LEAN SIX SIGMA YELLOW BELT STUDY GUIDE 2026-2027 - EXAM 8 (100 QUESTIONS)

Choose the best answer for each question. This original study guide practice exam covers foundational Lean Six Sigma Yellow Belt concepts. Use it for review and identify topics for further study after completing the answer key.

1. The main purpose of Lean Six Sigma is to:

A. increase inspection after production
B. standardize every job without analysis
C. improve customer value by reducing waste and variation
D. maximize output regardless of defects

2. In DMAIC, the Define phase primarily establishes:

A. the final control plan and audit schedule
B. the problem, customers, scope, and project goal
C. the statistical confidence interval
D. the supplier contract requirements

3. Which is a value-added activity?

A. assembling a product feature the customer requires
B. moving materials between distant storage areas
C. reworking an item that failed inspection
D. waiting for a machine to become available

4. A SIPOC diagram is most useful for:

A. calculating process capability indices
B. testing a hypothesis about averages
C. tracking daily production by operator
D. showing a high-level process from suppliers to customers

5. The customer requirement that is translated into measurable specifications is a:

A. critical-to-quality characteristic
B. nonconforming unit
C. special cause signal
D. process constraint

6. The voice of the customer is best captured through:

A. only the project team brainstorm
B. only internal financial reports
C. direct feedback, observations, and complaint data
D. only the final inspection record

7. A project charter should clearly state:

A. every solution chosen by the team
B. business case, problem statement, goal, and scope
C. the final standard operating procedure
D. all individual employee performance ratings

8. Which statement best describes a defect?

A. any activity that consumes time
B. a product produced ahead of schedule
C. a variation that customers cannot observe
D. a failure to meet a specified requirement

9. A unit is considered defective when it:

A. contains exactly one opportunity
B. is measured by a control chart
C. passes every inspection sample
D. has one or more defects

10. The Measure phase begins by confirming:

A. which improvement has already worked
B. who will own the control plan
C. how the current process and its measures will be defined
D. which statistical test proves causation

11. Operational definitions are important because they:

A. make data collection consistent across people and time
B. replace the need for customer input
C. eliminate natural process variation
D. guarantee a capable process

12. A data collection plan should specify:

A. the preferred solution before measuring
B. what data are needed, who collects it, and when
C. the final budget for the project

D. the annual employee training schedule

13. A baseline measure is used to:

A. describe current performance before improvements
B. predict the exact future demand
C. replace customer requirements
D. assign individual employee blame

14. Which measure is a count of occurrences rather than elapsed time?

A. average order cycle time
B. median call duration
C. time between machine failures
D. number of invoice errors

15. A check sheet is primarily used to:

A. display the relationship between two variables
B. collect data in a structured, repeatable way
C. list actions after a project closes
D. calculate a regression equation

16. A Pareto chart helps a team:

A. show process steps in sequence
B. compare an average to a target
C. prioritize the few categories causing most problems
D. assign causes to individual workers

17. A histogram is most useful for showing:

A. the sequence of a process
B. roles on a project team
C. the distribution and shape of numerical data
D. supplier and customer relationships

18. A run chart plots a measure:

A. against a list of possible causes
B. within a supplier-customer map
C. only after a solution is implemented
D. over time to reveal patterns or shifts

19. A scatter plot is used to explore:

A. which process step comes first
B. whether two variables appear related
C. how many defects each unit has
D. who approves a project charter

20. The median is the:

A. middle value after data are ordered
B. most frequently occurring value
C. sum divided by the count
D. largest value in the sample

21. The range of a data set is:

A. the maximum minus the minimum
B. the middle half of values
C. the most common value
D. the total number of observations

22. A process map is used to:

A. rank root causes by frequency
B. calculate defect opportunities
C. set a confidence level
D. make process steps and decision points visible

23. A detailed process map is especially helpful for:

A. replacing all process metrics
B. identifying rework loops, handoffs, and delays
C. proving a solution will work
D. eliminating the need for observation

24. A value stream map differs from a basic flowchart because it:

A. uses only symbols for decision points
B. contains no customer information
C. includes material and information flow with timing
D. requires statistical software

25. In Lean, transportation waste includes:

A. employees walking to a nearby workstation
B. unnecessary movement of materials or products
C. processing a customer order correctly

D. measuring a key quality characteristic

26. Inventory becomes waste when it:

A. is counted accurately at the end of a shift
B. is stored with a clear location label
C. is delivered according to customer demand
D. exceeds what is needed for the process to flow

27. Motion waste refers to:

A. the movement of products between suppliers
B. variation in a measurement system
C. unnecessary movement by people or equipment
D. a change in customer demand

28. Waiting waste occurs when:

A. work or people are idle because the next step is unavailable
B. a customer receives a product before its requested date
C. a machine produces within its approved performance limits
D. a team collects baseline data before selecting a solution

29. Overproduction means:

A. making more, earlier, or faster than needed
B. working overtime during a peak period
C. repairing a product after a defect
D. measuring a process output

30. Overprocessing is:

A. producing defects at a high rate
B. keeping too little inventory on hand
C. moving work between two departments
D. doing more work or using more precision than required

31. The eighth Lean waste is commonly described as:

A. missing supplier invoices
B. customer complaints after delivery
C. unused employee knowledge and creativity
D. process variation from machines

32. A 5 Whys analysis is intended to:

A. select the highest revenue customer
B. probe beyond symptoms toward an underlying cause
C. measure a process average
D. set the control chart limits

33. A fishbone diagram organizes:

A. the chronological project schedule
B. possible causes into logical categories
C. the financial return on a solution
D. the inspection sequence for a product

34. In a cause-and-effect diagram, the effect is:

A. a confirmed corrective action
B. the person who owns the process
C. the customer requirement
D. the problem or outcome being investigated

35. The Analyze phase focuses on:

A. writing the final project charter
B. training all process operators
C. identifying and validating root causes
D. documenting the completed control plan

36. A root cause is best defined as:

A. an underlying factor that, if addressed, prevents recurrence
B. the most visible symptom of a problem
C. any idea suggested in brainstorming
D. the last step in a process map

37. Correlation alone means that:

A. two variables move together without proving cause
B. one variable definitely causes the other
C. the data have no variation
D. a project has met its goal

38. A stratified data analysis separates data by:

A. random letters assigned to observations
B. meaningful groups such as shift, product, or location
C. only the highest defect category

D. the project team member collecting it

39. A pilot is conducted to:

A. replace measurement-system analysis
B. close a project before improvement
C. test a proposed change on a limited scale
D. avoid collecting post-change data

40. A solution selection matrix helps teams:

A. draw the current process map
B. calculate standard deviation
C. create a customer survey
D. compare alternatives against agreed criteria

41. The Improve phase includes:

A. developing, testing, and implementing solutions
B. writing the original problem statement
C. collecting only historical data
D. monitoring a stable process indefinitely

42. Poka-yoke is a method for:

A. calculating a process capability index
B. choosing a project sponsor
C. measuring customer loyalty
D. preventing errors or making them immediately obvious

43. Standard work is valuable because it:

A. removes all need for improvement
B. allows each worker to use any sequence
C. documents the best current method for doing the task
D. substitutes for training new employees

44. Visual management makes status clear by:

A. sending only lengthy monthly reports
B. using simple signals that can be understood quickly
C. requiring a manager to interpret every result
D. hiding process measures from operators

45. Kanban is primarily a system for:

A. calculating financial savings
B. assigning blame for late orders
C. testing statistical significance
D. signaling when work or materials should be replenished

46. A control plan identifies:

A. the historical root cause list only
B. what to monitor, how to monitor it, and response actions
C. the project charter approval route
D. every possible future improvement idea

47. The Control phase is intended to:

A. sustain gains and prevent the problem from returning
B. define the project boundaries
C. generate initial customer requirements
D. rank solution ideas without testing

48. A response plan should state:

A. which employee should be recognized for strong performance
B. how to rewrite the original problem statement after closure
C. what action to take when a measure is out of control
D. why the project team selected DMAIC for the work

49. Control charts are used to:

A. show every task on a project schedule
B. distinguish routine variation from unusual signals
C. replace all inspections
D. identify customer segments

50. Common-cause variation is:

A. variation from a specific unusual event
B. variation caused only by inspectors
C. the natural, routine variation built into a stable process
D. a defect that customers always notice

51. Special-cause variation is:

A. variation traceable to a specific, unusual source
B. the routine noise of a stable process
C. the average value of a process

D. the customer specification range

52. A point outside control limits is generally:

A. proof that every unit is defective
B. evidence the specification has changed
C. a reason to ignore the data
D. a signal to investigate a possible special cause

53. Control limits are based primarily on:

A. the customer requirement alone
B. actual process performance and variation
C. the project budget alone
D. the number of team members

54. Specification limits are established by:

A. customer needs, design, or external requirements
B. the random variation in the process
C. the plotting method used on a chart
D. the number of data points collected

55. A process can be in control but not capable when:

A. it has no variation at all
B. it meets every customer requirement
C. it is stable yet does not meet specifications consistently
D. it has an identified special cause

56. A process is capable when:

A. its average equals zero
B. it has no documented procedures
C. every data point equals the target
D. its stable output fits within specification limits

57. Cp compares:

A. the spread of the process to the specification width
B. the process mean to the target only
C. the number of defects to units only
D. the sample size to the population

58. Cpk considers:

A. only the number of process steps
B. both process spread and how centered the process is
C. only customer survey ratings
D. only the total inspection count

59. A measurement system should be evaluated because:

A. it eliminates the need for process mapping
B. it guarantees a successful improvement
C. it replaces the customer definition of quality
D. unreliable measurement can mislead every later decision

60. Accuracy describes how close a measurement is to:

A. other repeated measurements
B. the center control line
C. the accepted or true value
D. the upper specification limit

61. Precision describes:

A. how close one value is to a target
B. how consistently repeated measurements agree
C. how many defects a unit contains
D. how a process step is sequenced

62. Repeatability concerns variation when:

A. different people measure the same item
B. a process changes over time
C. a customer changes a requirement
D. the same person measures the same item repeatedly

63. Reproducibility concerns variation when:

A. different people measure the same item
B. one person repeats a measurement
C. one supplier ships multiple orders
D. a chart is updated daily

64. An effective operational definition includes:

A. only the preferred improvement idea
B. the name of the project sponsor
C. a clear rule for how to classify or measure the item

D. a list of all possible root causes

65. A nominal scale uses categories that:

A. have names but no inherent order
B. are ranked from low to high
C. have equal numerical intervals
D. include an absolute zero point

66. An ordinal scale uses categories that:

A. have no labels or categories
B. have an order without equal spacing
C. always include a true zero
D. can only be measured in seconds

67. A continuous variable can:

A. only be counted as whole items
B. never be measured numerically
C. take any value within a meaningful range
D. always be a defect category

68. A discrete variable is usually:

A. a measurement that can include decimals
B. a subjective customer opinion only
C. a continuous time measurement
D. a count of separate, whole occurrences

69. Defects per unit is calculated as:

A. total units divided by total defects
B. defective units divided by opportunities
C. opportunities divided by total units
D. total defects divided by total units

70. If 12 defects are found in 300 units, defects per unit equals:

A. 0.25
B. 0.04
C. 12.00
D. 25.00

71. If 18 of 200 inspected units are defective, the defective rate is:

A. 0.9 percent
B. 11 percent
C. 9 percent
D. 90 percent

72. A sample is:

A. a subset selected from a larger population
B. every item produced in a period
C. a chart with control limits
D. a customer requirement document

73. Random sampling helps reduce:

A. the need to define defects
B. the number of process steps
C. the importance of customer needs
D. selection bias in the data collected

74. A project sponsor normally:

A. collects every data point personally
B. performs all statistical calculations
C. removes barriers and provides organizational support
D. owns every process step daily

75. A process owner is the person who:

A. approves every project budget request
B. has ongoing responsibility for process performance
C. writes every customer survey question
D. serves only during the Define phase

76. A Yellow Belt typically contributes by:

A. supporting data collection and local improvement work
B. leading all enterprise strategy
C. certifying process capability independently
D. approving capital expenditures

77. A SMART goal should be:

A. simple, modern, accurate, repeatable, and tested
B. specific, measurable, achievable, relevant, and time-bound
C. statistical, measurable, approved, ranked, and tracked

D. standard, managed, assigned, reviewed, and timed

78. A well-written problem statement should:

A. name the employee who caused the issue
B. include the final selected solution
C. describe the gap without assuming a solution
D. promise a financial result before data exist

79. Project scope defines:

A. the preferred color of the report
B. the final process capability result
C. the complete list of employee opinions
D. what is included and excluded from the work

80. A stakeholder analysis helps the team:

A. understand who is affected and how to engage them
B. replace the project charter and define the project goal
C. calculate defects per opportunity for every inspected unit
D. select control-chart limits from historical process data

81. An affinity diagram is useful for:

A. showing a time sequence of data
B. calculating the median value
C. grouping many ideas into natural themes
D. testing a measurement instrument

82. Brainstorming works best when the team first:

A. generates ideas without immediately judging them
B. selects a solution before discussion
C. asks only the sponsor for ideas
D. eliminates all unusual suggestions

83. A decision point on a process map asks:

A. how many defects the product has
B. which customer is most valuable
C. who should lead the project
D. whether the flow follows one path or another

84. A bottleneck is:

A. a step with the fewest instructions
B. the step that limits overall process flow
C. a point where data are randomly sampled
D. a customer complaint category

85. Takt time represents:

A. the pace needed to meet customer demand
B. the time needed to repair a defect
C. the longest machine cycle time
D. the time spent in a team meeting

86. Cycle time is:

A. the time between customer surveys
B. the time required to complete one unit of work
C. the number of units in inventory
D. the percentage of defective units

87. Lead time is:

A. the hands-on time at one process step
B. the time to collect a sample
C. the time between control-chart points
D. the total elapsed time from request to delivery

88. A queue is most likely to grow when:

A. the process has no measurable variation in its output
B. customers reduce demand for the product or service
C. work arrives faster than the next step can handle it
D. the bottleneck is removed through a verified improvement

89. First-pass yield measures:

A. the proportion completed correctly without rework
B. the total number of defects per unit
C. the time required for a process map
D. the maximum output a machine can produce

90. Rework is harmful because it:

A. always improves process capability
B. eliminates the need for standard work
C. is the same as preventive maintenance

D. consumes resources without adding customer value

91. A kaizen event is:

A. a long-term financial forecasting method
B. a focused, short-term team improvement effort
C. a control-chart rule violation
D. a formal customer complaint system

92. The PDCA cycle stands for:

A. Prepare, Define, Control, Analyze
B. Plan, Document, Correct, Approve
C. Plan, Do, Check, Act
D. Process, Design, Check, Assess

93. Standardization after improvement helps:

A. remove the need to monitor results
B. make the improved method repeatable and sustainable
C. allow each shift to choose a different method
D. avoid updating work instructions

94. When an improvement is adopted, training should:

A. ensure affected people can perform the new standard work
B. be delayed until the project is forgotten
C. focus only on project leaders
D. replace the written procedure entirely

95. A balanced scorecard approach encourages:

A. using only cost as a measure
B. ignoring customer outcomes
C. tracking only individual activity
D. monitoring more than one dimension of performance

96. A leading indicator is a measure that:

A. is collected only after the project closes
B. always equals a financial result
C. can signal future performance before the outcome occurs
D. cannot be influenced by process changes

97. A lagging indicator is a measure that:

A. reports an outcome after performance has occurred
B. predicts tomorrow’s demand exactly
C. replaces all leading indicators
D. must be collected every hour

98. When a metric worsens after a change, the first response should be to:

A. assume the team has failed permanently
B. hide the metric from the process owner
C. make several unrelated changes at once
D. check the data and investigate the change systematically

99. The best evidence that a change worked is:

A. a single positive comment from a manager
B. the team’s confidence in the idea
C. sustained post-change data showing the intended result
D. a shorter project meeting

100. A control chart center line usually represents:

A. the customer’s upper specification limit
B. the process average or expected central value
C. the project team’s target savings
D. the maximum acceptable defect count

Exam 8: Answer Key and Explanations

1. C — The correct response is improve customer value by reducing waste and variation. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

2. B — The correct response is the problem, customers, scope, and project goal. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

3. A — The correct response is assembling a product feature the customer requires. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

4. D — The correct response is showing a high-level process from suppliers to customers. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

5. A — The correct response is critical-to-quality characteristic. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

6. C — The correct response is direct feedback, observations, and complaint data. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

7. B — The correct response is business case, problem statement, goal, and scope. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

8. D — The correct response is a failure to meet a specified requirement. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

9. D — The correct response is has one or more defects. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

10. C — The correct response is how the current process and its measures will be defined. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

11. A — The correct response is make data collection consistent across people and time. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

12. B — The correct response is what data are needed, who collects it, and when. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

13. A — The correct response is describe current performance before improvements. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

14. D — The correct response is number of invoice errors. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

15. B — The correct response is collect data in a structured, repeatable way. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

16. C — The correct response is prioritize the few categories causing most problems. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

17. C — The correct response is the distribution and shape of numerical data. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

18. D — The correct response is over time to reveal patterns or shifts. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

19. B — The correct response is whether two variables appear related. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

20. A — The correct response is middle value after data are ordered. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

21. A — The correct response is the maximum minus the minimum. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

22. D — The correct response is make process steps and decision points visible. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

23. B — The correct response is identifying rework loops, handoffs, and delays. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

24. C — The correct response is includes material and information flow with timing. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

25. B — The correct response is unnecessary movement of materials or products. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

26. D — The correct response is exceeds what is needed for the process to flow. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

27. C — The correct response is unnecessary movement by people or equipment. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

28. A — The correct response is work or people are idle because the next step is unavailable. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

29. A — The correct response is making more, earlier, or faster than needed. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

30. D — The correct response is doing more work or using more precision than required. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

31. C — The correct response is unused employee knowledge and creativity. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

32. B — The correct response is probe beyond symptoms toward an underlying cause. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

33. B — The correct response is possible causes into logical categories. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

34. D — The correct response is the problem or outcome being investigated. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

35. C — The correct response is identifying and validating root causes. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

36. A — The correct response is an underlying factor that, if addressed, prevents recurrence. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

37. A — The correct response is two variables move together without proving cause. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

38. B — The correct response is meaningful groups such as shift, product, or location. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

39. C — The correct response is test a proposed change on a limited scale. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

40. D — The correct response is compare alternatives against agreed criteria. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

41. A — The correct response is developing, testing, and implementing solutions. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

42. D — The correct response is preventing errors or making them immediately obvious. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

43. C — The correct response is documents the best current method for doing the task. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

44. B — The correct response is using simple signals that can be understood quickly. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

45. D — The correct response is signaling when work or materials should be replenished. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

46. B — The correct response is what to monitor, how to monitor it, and response actions. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

47. A — The correct response is sustain gains and prevent the problem from returning. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

48. C — The correct response is what action to take when a measure is out of control. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

49. B — The correct response is distinguish routine variation from unusual signals. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

50. C — The correct response is the natural, routine variation built into a stable process. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

51. A — The correct response is variation traceable to a specific, unusual source. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

52. D — The correct response is a signal to investigate a possible special cause. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

53. B — The correct response is actual process performance and variation. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

54. A — The correct response is customer needs, design, or external requirements. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

55. C — The correct response is it is stable yet does not meet specifications consistently. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

56. D — The correct response is its stable output fits within specification limits. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

57. A — The correct response is the spread of the process to the specification width. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

58. B — The correct response is both process spread and how centered the process is. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

59. D — The correct response is unreliable measurement can mislead every later decision. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

60. C — The correct response is the accepted or true value. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

61. B — The correct response is how consistently repeated measurements agree. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

62. D — The correct response is the same person measures the same item repeatedly. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

63. A — The correct response is different people measure the same item. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

64. C — The correct response is a clear rule for how to classify or measure the item. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

65. A — The correct response is have names but no inherent order. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

66. B — The correct response is have an order without equal spacing. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

67. C — The correct response is take any value within a meaningful range. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

68. D — The correct response is a count of separate, whole occurrences. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

69. D — The correct response is total defects divided by total units. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

70. B — The correct response is 0.04. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

71. C — The correct response is 9 percent. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

72. A — The correct response is a subset selected from a larger population. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

73. D — The correct response is selection bias in the data collected. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

74. C — The correct response is removes barriers and provides organizational support. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

75. B — The correct response is has ongoing responsibility for process performance. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

76. A — The correct response is supporting data collection and local improvement work. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

77. B — The correct response is specific, measurable, achievable, relevant, and time-bound. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

78. C — The correct response is describe the gap without assuming a solution. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

79. D — The correct response is what is included and excluded from the work. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

80. A — The correct response is understand who is affected and how to engage them. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

81. C — The correct response is grouping many ideas into natural themes. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

82. A — The correct response is generates ideas without immediately judging them. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

83. D — The correct response is whether the flow follows one path or another. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

84. B — The correct response is the step that limits overall process flow. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

85. A — The correct response is the pace needed to meet customer demand. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

86. B — The correct response is the time required to complete one unit of work. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

87. D — The correct response is the total elapsed time from request to delivery. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

88. C — The correct response is work arrives faster than the next step can handle it. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

89. A — The correct response is the proportion completed correctly without rework. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

90. D — The correct response is consumes resources without adding customer value. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

91. B — The correct response is a focused, short-term team improvement effort. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

92. C — The correct response is Plan, Do, Check, Act. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

93. B — The correct response is make the improved method repeatable and sustainable. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

94. A — The correct response is ensure affected people can perform the new standard work. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

95. D — The correct response is monitoring more than one dimension of performance. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

96. C — The correct response is can signal future performance before the outcome occurs. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

97. A — The correct response is reports an outcome after performance has occurred. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

98. D — The correct response is check the data and investigate the change systematically. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

99. C — The correct response is sustained post-change data showing the intended result. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.

100. B — The correct response is the process average or expected central value. It best matches the Lean Six Sigma concept identified in the stem. The alternatives refer to different tools, phases, or measures and therefore do not answer the question directly. Applying this distinction supports data collection, root-cause analysis, tested improvements, and process control in daily practice.