

SIX SIGMA GREEN BELT STUDY GUIDE 2026-2027 - EXAM 20 (100 QUESTIONS)

This standalone 100-question practice exam is aligned to the ASQ Certified Six Sigma Green Belt Body of Knowledge. Choose the single best answer for each question. The current ASQ computer-delivered CSSGB examination has 110 questions, including 100 scored questions, with 4 hours 18 minutes of exam time. This practice exam uses 100 questions to mirror the scored-question count. Use only permitted reference materials for your target testing format.

1. Which statement best describes the role of a Six Sigma Green Belt?

- A. Approves corporate strategy without data review.
- B. Performs only routine product inspection.
- C. Leads or supports improvement projects using data and DMAIC.
- D. Owns every process without a sponsor.

2. A process has a long queue and repeated handoffs, but customers value neither. Which Lean focus is most appropriate?

- A. Remove non-value-added steps and waiting.
- B. Add more inspection at the final step.
- C. Increase batch size to keep people busy.
- D. Document the queue without changing flow.

3. In a Six Sigma deployment, an executive champion primarily provides:

- A. Daily data entry for every project.
- B. Strategic alignment, resources, and barrier removal.
- C. Independent calibration of all instruments.
- D. Final approval of every work instruction.

4. The strongest business case for a Green Belt project links the problem to:

- A. The team preference for a familiar tool.
- B. A desire to use advanced statistics.
- C. The longest available project schedule.
- D. Customer impact and measurable organizational goals.

5. A supplier, input, process, output, customer diagram is most useful for:

- A. Testing whether two means differ.
- B. Setting control-chart limits.
- C. Defining the high-level boundaries of a process.
- D. Calculating a confidence interval.

6. Which practice most directly supports a culture of continuous improvement?

- A. Making process performance visible and acting on evidence.
- B. Rewarding only individual output volume.
- C. Waiting for annual audits to identify issues.
- D. Treating every variation as employee error.

7. A process is operating at a stable average but cannot meet customer requirements. This is chiefly a problem of:

- A. A missing project charter.
- B. An undefined sampling frame.
- C. A lack of brainstorming.
- D. Capability rather than statistical control.

8. What is the purpose of a project charter?

- A. Replace the detailed data-collection plan. in the stated situation
- B. Authorize the project and define its purpose, scope, and goals.
- C. Serve as the final control plan. in the stated situation
- D. List every possible solution. in the stated situation

9. A stakeholder analysis is most useful early in a project because it helps the team:

- A. Calculate process sigma directly.
- B. Select a random sample automatically.
- C. Plan communication and manage support or resistance.
- D. Set specification limits from control limits.

10. Which measure most directly reflects a customer-critical requirement?

- A. A critical-to-quality characteristic.
- B. A team meeting attendance rate.
- C. A project calendar milestone.
- D. A manager preference rating.

11. Design for Six Sigma is distinguished by its emphasis on:

- A. Sorting defects after production.
- B. Building customer requirements and robustness into a new design.
- C. Using only historical inspection data.
- D. Reducing headcount before redesign.

12. A problem statement should describe:

- A. The preferred solution and vendor.
- B. The final control limits.
- C. A list of individual employees to blame.
- D. The current undesirable condition using facts, not a proposed cause.

13. Voice of the customer data are translated into:

- A. Measurable critical-to-quality requirements.
- B. Control-chart rules only.
- C. Financial accounting entries.
- D. Randomization schedules only.

14. A SIPOC is normally developed at what level?

- A. Detailed task timing for every operator.
- B. High-level process boundaries and major elements.
- C. Individual defect classifications only.
- D. Final hypothesis-test results only.

15. Which statement is a well-written goal?

- A. Improve invoicing as much as possible. in the stated situation
- B. Use a new software package soon. in the stated situation
- C. Reduce invoice correction rate from 8% to 3% by 30 September.
- D. Make employees work more carefully. in the stated situation

16. Project scope should explicitly identify:

- A. Only the sponsor job title.
- B. Every future project idea.
- C. The final answer key.
- D. What is included and excluded from the project.

17. A RACI matrix clarifies:

- A. How to calculate Cp and Cpk.
- B. Which sample is normally distributed.
- C. Who is responsible, accountable, consulted, and informed.
- D. How to set subgroup size.

18. A process map is especially valuable in Define because it can reveal:

- A. The exact population standard deviation.
- B. Whether a gauge is biased.
- C. The p-value of a test.
- D. Handoffs, rework loops, and unclear ownership.

19. An affinity diagram helps a team:

- A. Estimate a regression slope.
- B. Organize many ideas into meaningful groups.
- C. Calculate a moving range.
- D. Select control-chart constants.

20. The nominal group technique is useful when a team needs to:

- A. Generate and prioritize ideas with balanced participation.
- B. Avoid documenting decisions.
- C. Replace all customer research.
- D. Prove a causal relationship.

21. A force-field analysis examines:

- A. Forces that support and resist a proposed change.
- B. Only the largest defect category.
- C. Only measurement-system variation.
- D. Only the process mean.

22. A communication plan should specify:

- A. Only the project budget.
- B. Only the sampling distribution.
- C. Audience, message, channel, timing, and owner.
- D. Only the test statistic.

23. Which action best manages scope creep?

- A. Add every requested feature immediately.
- B. Ignore stakeholders after kickoff.
- C. Change the goal whenever data are inconvenient.
- D. Evaluate new requests against the charter before accepting them.

24. A Kano analysis distinguishes requirements such as:

- A. Common and special causes.
- B. Basic, performance, and excitement attributes.
- C. Variables and attributes only.
- D. Bias and linearity only.

25. Benchmarking is most helpful when a team wants to:

- A. Replace customer requirements with averages.
- B. Compare process practices or performance with relevant references.
- C. Eliminate the need for measurement.
- D. Set arbitrary specification limits.

26. A Gantt chart is primarily used to:

- A. Analyze a distribution shape.
- B. Test a measurement system.
- C. Display project tasks, timing, and dependencies.
- D. Estimate a defect opportunity.

27. A risk register should be updated when:

- A. New project risks emerge or their status changes.
- B. Only after the project is closed.
- C. Only when a control chart signals.
- D. Only when a sample mean changes.

28. The best first response to stakeholder resistance is to:

- A. Label dissenters as defects.
- B. Withhold information until implementation.
- C. Remove all opportunities for feedback.
- D. Understand concerns and connect the change to relevant benefits.

29. A team charter normally documents:

- A. The final capability index.
- B. The full measurement error study.
- C. Purpose, roles, operating norms, and decision methods.
- D. The process control limits.

30. A CTQ tree is used to:

- A. Break broad customer needs into measurable requirements.
- B. Calculate takt time from demand.
- C. Determine alpha risk.
- D. Create a random number table.

31. A project should be selected first for its:

- A. Availability of the newest software.
- B. Number of possible meetings.
- C. Length of the project title.
- D. Alignment with business priorities and feasible benefit.

32. An operational definition is important because it:

- A. Guarantees that a process is capable. in the stated situation
- B. Specifies exactly how a characteristic will be measured or classified.
- C. Eliminates all sampling error. in the stated situation
- D. Sets the customer specification. in the stated situation

33. Before collecting baseline data, the team should first verify:

- A. That every potential solution is approved.
- B. That the process mean equals the target.
- C. The measurement system is adequate for its intended use.
- D. That all variation is special cause.

34. Repeatability refers to variation from:

- A. Different appraisers measuring the same item.
- B. Different suppliers using the same material.
- C. Different specification limits.
- D. The same appraiser measuring the same item repeatedly.

35. Reproducibility refers to variation from:

- A. Different appraisers measuring the same item.
- B. One appraiser repeating a reading.
- C. One part changing over time.
- D. One customer changing a requirement.

36. A sampling plan should define the population, method, timing, and:

- A. Final corrective actions only.
- B. Sample size and data-collection responsibilities.
- C. The project sponsor salary.
- D. The preferred chart color.

37. A histogram is most useful for displaying:

- A. The distribution of continuous measurement data.
- B. Task dependencies over time.
- C. A list of project risks.
- D. Roles on a team.

38. A Pareto chart helps a team:

- A. Prove that one factor causes another.
- B. Prioritize categories by their cumulative contribution.
- C. Calculate confidence limits for a mean.
- D. Assign responsibility for a task.

39. Stratification is used to:

- A. Increase the specification width.
- B. Replace random sampling with judgment.
- C. Eliminate the need for a baseline.
- D. Separate data into meaningful groups to expose patterns.

40. The median is generally less affected than the mean by:

- A. A larger sample size.
- B. A labeled process map.
- C. Extreme observations in a skewed data set.
- D. A defined target value.

41. Standard deviation describes:

- A. The distance between specification limits.
- B. The typical spread of values around their mean.
- C. The number of defects per unit only.
- D. The project completion date.

42. A boxplot is useful for quickly comparing:

- A. The order of project activities.
- B. Individual customer interview notes.
- C. Center, spread, and possible outliers across groups.
- D. A SIPOC boundary.

43. A process yield measures:

- A. The proportion of units meeting requirements.
- B. The width of the control limits.
- C. The cost of every defect.
- D. The number of project sponsors.

44. Defects per opportunity is most appropriate when:

- A. Every unit has exactly one measurement.
- B. Only project tasks are being tracked.
- C. No requirements have been defined.
- D. Units have different numbers of potential defect opportunities.

45. A check sheet is designed to:

- A. Collect data consistently at the point of occurrence.
- B. Determine the regression equation.
- C. Set financial budgets.
- D. Replace a measurement study.

46. The central limit theorem supports using a normal approximation for:

- A. Any individual observation regardless of context.
- B. Sample means from sufficiently large random samples.
- C. Only categorical data with no counts.
- D. Only perfectly capable processes.

47. A time plot is valuable because it can show:

- A. The detailed voice of customer.
- B. The authority chain in a project.
- C. The final future-state map.
- D. Trends, shifts, or cycles in data over time.

48. Measurement bias is the difference between:

- A. Two customer specification limits.
- B. Two consecutive process outputs.
- C. Observed average measurement and a known reference value.
- D. A sample and its subgroup.

49. Linearity in a measurement system concerns:

- A. Whether operators agree on categories.
- B. Whether bias changes across the measurement range.
- C. Whether the process has a queue.
- D. Whether a team has a charter.

50. A data-collection plan should include a clear rule for:

- A. Changing the customer target after analysis.
- B. Selecting solutions before measuring.
- C. Eliminating all natural variation.
- D. Handling missing, unusual, or ambiguous observations.

51. A run chart differs from a control chart because a run chart:

- A. Usually lacks statistically derived control limits.
- B. Cannot display observations over time.
- C. Is used only for attribute data.
- D. Requires no operational definitions.

52. A cause-and-effect diagram is used to:

- A. Prove which cause is statistically significant.
- B. Set a project schedule.
- C. Organize potential causes of a defined problem.
- D. Calculate process yield.

53. The five-whys technique is intended to:

- A. Replace data collection with opinions.
- B. Create a control plan.
- C. Estimate a population proportion.
- D. Explore successive causal links behind a problem.

54. A scatterplot is most useful for examining:

- A. The relationship between two quantitative variables.
- B. The sequence of project tasks.
- C. The wording of a charter.
- D. The ranking of stakeholders.

55. Correlation alone does not establish causation because:

- A. Correlation is always zero in a process.
- B. Other variables or mechanisms may explain the association.
- C. Causation can be read from a Pareto chart.
- D. Control limits define cause automatically.

56. A null hypothesis typically states:

- A. The preferred solution has been proven.
- B. The process is capable.
- C. There is no effect or difference to detect.
- D. The project is complete.

57. A p-value is the probability, assuming the null hypothesis, of:

- A. The null hypothesis being true.
- B. The alternative hypothesis being false.
- C. Results at least as extreme as those observed.
- D. A measurement system being accurate.

58. Type I error occurs when a team:

- A. Fails to reject a false null hypothesis.
- B. Rejects a true null hypothesis.
- C. Uses a larger sample size.
- D. Calculates a control limit.

59. Type II error occurs when a team:

- A. Fails to reject a false null hypothesis.
- B. Rejects a true null hypothesis.
- C. Uses a stratified sample.
- D. Changes a specification limit.

60. A confidence interval for a mean provides:

- A. Guaranteed individual values for every unit. in the stated situation
- B. A replacement for a control chart. in the stated situation
- C. A causal explanation by itself. in the stated situation
- D. A plausible range for the population mean based on sample data.

61. When comparing the means of two independent groups, a common starting test is:

- A. A chi-square goodness-of-fit test only.
- B. A p chart.
- C. A SIPOC analysis.
- D. A two-sample t test.

62. When comparing defect proportions from two independent groups, use:

- A. A two-proportion test.
- B. A paired t test.
- C. An individuals chart.
- D. A Gantt chart.

63. A chi-square test of independence is appropriate for:

- A. Comparing two continuous means only.
- B. Calculating a process capability index.
- C. Association between two categorical variables.
- D. Estimating a regression slope.

64. Regression analysis is used to:

- A. Assign team roles. in the stated situation in the stated situation
- B. Model how a response changes with one or more predictors.
- C. Measure appraiser agreement. in the stated situation in the stated situation
- D. Create a project charter. in the stated situation

65. Residual plots are examined to assess:

- A. Whether customers approve the scope.
- B. Whether a sample is random by definition.
- C. Whether regression assumptions appear reasonable.
- D. Whether a Pareto chart is sorted.

66. Multicollinearity can make regression results difficult to interpret because:

- A. The response has no units.
- B. Predictors are strongly related to one another.
- C. The sample is always too large.
- D. The chart lacks center lines.

67. An interaction means:

- A. A factor has no impact on the response.
- B. A process has no variation. in the stated situation
- C. A measurement is perfectly accurate. in the stated situation
- D. The effect of one factor depends on the level of another factor.

68. Failure mode and effects analysis ranks risks using:

- A. Severity, occurrence, and detection assessments.
- B. Mean, median, and mode.
- C. Alpha, beta, and power.
- D. Scope, schedule, and budget.

69. A root cause should be confirmed by:

- A. A single unverified opinion.
- B. Its position on a brainstorming list.
- C. Evidence showing it affects the problem and can be controlled.
- D. The number of people who suggest it.

70. The primary purpose of a designed experiment is to:

- A. Document all project meetings.
- B. Create specification limits.
- C. Replace customer input.
- D. Learn causal effects of controllable factors efficiently.

71. Randomizing experimental runs helps protect against:

- A. The need for replication.
- B. Bias from uncontrolled time-related or nuisance effects.
- C. The need for a response measure.
- D. Any possible interaction.

72. Replication in an experiment helps estimate:

- A. Experimental error and the reliability of observed effects.
- B. The project charter scope.
- C. The customer target alone.
- D. The number of process steps.

73. Blocking in an experiment is used to:

- A. Account for known nuisance variation while studying factors.
- B. Eliminate every source of variation.
- C. Avoid collecting response data.
- D. Make factors identical to responses.

74. A pilot is conducted before full implementation mainly to:

- A. Declare the project complete immediately. in the stated situation
- B. Replace the control plan. in the stated situation
- C. Avoid stakeholder communication. in the stated situation in the stated situation
- D. Test a proposed change on a limited scale and learn safely.

75. Poka-yoke is best described as:

- A. A technique for increasing batch sizes.
- B. A test for normality.
- C. A method that prevents or makes errors immediately visible.
- D. A customer survey format.

76. Kaizen events emphasize:

- A. Long-term data collection without action. in the stated situation
- B. Focused, rapid improvement involving the people doing the work.
- C. Only capital-intensive redesigns. in the stated situation in the stated situation
- D. Individual performance ratings. in the stated situation in the stated situation

77. A future-state value-stream map should show:

- A. Only the current inspection steps.
- B. How material and information can flow after waste is reduced.
- C. Only the project team names.
- D. Only the final capability indices.

78. A solution-selection matrix helps teams:

- A. Avoid defining evaluation criteria.
- B. Replace pilot testing with votes.
- C. Set control limits directly.
- D. Compare alternatives against agreed criteria.

79. The theory of constraints directs improvement effort first toward:

- A. The constraint that limits overall system throughput.
- B. The least expensive local task.
- C. The process step with the newest equipment.
- D. Every step equally regardless of impact.

80. Standard work supports improvement by:

- A. Preventing future learning.
- B. Eliminating the need for training.
- C. Making the current best method clear and repeatable.
- D. Allowing each operator to use any method.

81. A mistake-proofing solution is preferred when it:

- A. Prevents the error rather than merely detecting it later.
- B. Adds a final inspection without changing the cause.
- C. Depends entirely on memory.
- D. Increases process complexity without benefit.

82. When a solution changes a regulated process, the team should first ensure:

- A. The pilot is hidden from process owners.
- B. Required validation and change-control requirements are met.
- C. The baseline data are deleted.
- D. All control limits are widened.

83. A cost-benefit analysis is most useful for:

- A. Choosing the most popular idea only.
- B. Replacing risk assessment.
- C. Estimating a p-value.
- D. Comparing expected benefits, costs, and tradeoffs of alternatives.

84. Implementation planning should include:

- A. Only a final presentation date.
- B. Only the desired financial result.
- C. Owners, tasks, timing, resources, and risk contingencies.
- D. Only a list of completed analyses.

85. A robust design seeks performance that is:

- A. Dependent on frequent manual adjustment.
- B. Optimized only at one ideal condition.
- C. Unrelated to customer requirements.
- D. Insensitive to normal sources of variation.

86. The purpose of a control plan is to:

- A. Replace the project charter. in the stated situation
- B. Sustain gains by specifying what to monitor and how to respond.
- C. Eliminate the need for standard work. in the stated situation
- D. Prove a root cause without data. in the stated situation

87. Common-cause variation is:

- A. A signal of a specific unusual event.
- B. Always caused by one operator.
- C. The routine variation inherent in a stable process.
- D. Identical to a specification violation.

88. Special-cause variation is indicated by:

- A. A nonrandom signal suggesting an unusual influence.
- B. Any point inside control limits.
- C. A stable random pattern around the mean.
- D. A customer requirement.

89. Control limits are based on:

- A. Customer tolerance alone.
- B. Process data and expected common-cause variation.
- C. Management preference alone.
- D. The project budget alone.

90. Specification limits are established by:

- A. The latest subgroup average.
- B. The control-chart calculation alone.
- C. The number of appraisers.
- D. Customer, design, or business requirements.

91. An X-bar and R chart is commonly used for:

- A. Individual defect counts with varying opportunities.
- B. A one-time customer survey.
- C. Continuous data collected in rational subgroups.
- D. Project milestone tracking.

92. An individuals and moving-range chart is useful when:

- A. Continuous observations are collected one at a time.
- B. Subgroups always contain five measurements.
- C. Only categorical data are available.
- D. No time order exists.

93. A p chart monitors:

- A. The count of defects per constant unit.
- B. Individual continuous measurements.
- C. The average range of subgroups.
- D. The proportion defective when sample sizes may vary.

94. A c chart is appropriate for:

- A. Counts of defects when the area of opportunity is constant.
- B. Defective proportions with changing samples. in the stated situation
- C. Continuous data in subgroups. in the stated situation
- D. Project task completion. in the stated situation in the stated situation

95. A u chart is appropriate for:

- A. A constant count of defects only.
- B. Individual observations only.
- C. Defects per unit when opportunity size varies.
- D. Binary project decisions.

96. Cp compares:

- A. Process mean with target only.
- B. Specification width with process spread, ignoring centering.
- C. Control-limit width with sample size.
- D. Defect count with opportunity count.

97. Cpk differs from Cp because Cpk:

- A. Accounts for how centered the process is within specifications.
- B. Uses only customer survey data.
- C. Cannot be used with continuous data.
- D. Always exceeds Cp.

98. When a control chart signals special cause, the first step is to:

- A. Adjust the process without investigation.
- B. Investigate the signal and identify the assignable cause.
- C. Recalculate specification limits.
- D. Remove the point automatically.

99. A response plan should state:

- A. Only the project slogan. in the stated situation
- B. Only the historical baseline. in the stated situation
- C. Who acts, what action to take, and how to document it.
- D. Only the final financial benefit. in the stated situation

100. Process ownership after project closure should be assigned to:

- A. The original project team indefinitely. in the stated situation
- B. An anonymous shared mailbox. in the stated situation
- C. No one once the project closes. in the stated situation
- D. A named person or role with authority to maintain the process.

EXAM 20: ANSWER KEY AND EXPLANATIONS

1. **C** - Leads or supports improvement projects using data and DMAIC. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
2. **A** - Remove non-value-added steps and waiting. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
3. **B** - Strategic alignment, resources, and barrier removal. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
4. **D** - Customer impact and measurable organizational goals. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
5. **C** - Defining the high-level boundaries of a process. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
6. **A** - Making process performance visible and acting on evidence. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
7. **D** - Capability rather than statistical control. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
8. **B** - Authorize the project and define its purpose, scope, and goals. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
9. **C** - Plan communication and manage support or resistance. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
10. **A** - A critical-to-quality characteristic. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
11. **B** - Building customer requirements and robustness into a new design. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
12. **D** - The current undesirable condition using facts, not a proposed cause. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
13. **A** - Measurable critical-to-quality requirements. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
14. **B** - High-level process boundaries and major elements. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

- 15. C** - Reduce invoice correction rate from 8% to 3% by 30 September. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 16. D** - What is included and excluded from the project. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 17. C** - Who is responsible, accountable, consulted, and informed. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 18. D** - Handoffs, rework loops, and unclear ownership. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 19. B** - Organize many ideas into meaningful groups. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 20. A** - Generate and prioritize ideas with balanced participation. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 21. A** - Forces that support and resist a proposed change. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 22. C** - Audience, message, channel, timing, and owner. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 23. D** - Evaluate new requests against the charter before accepting them. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 24. B** - Basic, performance, and excitement attributes. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 25. B** - Compare process practices or performance with relevant references. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 26. C** - Display project tasks, timing, and dependencies. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 27. A** - New project risks emerge or their status changes. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 28. D** - Understand concerns and connect the change to relevant benefits. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 29. C** - Purpose, roles, operating norms, and decision methods. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select

methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

30. A - Break broad customer needs into measurable requirements. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

31. D - Alignment with business priorities and feasible benefit. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

32. B - Specifies exactly how a characteristic will be measured or classified. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

33. C - The measurement system is adequate for its intended use. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

34. D - The same appraiser measuring the same item repeatedly. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

35. A - Different appraisers measuring the same item. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

36. B - Sample size and data-collection responsibilities. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

37. A - The distribution of continuous measurement data. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

38. B - Prioritize categories by their cumulative contribution. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

39. D - Separate data into meaningful groups to expose patterns. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

40. C - Extreme observations in a skewed data set. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

41. B - The typical spread of values around their mean. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

42. C - Center, spread, and possible outliers across groups. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

43. A - The proportion of units meeting requirements. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

- 44. D** - Units have different numbers of potential defect opportunities. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 45. A** - Collect data consistently at the point of occurrence. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 46. B** - Sample means from sufficiently large random samples. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 47. D** - Trends, shifts, or cycles in data over time. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 48. C** - Observed average measurement and a known reference value. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 49. B** - Whether bias changes across the measurement range. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 50. D** - Handling missing, unusual, or ambiguous observations. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 51. A** - Usually lacks statistically derived control limits. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 52. C** - Organize potential causes of a defined problem. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 53. D** - Explore successive causal links behind a problem. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 54. A** - The relationship between two quantitative variables. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 55. B** - Other variables or mechanisms may explain the association. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 56. C** - There is no effect or difference to detect. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 57. C** - Results at least as extreme as those observed. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 58. B** - Rejects a true null hypothesis. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

- 59. A** - Fails to reject a false null hypothesis. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 60. D** - A plausible range for the population mean based on sample data. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 61. D** - A two-sample t test. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 62. A** - A two-proportion test. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 63. C** - Association between two categorical variables. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 64. B** - Model how a response changes with one or more predictors. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 65. C** - Whether regression assumptions appear reasonable. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 66. B** - Predictors are strongly related to one another. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 67. D** - The effect of one factor depends on the level of another factor. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 68. A** - Severity, occurrence, and detection assessments. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 69. C** - Evidence showing it affects the problem and can be controlled. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 70. D** - Learn causal effects of controllable factors efficiently. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 71. B** - Bias from uncontrolled time-related or nuisance effects. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 72. A** - Experimental error and the reliability of observed effects. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 73. A** - Account for known nuisance variation while studying factors. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

- 74. D** - Test a proposed change on a limited scale and learn safely. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 75. C** - A method that prevents or makes errors immediately visible. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 76. B** - Focused, rapid improvement involving the people doing the work. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 77. B** - How material and information can flow after waste is reduced. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 78. D** - Compare alternatives against agreed criteria. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 79. A** - The constraint that limits overall system throughput. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 80. C** - Making the current best method clear and repeatable. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 81. A** - Prevents the error rather than merely detecting it later. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 82. B** - Required validation and change-control requirements are met. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 83. D** - Comparing expected benefits, costs, and tradeoffs of alternatives. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 84. C** - Owners, tasks, timing, resources, and risk contingencies. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 85. D** - Insensitive to normal sources of variation. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 86. B** - Sustain gains by specifying what to monitor and how to respond. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 87. C** - The routine variation inherent in a stable process. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.
- 88. A** - A nonrandom signal suggesting an unusual influence. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods

using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

89. B - Process data and expected common-cause variation. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

90. D - Customer, design, or business requirements. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

91. C - Continuous data collected in rational subgroups. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

92. A - Continuous observations are collected one at a time. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

93. D - The proportion defective when sample sizes may vary. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

94. A - Counts of defects when the area of opportunity is constant. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

95. C - Defects per unit when opportunity size varies. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

96. B - Specification width with process spread, ignoring centering. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

97. A - Accounts for how centered the process is within specifications. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

98. B - Investigate the signal and identify the assignable cause. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

99. C - Who acts, what action to take, and how to document it. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.

100. D - A named person or role with authority to maintain the process. This choice fits the stated situation and matches established Six Sigma practice. The alternatives identify a different tool, phase, or purpose, so they do not solve the problem described. Select methods using process evidence and customer requirements; that keeps the team focused and its decision defensible in practice.