatter plot is most appropriate for examining.

- A. The relationship between two quantitative variables.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**19.** While preparing a DMAIC project review, the team asks the following applied question: Correlation alone does not establish causation because?

- A. A customer survey summary written after the improvement is deployed.
- B. An observed association may be due to other factors or chance.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**20.** A Green Belt team is reviewing a service process. the team must select the best completion: a process map differs from a SIPOC because a process map.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. Shows the sequence of detailed activities and decision points.

**21.** During a manufacturing improvement project, the team asks the following applied question: Value-added analysis asks whether an activity?

- A. Changes the product or service in a way the customer values.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**22.** In a healthcare workflow study, the team asks the following applied question: Failure mode and effects analysis ranks risks using?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. Severity, occurrence, and detection evaluations.

**23.** While preparing a DMAIC project review, the team must select the best completion: a fishbone diagram should be followed by.

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. Evidence gathering to test the most plausible candidate causes.
- D. A final inspection activity performed after all process work is complete.

**24.** A Green Belt team is reviewing a service process. the team asks the following applied question: Brainstorming is most effective when the team initially?

- A. A routine accounting report prepared only for monthly financial close.
- B. Generates ideas freely before judging or selecting them.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**25.** During a manufacturing improvement project, the team must select the best completion: a pilot test is conducted to.

- A. A final inspection activity performed after all process work is complete.
- B. Evaluate a proposed solution on a limited scale before broad deployment.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**26.** In a healthcare workflow study, the team asks the following applied question: Poka-yoke refers to?

- A. A method that prevents errors or makes them immediately obvious.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**27.** While preparing a DMAIC project review, the team asks the following applied question: Standard work is valuable after improvement because it?

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. Documents the best known method so the new process is performed consistently.
- D. A final inspection activity performed after all process work is complete.

**28.** A Green Belt team is reviewing a service process. the team must select the best completion: a future-state process map should describe.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. The intended flow after waste and causes have been addressed.

**29.** During a manufacturing improvement project, the team must select the best completion: a force-field analysis helps a team identify.

- A. Forces that support or resist a proposed change.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**30.** In a healthcare workflow study, the team must select the best completion: a control plan should specify.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. What to monitor, how to measure it, who acts, and what action to take.

**31.** While preparing a DMAIC project review, the team must select the best completion: a reaction plan is triggered when.

- A. A customer survey summary written after the improvement is deployed.
- B. A monitored process shows a defined out-of-control or unacceptable condition.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**32.** A Green Belt team is reviewing a service process. the team asks the following applied question: Visual management primarily improves control by?

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. Making status, standards, and abnormalities easy to see quickly.
- D. A one-time kickoff meeting held before the team begins collecting data.

**33.** During a manufacturing improvement project, the team asks the following applied question: Document control is important because it?

- A. A final inspection activity performed after all process work is complete.
- B. Ensures people use the current approved process instructions.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**34.** In a healthcare workflow study, the team must select the best completion: a control chart is used to.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. Distinguish routine common-cause variation from special-cause signals.

**35.** While preparing a DMAIC project review, the team asks the following applied question: The arithmetic mean is calculated by?

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. Adding all observations and dividing by the number of observations.
- D. A final inspection activity performed after all process work is complete.

**36.** A Green Belt team is reviewing a service process. the team asks the following applied question: The median is particularly useful when data are?

- A. Skewed or contain extreme values that distort the mean.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**37.** During a manufacturing improvement project, the team asks the following applied question: Standard deviation describes?

- A. The typical spread of individual values around their mean.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**38.** In a healthcare workflow study, the team asks the following applied question: The range of a data set is?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. The maximum value minus the minimum value.

**39.** While preparing a DMAIC project review, the team must select the best completion: a histogram is best used to show.

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. The distribution shape of quantitative data grouped into intervals.
- D. A final inspection activity performed after all process work is complete.

**40.** A Green Belt team is reviewing a service process. the team must select the best completion: a box plot displays.

- A. A routine accounting report prepared only for monthly financial close.
- B. Median, quartiles, spread, and potential outlying observations.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**41.** During a manufacturing improvement project, the team must select the best completion: a nominal scale classifies data into.

- A. A final inspection activity performed after all process work is complete.
- B. Named categories with no inherent order.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**42.** In a healthcare workflow study, the team asks the following applied question: An ordinal scale classifies data into?

- A. Ordered categories whose distances are not necessarily equal.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**43.** While preparing a DMAIC project review, the team must select the best completion: a confidence interval provides.

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. A plausible range for a population value based on sample data.
- D. A final inspection activity performed after all process work is complete.

**44.** A Green Belt team is reviewing a service process. the team must select the best completion: a p-value is.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. The probability of results at least as extreme if the null hypothesis were true.

**45.** During a manufacturing improvement project, the team must select the best completion: a Type I error occurs when a team.

- A. Rejects a true null hypothesis.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**46.** In a healthcare workflow study, the team must select the best completion: a Type II error occurs when a team.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. Fails to reject a false null hypothesis.
- D. A routine accounting report prepared only for monthly financial close.

**47.** While preparing a DMAIC project review, the team asks the following applied question: Statistical power is the probability of?

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. Rejecting a false null hypothesis.

**48.** A Green Belt team is reviewing a service process. the team asks the following applied question: Randomization in an experiment helps?

- A. A routine accounting report prepared only for monthly financial close.
- B. Balance unknown influences across treatment conditions.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**49.** During a manufacturing improvement project, the team asks the following applied question: Cp compares?

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. The specification width with the natural process spread.
- D. A customer survey summary written after the improvement is deployed.

**50.** In a healthcare workflow study, the team asks the following applied question: Cpk differs from Cp because Cpk?

- A. Accounts for how centered the process mean is within specifications.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**51.** While preparing a DMAIC project review, the team must select the best completion: a process can be capable only when.

- A. A customer survey summary written after the improvement is deployed.
- B. Its natural variation fits within customer specification limits.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

52. A Green Belt team is reviewing a service process. the team must select the best completion: a specification limit is established by.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. Customer, design, or business requirements.

53. During a manufacturing improvement project, the team must select the best completion: a control limit is calculated from.

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. The observed process behavior over time.
- D. A customer survey summary written after the improvement is deployed.

54. In a healthcare workflow study, the team asks the following applied question: The purpose of 5S is to?

- A. Create an orderly, visible, and disciplined workplace.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

55. While preparing a DMAIC project review, the team asks the following applied question: Value stream mapping is used to?

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. Visualize material and information flow across an end-to-end value stream.

**56.** A Green Belt team is reviewing a service process. the team must select the best completion: a pull system authorizes work based on.

- A. A routine accounting report prepared only for monthly financial close.
- B. Actual downstream demand or consumption.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**57.** During a manufacturing improvement project, the team asks the following applied question: Kanban is commonly used to?

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. Signal replenishment or authorize production in a pull system.
- D. A customer survey summary written after the improvement is deployed.

**58.** In a healthcare workflow study, the team asks the following applied question: Cycle time is?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. The time required to complete one unit or one process cycle.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**59.** While preparing a DMAIC project review, the team asks the following applied question: Takt time is?

- A. The available production time divided by customer demand.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**60.** A Green Belt team is reviewing a service process. the team must select the best completion: a bottleneck is the step that.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. Has the least effective capacity and constrains overall throughput.

**61.** During a manufacturing improvement project, the team asks the following applied question: Work in process inventory is especially important because it?

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. Can hide delays, quality problems, and uneven flow.
- D. A customer survey summary written after the improvement is deployed.

**62.** In a healthcare workflow study, the team must select the best completion: a stakeholder analysis should identify.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. Interested parties, their influence, needs, and engagement approach.

**63.** While preparing a DMAIC project review, the team must select the best completion: a SMART goal is.

- A. Specific, measurable, achievable, relevant, and time-bound.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**64.** A Green Belt team is reviewing a service process. the team must select the best completion: a project scope statement should clarify.

- A. A routine accounting report prepared only for monthly financial close.
- B. What is included, excluded, and bounded by the project.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**65.** During a manufacturing improvement project, the team must select the best completion: a RACI matrix clarifies.

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. Who is responsible, accountable, consulted, and informed.

**66.** In a healthcare workflow study, the team must select the best completion: a Gantt chart is useful for.

- A. Displaying planned tasks and their timing on a project schedule.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**67.** While preparing a DMAIC project review, the team must select the best completion: a risk register is used to.

- A. A customer survey summary written after the improvement is deployed.
- B. Record project risks, owners, responses, and monitoring actions.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**68.** A Green Belt team is reviewing a service process. the team must select the best completion: a factorial experiment is designed to.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. Study multiple factors and possible interactions efficiently.
- D. A one-time kickoff meeting held before the team begins collecting data.

**69.** During a manufacturing improvement project, the team asks the following applied question: An interaction exists when?

- A. A final inspection activity performed after all process work is complete.
- B. The effect of one factor depends on the level of another factor.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**70.** In a healthcare workflow study, the team must select the best completion: a response variable is.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. The measured outcome affected by experimental factor settings.
- D. A routine accounting report prepared only for monthly financial close.

**71.** While preparing a DMAIC project review, the team must select the best completion: a factor in a designed experiment is.

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. An input deliberately varied to study its effect on a response.

**72.** A Green Belt team is reviewing a service process. the team asks the following applied question: Replication in an experiment helps?

- A. Estimate experimental error and improve precision.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**73.** During a manufacturing improvement project, the team asks the following applied question: Blocking is used to?

- A. Account for a known nuisance source of variation.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**74.** In a healthcare workflow study, the team asks the following applied question: An individuals chart is appropriate when?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. Measurements are collected one at a time rather than in rational subgroups.

**75.** While preparing a DMAIC project review, the team asks the following applied question: An X-bar and R chart is appropriate when?

- A. A customer survey summary written after the improvement is deployed.
- B. Continuous data are collected in small rational subgroups.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**76.** A Green Belt team is reviewing a service process. the team must select the best completion: a p chart monitors.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. The fraction nonconforming when sample sizes may vary.
- D. A one-time kickoff meeting held before the team begins collecting data.

**77.** During a manufacturing improvement project, the team must select the best completion: a c chart monitors.

- A. A final inspection activity performed after all process work is complete.
- B. The count of defects per constant inspection unit.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**78.** In a healthcare workflow study, the team must select the best completion: a u chart monitors.

- A. Defects per unit when the inspection opportunity varies.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**79.** While preparing a DMAIC project review, the team asks the following applied question: An np chart monitors?

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. The number nonconforming when the sample size is constant.

**80.** A Green Belt team is reviewing a service process. the team must select the best completion: a defect is.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. Any failure to meet a specified requirement.
- D. A one-time kickoff meeting held before the team begins collecting data.

**81.** During a manufacturing improvement project, the team must select the best completion: a defective unit is.

- A. A final inspection activity performed after all process work is complete.
- B. A unit with one or more defects.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**82.** In a healthcare workflow study, the team asks the following applied question: First-pass yield measures?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. The proportion of units that pass a process without rework.

**83.** While preparing a DMAIC project review, the team asks the following applied question: Rolled throughput yield estimates?

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. The probability that a unit passes all steps without defects.
- D. A final inspection activity performed after all process work is complete.

**84.** A Green Belt team is reviewing a service process. the team asks the following applied question: Cost of poor quality includes?

- A. Costs caused by failures, appraisal, and prevention activities.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**85.** During a manufacturing improvement project, the team asks the following applied question: An internal failure cost occurs when?

- A. A final inspection activity performed after all process work is complete.
- B. A defect is found before the product or service reaches the customer.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**86.** In a healthcare workflow study, the team asks the following applied question: An external failure cost occurs when?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. A defect is discovered after it reaches the customer.
- D. A routine accounting report prepared only for monthly financial close.

**87.** While preparing a DMAIC project review, the team must select the best completion: a baseline is.

- A. A customer survey summary written after the improvement is deployed.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. The documented current performance level before changes are made.

**88.** A Green Belt team is reviewing a service process. the team must select the best completion: a data collection plan should define.

- A. What data are needed, who collects them, when, and by what method.
- B. A routine accounting report prepared only for monthly financial close.
- C. A final inspection activity performed after all process work is complete.
- D. A one-time kickoff meeting held before the team begins collecting data.

**89.** During a manufacturing improvement project, the team asks the following applied question: Data normalization is used when?

- A. A final inspection activity performed after all process work is complete.
- B. Results must be adjusted to a common basis for fair comparison.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. A customer survey summary written after the improvement is deployed.

**90.** In a healthcare workflow study, the team must select the best completion: a discrete variable is one that.

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. A customer survey summary written after the improvement is deployed.
- C. Takes countable separate values.
- D. A routine accounting report prepared only for monthly financial close.

**91.** While preparing a DMAIC project review, the team must select the best completion: a continuous variable is one that.

- A. Can take any value within a measurement interval.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**92.** A Green Belt team is reviewing a service process. the team must select the best completion: a rational subgroup is formed so that.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. A one-time kickoff meeting held before the team begins collecting data.
- D. Within-group variation reflects only short-term common causes.

**93.** During a manufacturing improvement project, the team asks the following applied question: An outlier should be handled by?

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. Investigating its source before deciding whether exclusion is justified.

**94.** In a healthcare workflow study, the team asks the following applied question: Resistance to change is best addressed by?

- A. Understanding concerns and involving affected people in the transition.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**95.** While preparing a DMAIC project review, the team must select the best completion: a communication plan should specify.

- A. A customer survey summary written after the improvement is deployed.
- B. Audience, message, channel, timing, and owner.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**96.** A Green Belt team is reviewing a service process. the team asks the following applied question: Training after a process change should focus on?

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. The new standard work, required skills, and evidence of competence.
- D. A one-time kickoff meeting held before the team begins collecting data.

**97.** During a manufacturing improvement project, the team must select the best completion: a Green Belt should report data in a way that.

- A. A final inspection activity performed after all process work is complete.
- B. A one-time kickoff meeting held before the team begins collecting data.
- C. A customer survey summary written after the improvement is deployed.
- D. Accurately represents the method, results, limitations, and uncertainty.

**98.** In a healthcare workflow study, the team asks the following applied question: When a project analysis reveals an unfavorable result, the Green Belt should?

- A. A one-time kickoff meeting held before the team begins collecting data.
- B. Report the result accurately and help the team understand its implications.
- C. A customer survey summary written after the improvement is deployed.
- D. A routine accounting report prepared only for monthly financial close.

**99.** While preparing a DMAIC project review, the team asks the following applied question: Kaizen is best described as?

- A. A disciplined approach to continuous, incremental improvement.
- B. A customer survey summary written after the improvement is deployed.
- C. A routine accounting report prepared only for monthly financial close.
- D. A final inspection activity performed after all process work is complete.

**100.** A Green Belt team is reviewing a service process. the team must select the best completion: a process owner is accountable for.

- A. A routine accounting report prepared only for monthly financial close.
- B. A final inspection activity performed after all process work is complete.
- C. Sustaining the process performance and responding to control-plan signals.
- D. A one-time kickoff meeting held before the team begins collecting data.

## Practice Exam 6: Answer Key and Explanations

- 1. C** — A concise authorization that states the business case, scope, goals, and roles. It formally launches a bounded improvement effort and gives the team shared direction. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied
- 2. A** — Only common-cause variation within stable control limits. Control concerns predictable process behavior, not whether the output meets requirements. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the
- 3. D** — A measurable customer need that strongly affects perceived quality. CTQs translate the voice of the customer into operational requirements. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps
- 4. B** — Customer needs, priorities, and definitions of value. VOC supplies evidence about what customers value before solutions are selected. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the
- 5. A** — Clarify the problem, customers, scope, goals, and project team. Define establishes the project frame so later analysis addresses the right problem. In this scenario, the team should apply that

definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**6. D** — Maps suppliers, inputs, process, outputs, and customers at a high level. SIPOC gives the team a common boundary view without excessive detail. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**7. B** — A precise, repeatable rule for measuring or classifying something. It reduces interpretation differences between people collecting the data. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**8. C** — The measurement process is sufficiently reliable for its intended use. Data-driven decisions require evidence that the gauge and method are trustworthy. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**9. C** — The same appraiser measuring the same item repeatedly. Repeatability isolates equipment or method variation under one operator. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**10. D** — Different appraisers measuring the same items. Reproducibility captures the operator-to-operator component of measurement variation. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based and supports

**11. B** — The complete list or source from which a sample can be drawn. A sound frame is necessary to make the planned sample represent the target population. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the

**12. A** — Important subgroups should each be represented in the sample. Separating meaningful strata can improve coverage and reveal subgroup differences. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**13. A** — Collect and tally data consistently at the point of occurrence. Its simple structure makes patterns visible while preserving the original observations. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**14. D** — Data in time order without calculated control limits. It helps reveal trends, shifts, or cycles before a control-chart analysis. In this scenario, the team should apply that definition or tool directly to

the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**15. C** — A relatively few categories often account for much of the effect. Ranking categories by frequency or impact helps focus limited improvement resources. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**16. B** — Organize possible causes of a problem into logical categories. It supports broad cause generation before the team tests which causes matter. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**17. C** — Probe progressively from a symptom toward an underlying cause. Repeated questioning can expose a process condition that produced the visible failure. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**18. A** — The relationship between two quantitative variables. The plot can reveal direction, form, and unusual observations before modeling. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**19. B** — An observed association may be due to other factors or chance. A relationship in data must be supported by process knowledge or designed evidence. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question.

**20. D** — Shows the sequence of detailed activities and decision points. The map exposes handoffs, rework, queues, and opportunities inside the process. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept

**21. A** — Changes the product or service in a way the customer values. Necessary but non-value-added work may remain, but should be minimized or simplified. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting

**22. D** — Severity, occurrence, and detection evaluations. FMEA prioritizes potential failures so prevention work targets the most significant risks. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**23. C** — Evidence gathering to test the most plausible candidate causes. The diagram creates hypotheses; it does not prove which cause is responsible. In this scenario, the team should apply that

definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**24. B** — Generates ideas freely before judging or selecting them. Separating idea generation from evaluation encourages breadth and reduces premature rejection. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**25. B** — Evaluate a proposed solution on a limited scale before broad deployment. Piloting reveals practical issues and unintended effects while limiting implementation risk. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**26. A** — A method that prevents errors or makes them immediately obvious. Error proofing changes the process so an incorrect action is hard to make or detect. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied

**27. C** — Documents the best known method so the new process is performed consistently. Without a defined method, gains can erode as people revert to prior practices. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied

**28. D** — The intended flow after waste and causes have been addressed. It converts improvement concepts into a visible operating design for implementation. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**29. A** — Forces that support or resist a proposed change. Knowing both types of forces supports a practical change-management plan. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**30. D** — What to monitor, how to measure it, who acts, and what action to take. A useful plan turns the improved process into an owned operating routine. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the

**31. B** — A monitored process shows a defined out-of-control or unacceptable condition. It makes corrective action timely and consistent instead of dependent on memory. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**32. C** — Making status, standards, and abnormalities easy to see quickly. Clear visual cues shorten the time between a deviation and an appropriate response. In this scenario, the team should apply that

definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**33. B** — Ensures people use the current approved process instructions. Uncontrolled versions can reintroduce obsolete methods and variation. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based

**34. D** — Distinguish routine common-cause variation from special-cause signals. It provides rules for judging process stability over time. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based

**35. C** — Adding all observations and dividing by the number of observations. The mean uses every data value and describes the distribution center when appropriate. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting

**36. A** — Skewed or contain extreme values that distort the mean. The middle ordered value is resistant to the influence of unusually large or small observations. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question.

**37. A** — The typical spread of individual values around their mean. A larger standard deviation indicates greater dispersion in the observed process output. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**38. D** — The maximum value minus the minimum value. Range is a simple dispersion measure, although it is sensitive to extreme observations. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept

**39. C** — The distribution shape of quantitative data grouped into intervals. It reveals center, spread, skewness, gaps, and possible multiple populations. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**40. B** — Median, quartiles, spread, and potential outlying observations. It compactly compares distributions across groups using robust summary statistics. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**41. B** — Named categories with no inherent order. Examples include department, product type, or defect category. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based and supports

**42. A** — Ordered categories whose distances are not necessarily equal. Ratings such as low, medium, and high preserve rank but not equal intervals. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**43. C** — A plausible range for a population value based on sample data. It expresses estimation uncertainty rather than claiming the sample result is exact. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting

**44. D** — The probability of results at least as extreme if the null hypothesis were true. It is evidence against a specified null model, not the probability that the null is true. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they

**45. A** — Rejects a true null hypothesis. This false alarm risk is controlled by the chosen significance level. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based

**46. C** — Fails to reject a false null hypothesis. This missed-detection risk is related to statistical power and sample size. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**47. D** — Rejecting a false null hypothesis. Higher power improves the chance that a meaningful effect will be detected. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**48. B** — Balance unknown influences across treatment conditions. Random assignment supports a fair comparison by reducing systematic confounding. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based

**49. C** — The specification width with the natural process spread.  $C_p$  measures potential capability and assumes the process is centered. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**50. A** — Accounts for how centered the process mean is within specifications. A shifted process can have a good  $C_p$  but a lower  $C_{pk}$ . In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**51. B** — Its natural variation fits within customer specification limits. Capability compares process output with requirements, while control concerns stability. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**52. D** — Customer, design, or business requirements. Specifications define acceptable output; they are not calculated from process data. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based

**53. C** — The observed process behavior over time. Control limits are statistical signals and must not be confused with specifications. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**54. A** — Create an orderly, visible, and disciplined workplace. The five practices support safer flow and make abnormalities easier to notice. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**55. D** — Visualize material and information flow across an end-to-end value stream. It reveals delays, inventories, handoffs, and opportunities beyond one local step. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**56. B** — Actual downstream demand or consumption. Pull limits overproduction by connecting upstream activity to customer need. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based and

**57. C** — Signal replenishment or authorize production in a pull system. A visible signal helps control work and inventory between connected process steps. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**58. B** — The time required to complete one unit or one process cycle. It is a flow measure that can be compared with demand and improvement targets. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied

**59. A** — The available production time divided by customer demand. Takt expresses the pace needed to satisfy demand and guides capacity balancing. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept

**60. D** — Has the least effective capacity and constrains overall throughput. Improving a non-bottleneck may not improve system output if the constraint remains. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**61. C** — Can hide delays, quality problems, and uneven flow. Excess WIP often increases lead time and masks the underlying causes of disruption. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**62. D** — Interested parties, their influence, needs, and engagement approach. Early stakeholder planning reduces resistance and improves access to relevant information. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**63. A** — Specific, measurable, achievable, relevant, and time-bound. These characteristics make a project target concrete enough to manage and evaluate. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**64. B** — What is included, excluded, and bounded by the project. Explicit scope helps prevent uncontrolled expansion and protects team focus. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**65. D** — Who is responsible, accountable, consulted, and informed. Role clarity reduces delays and confusion during improvement work. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based

**66. A** — Displaying planned tasks and their timing on a project schedule. It makes sequencing and progress visible, although it does not prove process causes. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting

**67. B** — Record project risks, owners, responses, and monitoring actions. Capturing risks early enables the team to prepare rather than react late. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept

**68. C** — Study multiple factors and possible interactions efficiently. It estimates how factor combinations affect a response rather than changing one factor at a time. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting

**69. B** — The effect of one factor depends on the level of another factor. Interactions matter because a main-effect conclusion can be misleading when combinations behave differently. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied

**70. C** — The measured outcome affected by experimental factor settings. The team analyzes this output to judge the effect of deliberate changes. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept

**71. D** — An input deliberately varied to study its effect on a response. Factors are controlled settings, whereas the response is the observed result. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**72. A** — Estimate experimental error and improve precision. Repeated treatment combinations reveal natural variation and strengthen conclusions about effects. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**73. A** — Account for a known nuisance source of variation. Grouping similar experimental units reduces unwanted noise in treatment comparisons. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the

**74. D** — Measurements are collected one at a time rather than in rational subgroups. The chart tracks individual values and a moving range estimate of short-term variation. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied

**75. B** — Continuous data are collected in small rational subgroups. The X-bar chart monitors subgroup averages while the R chart monitors within-subgroup spread. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**76. C** — The fraction nonconforming when sample sizes may vary. It is an attribute chart based on proportion defective rather than defect counts. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**77. B** — The count of defects per constant inspection unit. It applies when opportunities for defects are stable across the observations. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**78. A** — Defects per unit when the inspection opportunity varies. It standardizes defect counts by the varying number of units or opportunities inspected. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**79. D** — The number nonconforming when the sample size is constant. It is the count-based companion to a p chart for stable sample sizes. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**80. C** — Any failure to meet a specified requirement. One unit may contain more than one defect, which differs from counting defective units. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**81. B** — A unit with one or more defects. The distinction matters when selecting an attribute measure or chart. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**82. D** — The proportion of units that pass a process without rework. It exposes hidden rework by considering only units that succeed on their initial pass. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question.

**83. C** — The probability that a unit passes all steps without defects. Multiplying step yields highlights how small losses compound across a multi-step process. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**84. A** — Costs caused by failures, appraisal, and prevention activities. Analyzing these costs helps communicate the business impact of quality problems. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**85. B** — A defect is found before the product or service reaches the customer. Scrap, rework, and retesting are examples of failures detected inside the organization. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question.

**86. C** — A defect is discovered after it reaches the customer. Warranty claims, returns, and complaint handling are external failure consequences. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**87. D** — The documented current performance level before changes are made. It provides a reference for judging whether the project delivered meaningful improvement. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**88. A** — What data are needed, who collects them, when, and by what method. Planning reduces missing, inconsistent, or unusable data during the Measure phase. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting

**89. B** — Results must be adjusted to a common basis for fair comparison. Rates per unit, hour, or transaction can reveal differences obscured by unequal exposure. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question.

**90. C** — Takes countable separate values. Counts of defects or customers are discrete, unlike continuously measured time or length. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project

**91. A** — Can take any value within a measurement interval. Time, mass, and length are examples because increasingly precise measurements are meaningful. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept

**92. D** — Within-group variation reflects only short-term common causes. Proper subgrouping helps control charts distinguish local variation from changes between subgroups. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**93. D** — Investigating its source before deciding whether exclusion is justified. Removing a value simply because it is unusual can conceal a real special cause. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting

**94. A** — Understanding concerns and involving affected people in the transition. Participation, communication, and training make adoption more credible and practical. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe

activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps

**95. B** — Audience, message, channel, timing, and owner. Clear planned communication keeps stakeholders informed and supports coordinated implementation. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept keeps the project evidence-based

**96. C** — The new standard work, required skills, and evidence of competence. Training must enable consistent execution, not merely announce that a change occurred. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the

**97. D** — Accurately represents the method, results, limitations, and uncertainty. Selective reporting can create a false improvement story and undermines decision quality. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise concept

**98. B** — Report the result accurately and help the team understand its implications. Integrity requires transparent reporting even when findings do not support a preferred solution. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question.

**99. A** — A disciplined approach to continuous, incremental improvement. Kaizen encourages people closest to the work to identify and test small practical improvements. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting the precise

**100. C** — Sustaining the process performance and responding to control-plan signals. The owner ensures that the improved process remains managed after the project team disbands. In this scenario, the team should apply that definition or tool directly to the decision at hand. The other responses describe activities that may occur in quality work, but they do not answer the applied question. Selecting