

PRACTICE EXAM 27: SIX SIGMA GREEN BELT (100 QUESTIONS)

This original alternate-form practice exam contains 100 multiple-choice questions aligned to the ASQ Certified Six Sigma Green Belt Body of Knowledge. Allow approximately 235 minutes. Select the single best answer for each question. This is a study aid and is not an official ASQ examination.

1. During a Green Belt project, answer this question: which tool visually maps suppliers, inputs, process steps, outputs, and customers?

- A. FMEA
- B. SIPOC
- C. Histogram
- D. Scatter diagram

2. A process-improvement team must decide: a CTQ tree is used to:

- A. Display data over time
- B. Translate broad customer needs into measurable requirements
- C. Estimate process capability
- D. Assign project tasks

3. In this DMAIC scenario, identify the best choice: in a Kano analysis, a performance requirement is one where:

- A. Customers do not notice it
- B. Satisfaction increases as performance improves
- C. Delight rises regardless of performance
- D. It is unnecessary to measure

4. A quality team is reviewing its options. Determine: the project sponsor is primarily accountable for:

- A. Approving resources and supporting the project
- B. Creating all control charts
- C. Serving as the only subject-matter expert
- D. Conducting every data collection activity

5. During a Green Belt project, answer this question: a RACI chart clarifies:

- A. Process capability indices
- B. Roles and decision responsibilities
- C. The number of defects per unit
- D. Sampling-distribution shape

6. A process-improvement team must decide: the best operational definition of a defect is:

- A. A measurable rule for classifying nonconformance
- B. A customer preference that cannot be measured
- C. A target selected after data collection
- D. A vague description of poor quality

7. In this DMAIC scenario, identify the best choice: a process map differs from a SIPOC because a process map:

- A. Shows more detailed sequence and decision points
- B. Can only be used in Control
- C. Always includes financial benefits
- D. Eliminates the need for a scope statement

8. A quality team is reviewing its options. Determine: a communication plan should specify:

- A. The mean and standard deviation
- B. Only the project end date
- C. Who receives what information, when, and how
- D. The final answer key

9. During a Green Belt project, answer this question: which project risk should be addressed early?

- A. The color of the final report cover
- B. A future holiday schedule
- C. The possibility of stakeholder resistance
- D. The number of appendices

10. A process-improvement team must decide: a business case explains:

- A. How to calculate a t statistic
- B. Why the project matters to the organization
- C. Where data are stored
- D. Which control chart to use

11. In this DMAIC scenario, identify the best choice: a high-level value-stream map is especially useful for identifying:

- A. Delays, handoffs, and non-value-added flow
- B. Exact capability indices
- C. The p-value for a hypothesis test
- D. Individual measurement bias

12. A quality team is reviewing its options. Determine: which is an example of an in-scope boundary?

- A. All company processes
- B. The order-entry process from receipt through confirmation
- C. Every future customer interaction
- D. Only the team kickoff meeting

13. During a Green Belt project, answer this question: a project charter is normally approved before:

- A. The team begins formal data collection
- B. The problem is identified
- C. The sponsor is assigned
- D. The customer need is considered

14. A process-improvement team must decide: a SMART goal includes all of the following except:

- A. Measurable
- B. Achievable
- C. Specific
- D. Unrelated to time

15. In this DMAIC scenario, identify the best choice: the primary output of a VOC-to-CTQ translation is:

- A. Measurable specifications tied to customer needs
- B. A list of employee opinions
- C. A normal probability plot
- D. A control plan

16. A quality team is reviewing its options. Determine: a project is likely too broad when:

- A. Its goal is measurable
- B. Its sponsor is identified
- C. Its customers are known
- D. Its process boundaries span unrelated departments and outcomes

17. During a Green Belt project, answer this question: a Pareto chart of customer complaints is most useful in Define for:

- A. Proving a cause-and-effect relationship
- B. Ranking the few complaint categories with greatest impact
- C. Checking measurement repeatability
- D. Calculating a confidence interval

18. A process-improvement team must decide: a process owner should be involved early because the owner:

- A. Understands and sustains the operating process
- B. Performs every statistical test
- C. Replaces the project sponsor
- D. Approves employee payroll

19. In this DMAIC scenario, identify the best choice: before collecting baseline data, a team should first:

- A. Define the measure and its operational definition
- B. Set permanent control limits
- C. Run a design of experiments
- D. Choose the preferred solution

20. A quality team is reviewing its options. Determine: accuracy in a measurement system refers to:

- A. Closeness of measurements to the true value

- B. Consistency among repeated readings
- C. Number of categories in a chart
- D. Speed of the inspection process

21. During a Green Belt project, answer this question: precision refers to:

- A. Consistency of repeated measurements
- B. How close data are to a target
- C. The size of the process mean
- D. The number of operators involved

22. A process-improvement team must decide: a gage repeatability and reproducibility study evaluates:

- A. Measurement-system variation from equipment and appraisers
- B. Customer satisfaction segments
- C. The process flow sequence
- D. Project financial benefits

23. In this DMAIC scenario, identify the best choice: a sampling frame is:

- A. The complete list from which a sample can be selected
- B. A chart showing sample averages
- C. The physical device used for measurement
- D. The final set of control limits

24. A quality team is reviewing its options. Determine: random sampling is used primarily to:

- A. Reduce selection bias
- B. Increase the sample mean
- C. Guarantee zero variation
- D. Replace operational definitions

25. During a Green Belt project, answer this question: a histogram is best used to:

- A. Identify project stakeholders
- B. Assign action owners
- C. Show the distribution and shape of continuous data
- D. Display process steps

26. A process-improvement team must decide: a run chart is most helpful for:

- A. Comparing categorical proportions only
- B. Displaying observations in time order
- C. Ranking failure modes
- D. Mapping customer needs

27. In this DMAIC scenario, identify the best choice: which graph best examines a possible relationship between two continuous variables?

- A. Pie chart
- B. Scatter diagram
- C. SIPOC diagram
- D. Affinity diagram

28. A quality team is reviewing its options. Determine: the median is preferred over the mean when data are:

- A. Measured with a calibrated gage
- B. Strongly skewed by outliers
- C. Collected in random order
- D. Perfectly symmetric

29. During a Green Belt project, answer this question: standard deviation describes:

- A. The spread of values around the mean
- B. The number of defect opportunities
- C. The center of the data
- D. The process target

30. A process-improvement team must decide: a box plot is particularly useful for:

- A. Calculating a regression coefficient
- B. Selecting a project sponsor
- C. Defining a CTQ
- D. Comparing distributions and identifying potential outliers

31. In this DMAIC scenario, identify the best choice: a nominal scale consists of:

- A. Ordered categories with unequal intervals
- B. Categories with no inherent order
- C. Measurements with a true zero
- D. Continuous numerical readings

32. A quality team is reviewing its options. Determine: data recorded as pass/fail are:

- A. Attribute data
- B. Continuous data
- C. Ratio data
- D. Interval data

33. During a Green Belt project, answer this question: a baseline measure should reflect:

- A. Current process performance before improvement
- B. Performance after the solution is implemented
- C. Only the best-performing shift
- D. The desired future target

34. A process-improvement team must decide: stratifying data means:

- A. Separating data into meaningful groups
- B. Removing all unusual values
- C. Converting attributes to variables
- D. Combining all observations into one average

35. In this DMAIC scenario, identify the best choice: a check sheet is primarily used to:

- A. Collect data consistently at the point of occurrence
- B. Calculate a confidence interval
- C. Predict future sales
- D. Create a project charter

36. A quality team is reviewing its options. Determine: when an appraiser consistently reads high relative to a standard, the system has:

- A. Bias
- B. Linearity
- C. Repeatability
- D. Stability

37. During a Green Belt project, answer this question: the Analyze phase focuses on:

- A. Identifying and validating root causes
- B. Writing the project charter

- C. Collecting only VOC data
- D. Sustaining the chosen solution

38. A process-improvement team must decide: a fishbone diagram is used to:

- A. Display possible categories of causes
- B. Calculate capability indices
- C. Set a process target
- D. Schedule project tasks

39. In this DMAIC scenario, identify the best choice: the 5 Whys technique is intended to:

- A. Probe progressively deeper into a causal chain
- B. Find the most popular solution
- C. Replace data collection
- D. Calculate a sample size

40. A quality team is reviewing its options. Determine: a correlation coefficient near zero indicates:

- A. No visible process variation
- B. A very high defect rate
- C. A strong causal relationship
- D. Little linear association between variables

41. During a Green Belt project, answer this question: regression analysis is used to:

- A. Rank stakeholder influence
- B. Create a SIPOC diagram
- C. Model the relationship between a response and predictors
- D. Establish a sampling frame

42. A process-improvement team must decide: a p-value smaller than the chosen alpha level leads the team to:

- A. Prove the null hypothesis true
- B. Fail to collect any more data
- C. Reject the null hypothesis
- D. Accept every alternative explanation

43. In this DMAIC scenario, identify the best choice: the null hypothesis usually represents:

- A. No effect, difference, or relationship
- B. The preferred solution
- C. The customer specification
- D. A change or difference exists

44. A quality team is reviewing its options. Determine: a Type I error occurs when a team:

- A. Fails to reject a false null hypothesis
- B. Rejects a true null hypothesis
- C. Uses too large a sample
- D. Collects attribute data

45. During a Green Belt project, answer this question: a Type II error occurs when a team:

- A. Uses a random sample
- B. Fails to reject a false null hypothesis
- C. Uses a control chart
- D. Rejects a true null hypothesis

46. A process-improvement team must decide: a confidence interval provides:

- A. A range of plausible values for a population parameter
- B. A list of root causes
- C. A method for assigning roles
- D. A permanent control limit

47. In this DMAIC scenario, identify the best choice: a two-sample t test is commonly used to compare:

- A. Two process maps
- B. Two customer segments only
- C. Two population means
- D. Two control charts

48. A quality team is reviewing its options. Determine: a chi-square test is commonly used with:

- A. A continuous response and predictor
- B. Two means from normal populations
- C. A single process standard deviation
- D. Categorical counts or proportions

49. During a Green Belt project, answer this question: an FMEA prioritizes potential failures using:

- A. Severity, occurrence, and detection
- B. Mean, median, and mode
- C. Scope, schedule, and budget
- D. Cp, Cpk, and Pp

50. A process-improvement team must decide: the highest-risk FMEA item generally has the:

- A. Largest risk priority number

- B. Most process steps
- C. Lowest severity score
- D. Smallest sample size

51. In this DMAIC scenario, identify the best choice: a cause is validated when:

- A. Evidence shows it is associated with the problem
- B. It appears first on a fishbone diagram
- C. It is selected by the sponsor
- D. The team agrees it sounds reasonable

52. A quality team is reviewing its options. Determine: a multi-vari chart helps identify:

- A. Patterns of variation within, between, and over time
- B. The best project communication channel
- C. The required training course
- D. The project financial benefit

53. During a Green Belt project, answer this question: confounding in an experiment means:

- A. The response is measured accurately
- B. The sample is randomly selected
- C. A factor effect cannot be separated from another effect
- D. The process is stable

54. A process-improvement team must decide: a residual plot is examined to:

- A. Calculate customer satisfaction
- B. Create a CTQ tree
- C. Determine project scope
- D. Assess whether a regression model assumptions are reasonable

55. In this DMAIC scenario, identify the best choice: a root-cause statement should be supported by:

- A. Opinion from the most senior manager
- B. Data and process evidence
- C. The final control plan
- D. A single customer anecdote

56. A quality team is reviewing its options. Determine: the Improve phase is primarily concerned with:

- A. Writing baseline problem statements
- B. Generating, testing, and implementing solutions
- C. Verifying gage repeatability
- D. Calculating p-values only

57. During a Green Belt project, answer this question: brainstorming is most effective when the team initially:

- A. Generates many ideas before evaluating them
- B. Critiques each idea immediately
- C. Allows only the sponsor to speak
- D. Uses only historical solutions

58. A process-improvement team must decide: a solution-selection matrix helps teams:

- A. Compare alternatives against weighted criteria
- B. Measure appraiser bias
- C. Set control limits
- D. Calculate a sample mean

59. In this DMAIC scenario, identify the best choice: a pilot test is conducted to:

- A. Test a solution on a limited scale before full rollout
- B. Replace and revise process documentation before deployment
- C. Prove the project charter was correct
- D. Avoid baseline comparison after the change

60. A quality team is reviewing its options. Determine: poka-yoke is best described as:

- A. A chart for monitoring process averages
- B. A customer survey data-collection technique
- C. A financial cost-accounting method
- D. An approach that prevents or detects errors early

61. During a Green Belt project, answer this question: the purpose of a design of experiments is to:

- A. Change one factor at a time without learning interactions
- B. Systematically study factor effects on a response
- C. Avoid using data to choose solutions
- D. Create a process map

62. A process-improvement team must decide: in a factorial experiment, an interaction exists when:

- A. The effect of one factor depends on another factor
- B. One factor has no effect
- C. All measurements are identical
- D. The response is categorical

63. In this DMAIC scenario, identify the best choice: a Kaizen event is typically:

- A. A focused, rapid improvement effort
- B. A measurement-system study
- C. A long-term audit cycle
- D. A statistical hypothesis test

64. A quality team is reviewing its options. Determine: before full implementation, a team should confirm that the solution:

- A. Uses the newest available software
- B. Has the largest number of features
- C. Eliminates every form of variation
- D. Addresses validated causes and does not create unacceptable risk

65. During a Green Belt project, answer this question: standard work is useful because it:

- A. Documents the best known sequence for consistent performance
- B. Replaces training and supervision
- C. Eliminates the need for a control plan
- D. Allows each operator to use a different method

66. A process-improvement team must decide: a cost-benefit analysis is used to:

- A. Determine gage linearity
- B. Rank process steps by time
- C. Compare expected benefits with implementation costs
- D. Calculate a correlation coefficient

67. In this DMAIC scenario, identify the best choice: force-field analysis identifies:

- A. Forces supporting and resisting a proposed change
- B. The normal distribution of measurements

- C. The number of defect opportunities
- D. The process capability index

68. A quality team is reviewing its options. Determine: a mistake-proofing device should ideally:

- A. Prevent an error from occurring or moving forward
- B. Detect an error after the customer receives it
- C. Increase inspection workload
- D. Depend on memory alone

69. During a Green Belt project, answer this question: which change-management action improves adoption?

- A. Withhold the reason for the change
- B. Involve affected people and communicate benefits
- C. Implement without training
- D. Delay feedback until the project ends

70. A process-improvement team must decide: a pilot result should be compared with:

- A. The original project title
- B. The team meeting schedule
- C. A random industry benchmark only
- D. The relevant baseline and success criteria

71. In this DMAIC scenario, identify the best choice: the primary purpose of the Control phase is to:

- A. Sustain gains and monitor ongoing performance
- B. Generate the initial solution list
- C. Define the project scope
- D. Validate the measurement system

72. A quality team is reviewing its options. Determine: a control plan normally documents:

- A. What to monitor, frequency, and response actions
- B. Every historic team decision and vote
- C. Only project financial benefits and costs
- D. The company organization chart structure

73. During a Green Belt project, answer this question: control limits are calculated from:

- A. Observed process variation
- B. The project budget
- C. Customer specifications only
- D. The team preference

74. A process-improvement team must decide: specification limits are set by:

- A. Customer, design, or business requirements
- B. Random sampling
- C. The regression output
- D. The process-control chart formula

75. In this DMAIC scenario, identify the best choice: a point outside control limits is a signal of:

- A. Potential special-cause variation
- B. Common-cause variation only
- C. Guaranteed customer dissatisfaction
- D. A completed improvement project

76. A quality team is reviewing its options. Determine: an X-bar chart is used to monitor:

- A. The average of a continuous process measure
- B. The number of defects per unit
- C. The proportion defective only
- D. The count of rare events

77. During a Green Belt project, answer this question: a p chart is appropriate for monitoring:

- A. The proportion defective in samples
- B. The number of defects per unit
- C. The average measurement from subgroups
- D. Individual continuous values

78. A process-improvement team must decide: when a control-chart signal occurs, the first response should be to:

- A. Investigate the assignable cause using the response plan
- B. Adjust the process immediately without investigation
- C. Widen the specification limits
- D. Ignore the point if the average is on target

79. In this DMAIC scenario, identify the best choice: a process owner accepts handoff when:

- A. The team has stopped meeting
- B. Controls, responsibilities, and training are in place
- C. The project charter is rewritten
- D. All future improvement is unnecessary

80. A quality team is reviewing its options. Determine: visual management supports control by:

- A. Replacing standardized work
- B. Eliminating data collection
- C. Hiding process performance from operators
- D. Making status and abnormalities easy to see

81. During a Green Belt project, answer this question: what is the primary purpose of a Six Sigma project charter?

- A. Calculate process capability
- B. Create a control chart
- C. Authorize the project and define its business case
- D. Select a sampling plan

82. A process-improvement team must decide: which statement best describes the voice of the customer (VOC)?

- A. Internal opinions about a process
- B. Customer needs translated into requirements
- C. A list of team meeting notes
- D. A report of final project savings

83. In this DMAIC scenario, identify the best choice: a critical-to-quality (CTQ) requirement is best defined as:

- A. Any measure that is easy to collect
- B. A measurable characteristic important to the customer
- C. A cost category in the budget
- D. A task assigned to the project sponsor

84. A quality team is reviewing its options. Determine: which role removes organizational barriers and provides resources for a Six Sigma project?

- A. Green Belt
- B. Team member
- C. Champion
- D. Process owner

85. During a Green Belt project, answer this question: a project is most suitable for Six Sigma when it:

- A. Requires only routine daily supervision
- B. Has a measurable problem tied to business goals
- C. Has no identifiable customer impact
- D. Can be solved without data

86. A process-improvement team must decide: which measure is generally a leading indicator of process performance?

- A. Monthly warranty cost
- B. Customer complaint total
- C. First-pass yield during production
- D. Annual financial statement

87. In this DMAIC scenario, identify the best choice: the main value of a SIPOC diagram is that it:

- A. Provides a high-level view of process boundaries
- B. Tests whether data are normally distributed
- C. Ranks failure modes by risk
- D. Calculates process sigma level

88. A quality team is reviewing its options. Determine: which quality leader is most closely associated with the cause-and-effect diagram?

- A. Walter Shewhart

- B. Joseph Juran
- C. W. Edwards Deming
- D. Kaoru Ishikawa

89. During a Green Belt project, answer this question: in Six Sigma terminology, a defect is:

- A. Any event outside a control limit
- B. A unit that passes final inspection
- C. A customer complaint about service
- D. Failure to meet a requirement

90. A process-improvement team must decide: which metric compares the cost of poor quality with total sales?

- A. Cost of poor quality percentage
- B. Defects per million opportunities
- C. Rolled throughput yield
- D. Process cycle efficiency

91. In this DMAIC scenario, identify the best choice: a balanced scorecard helps an organization by:

- A. Replacing all financial measures
- B. Eliminating the need for customer data
- C. Assigning root causes automatically
- D. Linking operational measures to strategic objectives

92. A quality team is reviewing its options. Determine: what is a key benefit of cross-functional project teams?

- A. They bring knowledge from each process area
- B. They guarantee all decisions are unanimous

- C. They eliminate the need for a sponsor
- D. They replace the process owner

93. During a Green Belt project, answer this question: which item is an external customer requirement?

- A. A supervisor preference for a meeting time
- B. An internal audit schedule
- C. A team member training record
- D. A shipping label that meets a retailer specification

94. A process-improvement team must decide: the term $Y=f(X)$ expresses that:

- A. Outputs can be affected by input variables
- B. Every process has only one input
- C. Customer needs are unrelated to processes
- D. All variation is caused by people

95. In this DMAIC scenario, identify the best choice: when selecting a project, the strongest criterion is:

- A. Availability of a favorite software tool
- B. Number of people available for meetings
- C. Clear strategic alignment and measurable benefit
- D. Whether the solution is already known

96. A quality team is reviewing its options. Determine: the Define phase begins by clarifying:

- A. The project problem, goal, and scope
- B. The final control limits
- C. The regression equation
- D. The measurement-system bias

97. During a Green Belt project, answer this question: a problem statement should describe:

- A. The person responsible for defects
- B. The desired future state only
- C. The suspected solution
- D. The current gap using facts and data

98. A process-improvement team must decide: a well-written goal statement should be:

- A. Broad enough to cover every process
- B. Specific, measurable, and time-bound
- C. Written only after Improve
- D. Based on the team leader preference

99. In this DMAIC scenario, identify the best choice: project scope should identify:

- A. Only the project budget
- B. The process boundaries included and excluded
- C. The final p-value
- D. The control-chart center line

100. A quality team is reviewing its options. Determine: a stakeholder analysis is used primarily to:

- A. Understand influence, needs, and engagement
- B. Calculate financial savings
- C. Select random samples
- D. Predict measurement error

Practice Exam 27: Answer Key and Explanations

1. **A** — FMEA is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
2. **B** — Translate broad customer needs into measurable requirements is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
3. **C** — Delight rises regardless of performance is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
4. **D** — Conducting every data collection activity is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
5. **A** — Process capability indices is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
6. **D** — A vague description of poor quality is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
7. **C** — Always includes financial benefits is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
8. **B** — Only the project end date is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.
9. **C** — The possibility of stakeholder resistance is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

10. B — Why the project matters to the organization is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

11. D — Individual measurement bias is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

12. A — All company processes is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

13. A — The team begins formal data collection is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

14. C — Specific is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

15. B — A list of employee opinions is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

16. D — Its process boundaries span unrelated departments and outcomes is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

17. B — Ranking the few complaint categories with greatest impact is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

18. C — Replaces the project sponsor is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

19. D — Choose the preferred solution is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

20. A — Closeness of measurements to the true value is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

21. B — How close data are to a target is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

22. D — Project financial benefits is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

23. A — The complete list from which a sample can be selected is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

24. C — Guarantee zero variation is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

25. C — Show the distribution and shape of continuous data is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

26. B — Displaying observations in time order is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

27. A — Pie chart is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

28. D — Perfectly symmetric is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

29. C — The center of the data is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

30. D — Comparing distributions and identifying potential outliers is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

31. A — Ordered categories with unequal intervals is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

32. B — Continuous data is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

33. B — Performance after the solution is implemented is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

34. D — Combining all observations into one average is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

35. A — Collect data consistently at the point of occurrence is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

36. C — Repeatability is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

37. D — Sustaining the chosen solution is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

38. A — Display possible categories of causes is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

39. B — Find the most popular solution is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

40. C — A strong causal relationship is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

41. C — Model the relationship between a response and predictors is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

42. A — Prove the null hypothesis true is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

43. D — A change or difference exists is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

44. B — Rejects a true null hypothesis is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

45. D — Rejects a true null hypothesis is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

46. A — A range of plausible values for a population parameter is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

47. C — Two population means is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

48. B — Two means from normal populations is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

49. B — Mean, median, and mode is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

50. C — Lowest severity score is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

51. D — The team agrees it sounds reasonable is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

52. A — Patterns of variation within, between, and over time is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

53. C — A factor effect cannot be separated from another effect is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

54. D — Assess whether a regression model assumptions are reasonable is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

55. A — Opinion from the most senior manager is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

56. B — Generating, testing, and implementing solutions is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

57. B — Critiques each idea immediately is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

58. A — Compare alternatives against weighted criteria is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

59. C — Prove the project charter was correct is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

60. D — An approach that prevents or detects errors early is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

61. A — Change one factor at a time without learning interactions is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

62. B — One factor has no effect is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

63. C — A long-term audit cycle is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

64. D — Addresses validated causes and does not create unacceptable risk is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

65. D — Allows each operator to use a different method is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

66. C — Compare expected benefits with implementation costs is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

67. A — Forces supporting and resisting a proposed change is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

68. B — Detect an error after the customer receives it is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

69. A — Withhold the reason for the change is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

70. D — The relevant baseline and success criteria is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

71. B — Generate the initial solution list is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

72. C — Only project financial benefits and costs is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

73. C — Customer specifications only is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

74. D — The process-control chart formula is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

75. B — Common-cause variation only is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

76. A — The average of a continuous process measure is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

77. C — The average measurement from subgroups is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

78. B — Adjust the process immediately without investigation is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

79. A — The team has stopped meeting is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

80. D — Making status and abnormalities easy to see is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

81. C — Authorize the project and define its business case is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

82. A — Internal opinions about a process is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

83. B — A measurable characteristic important to the customer is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

84. D — Process owner is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

85. B — Has a measurable problem tied to business goals is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

86. A — Monthly warranty cost is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

87. D — Calculates process sigma level is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

88. C — W. Edwards Deming is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

89. A — Any event outside a control limit is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

90. B — Defects per million opportunities is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

91. D — Linking operational measures to strategic objectives is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

92. C — They eliminate the need for a sponsor is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

93. D — A shipping label that meets a retailer specification is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

94. A — Outputs can be affected by input variables is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

95. C — Clear strategic alignment and measurable benefit is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

96. B — The final control limits is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

97. C — The suspected solution is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

98. B — Specific, measurable, and time-bound is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

99. A — Only the project budget is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.

100. D — Predict measurement error is the best answer because it addresses the project question directly. A sound Six Sigma decision uses the appropriate tool for the DMAIC phase and relies on relevant process evidence. Other choices may be valid in another setting, but they do not satisfy the requirement or support the same conclusion.