

PRACTICE EXAM 26: 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. A project team is reviewing the evidence. a confidence interval provides:
 - A. A list of root causes
 - B. A range of plausible values for a population parameter
 - C. A method for assigning roles
 - D. A permanent control limit

2. For an improvement assignment, decide: a two-sample t test is commonly used to compare:
 - A. Two process maps
 - B. Two customer segments only
 - C. Two control charts
 - D. Two population means

3. A Green Belt is planning the next step. a chi-square test is commonly used with:
 - A. A continuous response and predictor
 - B. A single process standard deviation
 - C. Two means from normal populations
 - D. Categorical counts or proportions

4. In an operational case, identify the best response: an FMEA prioritizes potential failures using:

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

5. A project team is reviewing the evidence. the highest-risk FMEA item generally has the:

- A. Lowest severity score
- B. Largest risk priority number
- C. Most process steps
- D. Smallest sample size

6. For an improvement assignment, decide: a cause is validated when:

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

7. A Green Belt is planning the next step. a multi-vari chart helps identify:

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

8. In an operational case, identify the best response: confounding in an experiment means:

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

9. A project team is reviewing the evidence. a residual plot is examined to:

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

10. For an improvement assignment, decide: a root-cause statement should be supported by:

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

11. A Green Belt is planning the next step. 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

12. In an operational case, identify the best response: brainstorming is most effective when the team initially:

- A. Critiques each idea immediately
- B. Generates many ideas before evaluating them

- C. Allows only the sponsor to speak
- D. Uses only historical solutions

13. A project team is reviewing the evidence. a solution-selection matrix helps teams:

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

14. For an improvement assignment, decide: a pilot test is conducted to:

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

15. A Green Belt is planning the next step. poka-yoke is best described as:

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

16. In an operational case, identify the best response: the purpose of a design of experiments is to:

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

17. A project team is reviewing the evidence. in a factorial experiment, an interaction exists when:

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

18. For an improvement assignment, decide: 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

19. A Green Belt is planning the next step. before full implementation, a team should confirm that the solution:

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

20. In an operational case, identify the best response: standard work is useful because it:

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

21. A project team is reviewing the evidence. a cost-benefit analysis is used to:

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

22. For an improvement assignment, decide: force-field analysis identifies:

- A. The normal distribution of measurements
- B. The number of defect opportunities
- C. Forces supporting and resisting a proposed change
- D. The process capability index

23. A Green Belt is planning the next step. 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

24. In an operational case, identify the best response: which change-management action improves adoption?

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

25. A project team is reviewing the evidence. a pilot result should be compared with:

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

26. For an improvement assignment, decide: the primary purpose of the Control phase is to:

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

27. A Green Belt is planning the next step. a control plan normally documents:

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

28. In an operational case, identify the best response: control limits are calculated from:

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

29. A project team is reviewing the evidence. specification limits are set by:

- A. Customer, design, or business requirements
- B. Random sampling
- C. The regression output

D. The process-control chart formula

30. For an improvement assignment, decide: a point outside control limits is a signal of:

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

31. A Green Belt is planning the next step. 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

32. In an operational case, identify the best response: a p chart is appropriate for monitoring:

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

33. A project team is reviewing the evidence. when a control-chart signal occurs, the first response should be to:

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

34. For an improvement assignment, decide: 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

35. A Green Belt is planning the next step. visual management supports control by:

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

36. In an operational case, identify the best response: 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

37. A project team is reviewing the evidence. 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

38. For an improvement assignment, decide: 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

39. A Green Belt is planning the next step. which role removes organizational barriers and provides resources for a Six Sigma project?

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

40. In an operational case, identify the best response: a project is most suitable for Six Sigma when it:

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

41. A project team is reviewing the evidence. which measure is generally a leading indicator of process performance?

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

42. For an improvement assignment, decide: the main value of a SIPOC diagram is that it:

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

43. A Green Belt is planning the next step. which quality leader is most closely associated with the cause-and-effect diagram?

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

44. In an operational case, identify the best response: 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

45. A project team is reviewing the evidence. which metric compares the cost of poor quality with total sales?

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

46. For an improvement assignment, decide: a balanced scorecard helps an organization by:

- A. Replacing all financial measures

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

47. A Green Belt is planning the next step. 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 replace the process owner
- D. They eliminate the need for a sponsor

48. In an operational case, identify the best response: which item is an external customer requirement?

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

49. A project team is reviewing the evidence. the term $Y=f(X)$ expresses that:

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

50. For an improvement assignment, decide: 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

51. A Green Belt is planning the next step. 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

52. In an operational case, identify the best response: a problem statement should describe:

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

53. A project team is reviewing the evidence. 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

54. For an improvement assignment, decide: project scope should identify:

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

55. A Green Belt is planning the next step. 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

56. In an operational case, identify the best response: which tool visually maps suppliers, inputs, process steps, outputs, and customers?

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

57. A project team is reviewing the evidence. a CTQ tree is used to:

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

58. For an improvement assignment, decide: 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

59. A Green Belt is planning the next step. the project sponsor is primarily accountable for:

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

60. In an operational case, identify the best response: a RACI chart clarifies:

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

61. A project team is reviewing the evidence. 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

62. For an improvement assignment, decide: a process map differs from a SIPOC because a process map:

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

63. A Green Belt is planning the next step. a communication plan should specify:

- A. The mean and standard deviation
- B. Who receives what information, when, and how

- C. Only the project end date
- D. The final answer key

64. In an operational case, identify the best response: which project risk should be addressed early?

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

65. A project team is reviewing the evidence. 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

66. For an improvement assignment, decide: a high-level value-stream map is especially useful for identifying:

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

67. A Green Belt is planning the next step. which is an example of an in-scope boundary?

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

68. In an operational case, identify the best response: a project charter is normally approved before:

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

69. A project team is reviewing the evidence. a SMART goal includes all of the following except:

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

70. For an improvement assignment, decide: 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

71. A Green Belt is planning the next step. 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

72. In an operational case, identify the best response: a Pareto chart of customer complaints is most useful in Define for:

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

73. A project team is reviewing the evidence. a process owner should be involved early because the owner:

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

74. For an improvement assignment, decide: before collecting baseline data, a team should first:

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

75. A Green Belt is planning the next step. 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

76. In an operational case, identify the best response: 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

77. A project team is reviewing the evidence. a gage repeatability and reproducibility study evaluates:

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

78. For an improvement assignment, decide: a sampling frame is:

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

79. A Green Belt is planning the next step. random sampling is used primarily to:

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

80. In an operational case, identify the best response: a histogram is best used to:

- A. Identify project stakeholders

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

81. A project team is reviewing the evidence. 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

82. For an improvement assignment, decide: which graph best examines a possible relationship between two continuous variables?

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

83. A Green Belt is planning the next step. the median is preferred over the mean when data are:

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

84. In an operational case, identify the best response: standard deviation describes:

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

D. The process target

85. A project team is reviewing the evidence. a box plot is particularly useful for:

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

86. For an improvement assignment, decide: a nominal scale consists of:

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

87. A Green Belt is planning the next step. data recorded as pass/fail are:

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

88. In an operational case, identify the best response: a baseline measure should reflect:

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

89. A project team is reviewing the evidence. stratifying data means:

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

90. For an improvement assignment, decide: a check sheet is primarily used to:

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

91. A Green Belt is planning the next step. when an appraiser consistently reads high relative to a standard, the system has:

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

92. In an operational case, identify the best response: the Analyze phase focuses on:

- A. Identifying and validating root causes
- B. Sustaining the chosen solution
- C. Writing the project charter
- D. Collecting only VOC data

93. A project team is reviewing the evidence. a fishbone diagram is used to:

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

94. For an improvement assignment, decide: the 5 Whys technique is intended to:

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

95. A Green Belt is planning the next step. a correlation coefficient near zero indicates:

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

96. In an operational case, identify the best response: regression analysis is used to:

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

97. A project team is reviewing the evidence. a p-value smaller than the chosen alpha level leads the team to:

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

98. For an improvement assignment, decide: the null hypothesis usually represents:

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

99. A Green Belt is planning the next step. a Type I error occurs when a team:

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

100. In an operational case, identify the best response: a Type II error occurs when a team:

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

Practice Exam 26: Answer Key and Explanations

1. B — A range of plausible values for a population parameter is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and

objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

2. D — Two population means is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

3. C — Two means from normal populations is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

4. A — Mean, median, and mode is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

5. A — Lowest severity score is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

6. C — The team agrees it sounds reasonable is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

7. B — Patterns of variation within, between, and over time is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

8. D — A factor effect cannot be separated from another effect is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

9. C — Assess whether a regression model assumptions are reasonable is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

10. D — Opinion from the most senior manager is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence

available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

11. B — Generating, testing, and implementing solutions is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

12. A — Critiques each idea immediately is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

13. B — Compare alternatives against weighted criteria is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

14. A — Prove the project charter was correct is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

15. C — An approach that prevents or detects errors early is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

16. D — Change one factor at a time without learning interactions is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

17. D — One factor has no effect is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

18. C — A long-term audit cycle is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

19. B — Addresses validated causes and does not create unacceptable risk is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC

phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

20. A — Allows each operator to use a different method is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

21. D — Compare expected benefits with implementation costs is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

22. C — Forces supporting and resisting a proposed change is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

23. B — Detect an error after the customer receives it is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

24. C — Withhold the reason for the change is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

25. A — The relevant baseline and success criteria is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

26. D — Generate the initial solution list is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

27. A — Only project financial benefits and costs is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

28. B — Customer specifications only is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence

available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

29. D — The process-control chart formula is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

30. C — Common-cause variation only is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

31. A — The average of a continuous process measure is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

32. B — The average measurement from subgroups is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

33. D — Adjust the process immediately without investigation is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

34. A — The team has stopped meeting is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

35. B — Making status and abnormalities easy to see is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

36. C — Authorize the project and define its business case is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

37. A — Internal opinions about a process is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence

available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

38. B — A measurable characteristic important to the customer is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

39. C — Process owner is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

40. D — Has a measurable problem tied to business goals is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

41. C — Monthly warranty cost is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

42. B — Calculates process sigma level is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

43. D — W. Edwards Deming is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

44. A — Any event outside a control limit is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

45. A — Defects per million opportunities is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

46. B — Linking operational measures to strategic objectives is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and

objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

47. D — They eliminate the need for a sponsor is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

48. C — A shipping label that meets a retailer specification is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

49. D — Outputs can be affected by input variables is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

50. C — Clear strategic alignment and measurable benefit is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

51. B — The final control limits is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

52. A — The suspected solution is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

53. B — Specific, measurable, and time-bound is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

54. C — Only the project budget is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

55. D — Predict measurement error is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence

available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

56. A — FMEA is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

57. D — Translate broad customer needs into measurable requirements is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

58. C — Delight rises regardless of performance is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

59. B — Conducting every data collection activity is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

60. A — Process capability indices is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

61. D — A vague description of poor quality is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

62. B — Always includes financial benefits is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

63. C — Only the project end date is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

64. A — The possibility of stakeholder resistance is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence

available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

65. B — Why the project matters to the organization is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

66. A — Individual measurement bias is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

67. D — All company processes is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

68. C — The team begins formal data collection is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

69. C — Specific is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

70. B — A list of employee opinions is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

71. D — Its process boundaries span unrelated departments and outcomes is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

72. A — Ranking the few complaint categories with greatest impact is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

73. D — Replaces the project sponsor is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence

available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

74. C — Choose the preferred solution is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

75. A — Closeness of measurements to the true value is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

76. B — How close data are to a target is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

77. B — Project financial benefits is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

78. C — The complete list from which a sample can be selected is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

79. A — Guarantee zero variation is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

80. D — Show the distribution and shape of continuous data is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

81. B — Displaying observations in time order is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

82. D — Pie chart is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives

may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

83. C — Perfectly symmetric is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

84. A — The center of the data is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

85. A — Comparing distributions and identifying potential outliers is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

86. B — Ordered categories with unequal intervals is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

87. D — Continuous data is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

88. C — Performance after the solution is implemented is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

89. A — Combining all observations into one average is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

90. B — Collect data consistently at the point of occurrence is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

91. D — Repeatability is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other

alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion. It strengthens consistent process decisions.

92. B — Sustaining the chosen solution is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

93. C — Display possible categories of causes is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

94. C — Find the most popular solution is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

95. A — A strong causal relationship is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

96. D — Model the relationship between a response and predictors is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

97. C — Prove the null hypothesis true is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

98. A — A change or difference exists is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

99. D — Rejects a true null hypothesis is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.

100. B — Rejects a true null hypothesis is the appropriate answer for the project situation. Six Sigma practitioners select tools that match the required decision, DMAIC phase, and objective evidence

available. The other alternatives may apply in a separate setting, but they do not meet the stated objective or establish the needed conclusion.