

PRACTICE EXAM 15: LEAN SIX SIGMA GREEN BELT SIMULATION (100 QUESTIONS)

This 100-question simulation is designed for Lean Six Sigma Green Belt study. Select the one best answer for each question. It is a practice resource, not an official examination. Topics include DMAIC, Lean flow, measurement systems, variation, capability, root-cause analysis, improvement, and control. Allow four hours for a realistic Green Belt practice session.

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

- A. A project practitioner who applies DMAIC tools
- B. A sponsor who approves capital spending
- C. A master expert who leads every project
- D. An auditor who certifies supplier systems

2. Which statement best describes a Six Sigma Yellow Belt?

- A. A sponsor who approves capital spending
- B. A team member who supports improvement work
- C. A master expert who leads every project
- D. An auditor who certifies supplier systems

3. In a SIPOC diagram, the letter I represents

- A. improvement ideas selected by leaders
- B. inspection points in the workflow
- C. information retained after closure
- D. inputs entering the process

4. A pull system authorizes work based primarily on

- A. the largest batch the machine can run
- B. the annual production forecast
- C. actual downstream demand
- D. the inventory space available upstream

5. Defective refers to

- A. a unit containing one or more defects
- B. a single missed requirement only
- C. the total number of opportunities
- D. a unit sampled for inspection

6. A process map should normally begin with

- A. a completed corrective action report
- B. an agreed trigger and clear end point
- C. a calculated control limit
- D. an approved future-state design

7. In an FMEA, detection estimates

- A. how much the failure will cost
- B. how frequently the cause appears
- C. how long the product will last
- D. how likely current controls will find the failure

8. A metric is most useful when it is

- A. clearly defined and linked to a decision or goal
- B. easy to collect but unrelated to the project
- C. changed whenever results are unfavorable
- D. kept confidential from process owners

9. Defect is best defined as

- A. any difference between two measurements
- B. a product that has passed inspection
- C. failure to meet a specified requirement
- D. a process step that adds value

10. First-pass yield measures

- A. the number of process steps completed
- B. the proportion completed correctly without rework
- C. the amount of inventory in a queue
- D. the difference between target and actual time

11. Continuous data are data that

- A. are limited to whole-number counts
- B. cannot be measured by an instrument
- C. can take any value within a measurement range
- D. must be customer opinions

12. A representative sample should

- A. include only the easiest units to inspect
- B. exclude unusual times and locations
- C. be selected after results are known

D. reflect the conditions of the population being studied

13. Which is a value-added activity from the customer perspective?

- A. assembling the product to required specifications
- B. moving materials between storage locations
- C. waiting for an approval signature
- D. reentering information into another system

14. Project scope helps a team by

- A. proving the root cause is correct
- B. eliminating every stakeholder concern
- C. defining what is included and excluded
- D. selecting the final control chart

15. In an FMEA, severity estimates

- A. how often a failure has occurred
- B. the seriousness of the effect if failure occurs
- C. how likely the failure is detected
- D. the number of operators affected

16. Control limits are calculated from

- A. customer requirements alone
- B. management preference alone
- C. the largest acceptable defect cost
- D. process data and expected variation

17. Lead time usually includes

- A. both processing time and waiting time
- B. only hands-on labor time
- C. only planned equipment downtime
- D. only the final inspection time

18. The 5 Whys technique aims to

- A. choose five projects for a department
- B. collect five observations per sample
- C. move from a symptom toward an underlying cause
- D. rank five suppliers by cost

19. The voice of the customer is best captured by

- A. choosing metrics only leaders prefer
- B. reviewing budgets after project closure
- C. assigning causes before collecting data
- D. listening to needs and translating them into requirements

20. Poka-yoke is designed to

- A. increase the inspection sample size
- B. prevent an error or make it immediately detectable
- C. move work into larger batches
- D. document every management decision

21. A SIPOC is most useful when a team needs to

- A. calculate a standard deviation
- B. rank individual employee performance
- C. define a process boundary at a high level
- D. test a statistical hypothesis

22. The 8 wastes include all of the following except

- A. overproduction
- B. waiting
- C. defects
- D. customer collaboration

23. A visual workplace tool that labels locations and makes abnormalities obvious is

- A. 5S
- B. FMEA
- C. DOE
- D. QFD

24. A capable process is one that

- A. has no common-cause variation
- B. can consistently meet its specification limits
- C. uses only attribute data
- D. does not need a process owner

25. When a team sees a problem, the first useful question is often

- A. who should be blamed immediately
- B. which solution costs the most
- C. how can data collection be skipped

D. what does the process evidence show

26. Correlation by itself does not prove

- A. that one variable causes the other
- B. that the variables can be plotted
- C. that a relationship might exist
- D. that the data have units

27. Measurement system variation can lead to

- A. automatic elimination of common causes
- B. incorrect conclusions about process performance
- C. a guaranteed increase in capability
- D. a complete process map

28. A run chart plots data

- A. by cause category from highest to lowest
- B. by department responsibility
- C. in time order to reveal patterns or shifts
- D. against only specification limits

29. A value stream map differs from a basic process map because it

- A. contains only customer requirements
- B. is used only for service processes
- C. shows material and information flow with timing
- D. cannot show waiting or inventory

30. When a special cause is found, a team should

- A. investigate it before changing the whole system
- B. adjust the process after every data point
- C. recalculate specifications from the latest value
- D. ignore it if the average has not changed

31. Setup reduction supports flow by

- A. increasing the number of approval levels
- B. requiring more material handling
- C. creating additional inspection queues
- D. reducing the cost and delay of smaller batches

32. A nominal group technique combines

- A. random sampling with hypothesis testing
- B. individual idea generation with structured sharing and ranking
- C. process mapping with control limits
- D. inventory counting with demand forecasting

33. Standard work is most valuable because it

- A. documents the current best known method
- B. eliminates the need for training
- C. guarantees a process has zero defects
- D. replaces all improvement experiments

34. A fishbone diagram is primarily used to

- A. select a random sample from a population
- B. organize possible causes of an effect
- C. compare two process averages
- D. create a daily production schedule

35. A check sheet is designed to

- A. calculate the process capability ratio
- B. set a control limit automatically
- C. approve a corrective action
- D. collect data consistently at the point of occurrence

36. A project charter should include

- A. a list of all possible solutions
- B. only the final financial result
- C. a problem statement, goal, scope, and roles
- D. every raw data point collected

37. Kanban is commonly used to

- A. signal replenishment or authorize production
- B. estimate the population mean
- C. calculate defect opportunities
- D. evaluate financial return on investment

38. A process output that matters to the customer is called a

- A. random-cause signal
- B. critical-to-quality requirement
- C. nonvalue-added activity

D. critical-to-quality characteristic

39. A queue forms when

- A. every step has equal capacity
- B. work is completed exactly at takt time
- C. arrival rate exceeds effective service capacity
- D. all defects are corrected immediately

40. A histogram is best used to show

- A. the sequence of process steps
- B. individual movement through a layout
- C. the responsibility for each task
- D. the distribution of numeric data

41. Range is calculated as

- A. sum of all values divided by count
- B. middle value minus mean value
- C. number of defects divided by units
- D. maximum value minus minimum value

42. A prioritization matrix is used to

- A. compare options against agreed criteria
- B. draw the physical layout of a workspace
- C. measure appraisal repeatability
- D. calculate defects per million

43. A spaghetti diagram is used to study

- A. the distribution of measurement error
- B. the trend of monthly defects
- C. movement of people, material, or information
- D. the hierarchy of project sponsors

44. The best evidence that an improvement worked is

- A. a verbal report that people like the change
- B. a before-and-after measure tied to the project goal
- C. a completed brainstorming list
- D. a signed project charter

45. A SMART goal is

- A. specific, measurable, achievable, relevant, and time-bound
- B. simple, managed, accurate, rapid, and tested
- C. standard, measured, approved, repeatable, and timely
- D. scoped, monitored, analyzed, revised, and tracked

46. Operational definition means

- A. a job description for an operator
- B. a policy for approving projects
- C. a precise, consistent rule for classifying or measuring
- D. a list of possible root causes

47. Common-cause variation is

- A. a one-time event outside normal operation
- B. the natural variation built into a stable process
- C. a customer requirement that changed
- D. an operator error that must be blamed

48. Batching can increase lead time because

- A. it automatically reduces setup time to zero
- B. it eliminates handoffs between steps
- C. it guarantees first-pass quality
- D. a unit waits for the rest of its batch

49. In DMAIC, the Define phase mainly clarifies

- A. the problem, customers, and project goal
- B. the final control plan and response plan
- C. the root cause confirmed by testing
- D. the capability index after improvements

50. A data point outside a control limit is

- A. proof that a specification is wrong
- B. automatically a customer defect
- C. a potential special-cause signal requiring investigation
- D. evidence that every data point is invalid

51. A cause should be treated as a verified root cause only after

- A. a manager agrees it sounds plausible
- B. evidence shows changing it changes the problem
- C. it appears first on a fishbone diagram

D. it is mentioned by the most people

52. Respect for people in Lean includes

- A. asking operators to ignore process problems
- B. involving those who do the work in improvements
- C. using metrics only to assign blame
- D. removing all employee discretion

53. A project champion typically

- A. collects every data point personally
- B. writes every work instruction alone
- C. performs all final product inspections
- D. removes barriers and supports the project team

54. A stable process can still be

- A. free of any variation
- B. unmeasurable by a control chart
- C. incapable of meeting specification requirements
- D. guaranteed to improve without action

55. Specification limits are set by

- A. the average of recent process data
- B. the control-chart software package
- C. the person collecting the sample
- D. customer, design, or regulatory requirements

56. Brainstorming works best when participants first

- A. generate ideas without judging them
- B. vote immediately on the first suggestion
- C. restrict ideas to management proposals
- D. require each idea to include a solution

57. A handoff is a point where

- A. a process becomes statistically stable
- B. a specification is converted to a control limit
- C. a defect is automatically removed
- D. work or information moves between people or functions

58. Reproducibility concerns variation between

- A. repeated trials by one appraiser
- B. different units made by one machine
- C. different appraisers using the same method
- D. the upper and lower specification

59. In an FMEA, occurrence estimates

- A. the seriousness of the customer impact
- B. how frequently a failure cause is expected
- C. how easily the failure will be seen
- D. the duration of the project

60. Special-cause variation is indicated by

- A. a signal suggesting something unusual affected the process
- B. small random fluctuations within a stable pattern
- C. a target value set by the customer
- D. a standard operating procedure

61. A process owner is the person who

- A. is accountable for ongoing process performance
- B. records only the team meeting minutes
- C. approves every employee timecard
- D. executes every task in the process

62. Visual management makes performance easier to understand by

- A. hiding data until the monthly review
- B. replacing all team meetings with dashboards
- C. using only financial measures
- D. displaying status and abnormalities where work occurs

63. A Pareto chart helps a team

- A. display every process step in sequence
- B. show the median of a data set
- C. focus on the few categories contributing most to a problem
- D. calculate a confidence interval

64. Rework is harmful because it

- A. always increases customer value
- B. uses resources to correct work already performed
- C. eliminates the need for inspection

D. makes process flow more visible

65. An internal customer is

- A. a person purchasing a product outside the company
- B. a project sponsor from another company
- C. a downstream person or function receiving process output
- D. a regulator inspecting the facility

66. The primary purpose of Lean is to

- A. increase inspection at every operation
- B. raise inventory to prevent shortages
- C. separate work into more departments
- D. maximize customer value while reducing waste

67. The first S in 5S focuses on

- A. sorting needed items from unnecessary items
- B. standardizing every customer requirement
- C. scheduling all preventive maintenance
- D. sustaining a weekly management review

68. The Measure phase should first ensure that

- A. the solution is permanently standardized
- B. the team defines operational measures clearly
- C. all root causes have been eliminated
- D. the project has closed financially

69. A well-written problem statement should avoid

- A. describing the affected process
- B. identifying the measurable gap
- C. stating where the problem occurs
- D. assuming the cause before evidence is gathered

70. Cycle time measures

- A. the elapsed time to complete one unit or task
- B. the time a unit waits in a queue only
- C. the time between project tollgates
- D. the time used to train a new employee

71. Overproduction is best described as

- A. shipping a product after the due date
- B. making more or earlier than the next process needs
- C. repairing an item that failed inspection
- D. moving material farther than necessary

72. Standardization after improvement helps

- A. ensure every process uses the same software
- B. remove the need for process monitoring
- C. make the new method the normal way of working
- D. eliminate all future training

73. A control plan should specify

- A. only the original project budget
- B. what to monitor, how often, and the response to problems
- C. only the names of team members
- D. only a list of potential causes

74. The mode is the

- A. middle ordered observation
- B. sum divided by the number of values
- C. most frequently occurring value
- D. distance from the mean to a limit

75. The 80/20 rule suggests that

- A. every cause contributes equally to an effect
- B. twenty defects always create eighty complaints
- C. eighty percent of work must be inspected
- D. a few causes often account for much of an effect

76. A gemba walk means

- A. observing the actual work where it happens
- B. reviewing only reports in a conference room
- C. calculating a process sigma level
- D. auditing supplier invoices

77. Precision refers to

- A. the closeness of repeated measurements to each other
- B. the closeness of a result to a target value
- C. the difference between upper and lower limits

D. the number of defects in a sample

78. A balanced set of measures may include

- A. only the metric that improved most
- B. quality, delivery, cost, and safety indicators
- C. only financial outcomes from leadership
- D. only the number of team meetings held

79. External customers are important because they

- A. always own the improvement project
- B. set the process control limits directly
- C. define value through needs and requirements
- D. collect all production data

80. A baseline is

- A. the final target after project closure
- B. a list of stakeholders on the project
- C. the assigned control-chart centerline
- D. the documented starting level before improvement

81. Kaizen refers to

- A. a single large capital investment
- B. a statistical test of two averages
- C. ongoing small improvements involving the people doing work
- D. a method for assigning belt roles

82. A bottleneck is the step that

- A. has the newest operating procedure
- B. has the lowest effective capacity
- C. contains the fewest work instructions
- D. has the highest employee satisfaction

83. Hidden factories are

- A. extra activities created to fix errors and manage failures
- B. separate facilities that make replacement parts
- C. secure areas used for confidential projects
- D. teams assigned only to new-product design

84. Discrete data are data that

- A. can take any value on a continuum
- B. are always collected by a survey
- C. must be displayed in a histogram
- D. take countable values such as number of defects

85. Work in process inventory often increases

- A. the accuracy of a measurement system
- B. the number of customers served per hour
- C. the stability of a control chart
- D. lead time and the visibility of flow problems

86. Accuracy refers to how close a measurement is to

- A. the average of all operators
- B. the accepted reference or true value
- C. the nearest specification limit
- D. the most common recorded value

87. A data collection plan should identify

- A. only the desired final answer
- B. only the project budget owner
- C. what is collected, by whom, when, and how
- D. only the customer complaint count

88. Tampering occurs when someone

- A. adjusts a stable process for routine common-cause noise
- B. uses a control plan after a project
- C. checks a suspect measurement device
- D. documents a verified root cause

89. A control chart is used to distinguish

- A. customer needs from process requirements
- B. common-cause variation from special-cause signals
- C. value-added from nonvalue-added work
- D. short-term from long-term finance results

90. A failure mode and effects analysis is used to

- A. show a process timeline
- B. calculate a sample median
- C. anticipate failures and prioritize preventive action

D. collect customer survey responses

91. Repeatability is variation when

- A. different appraisers measure the same item
- B. the process changes between shifts
- C. customers rate the same service
- D. the same appraiser measures the same item repeatedly

92. The median is the

- A. middle value after data are ordered
- B. most frequently occurring value
- C. arithmetic average of all values
- D. difference between largest and smallest values

93. A scatter plot is useful for exploring

- A. a possible relationship between two variables
- B. the sequence of a workflow
- C. the most common defect category
- D. the correct sampling interval

94. An affinity diagram helps a team

- A. calculate an average and standard deviation
- B. track a measure over time
- C. set engineering specifications
- D. group many ideas into meaningful themes

95. A communication plan clarifies

- A. which cause is statistically significant
- B. how to calculate defects per unit
- C. who needs which information and when
- D. what the final solution must cost

96. Benefits of an improvement should be

- A. assumed from the effort invested
- B. measured against the agreed baseline and goal
- C. reported only as anecdotes
- D. calculated before the problem is defined

97. Sampling is used when

- A. collecting every observation is impractical
- B. the process has no customers
- C. a team has already found the root cause
- D. all measurements are continuous

98. A pilot is used to

- A. replace all training during implementation
- B. test a change on a limited scale before full rollout
- C. prove that every root cause is gone
- D. avoid measuring the future-state process

99. A response plan is needed when

- A. the project charter is first written
- B. a team begins brainstorming ideas
- C. a monitored measure signals unacceptable performance
- D. a process map is drafted

100. A stakeholder is anyone who

- A. has a Six Sigma certification
- B. works only in the finance department
- C. approves every change request
- D. can affect or is affected by the project

Practice Exam 15: Answer Key and Explanations

1. A — The correct response is A project practitioner who applies DMAIC tools. It reflects the Green Belt role, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

2. B — The correct response is A team member who supports improvement work. It reflects the Yellow Belt role, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

3. D — The correct response is inputs entering the process. It reflects SIPOC elements, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

4. C — The correct response is actual downstream demand. It reflects pull systems, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

5. A — The correct response is a unit containing one or more defects. It reflects defectives, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

- 6. B** — The correct response is an agreed trigger and clear end point. It reflects process mapping, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 7. D** — The correct response is how likely current controls will find the failure. It reflects FMEA detection, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 8. A** — The correct response is clearly defined and linked to a decision or goal. It reflects effective metrics, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 9. C** — The correct response is failure to meet a specified requirement. It reflects defects, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 10. B** — The correct response is the proportion completed correctly without rework. It reflects first-pass yield, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 11. C** — The correct response is can take any value within a measurement range. It reflects continuous data, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 12. D** — The correct response is reflect the conditions of the population being studied. It reflects representative samples, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 13. A** — The correct response is assembling the product to required specifications. It reflects value-added work, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 14. C** — The correct response is defining what is included and excluded. It reflects project scope, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

- 15. B** — The correct response is the seriousness of the effect if failure occurs. It reflects FMEA severity, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 16. D** — The correct response is process data and expected variation. It reflects control limits, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 17. A** — The correct response is both processing time and waiting time. It reflects lead time, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 18. C** — The correct response is move from a symptom toward an underlying cause. It reflects 5 Whys, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 19. D** — The correct response is listening to needs and translating them into requirements. It reflects voice of the customer, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 20. B** — The correct response is prevent an error or make it immediately detectable. It reflects poka-yoke, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 21. C** — The correct response is define a process boundary at a high level. It reflects a SIPOC map, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 22. D** — The correct response is customer collaboration. It reflects Lean wastes, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 23. A** — The correct response is 5S. It reflects 5S, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action. It guides disciplined daily work.

- 24. B** — The correct response is can consistently meet its specification limits. It reflects process capability, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 25. D** — The correct response is what does the process evidence show. It reflects evidence-based improvement, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 26. A** — The correct response is that one variable causes the other. It reflects correlation, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 27. B** — The correct response is incorrect conclusions about process performance. It reflects measurement systems, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 28. C** — The correct response is in time order to reveal patterns or shifts. It reflects run charts, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 29. C** — The correct response is shows material and information flow with timing. It reflects value stream mapping, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 30. A** — The correct response is investigate it before changing the whole system. It reflects special-cause response, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 31. D** — The correct response is reducing the cost and delay of smaller batches. It reflects setup reduction, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 32. B** — The correct response is individual idea generation with structured sharing and ranking. It reflects nominal group technique, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

33. A — The correct response is documents the current best known method. It reflects standard work, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

34. B — The correct response is organize possible causes of an effect. It reflects cause-and-effect analysis, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

35. D — The correct response is collect data consistently at the point of occurrence. It reflects check sheets, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

36. C — The correct response is a problem statement, goal, scope, and roles. It reflects project charters, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

37. A — The correct response is signal replenishment or authorize production. It reflects Kanban, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

38. B — The correct response is critical-to-quality requirement. It reflects customer requirements, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

39. C — The correct response is arrival rate exceeds effective service capacity. It reflects queues, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

40. D — The correct response is the distribution of numeric data. It reflects histograms, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

41. D — The correct response is maximum value minus minimum value. It reflects range, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

- 42. A** — The correct response is compare options against agreed criteria. It reflects prioritization matrices, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 43. C** — The correct response is movement of people, material, or information. It reflects spaghetti diagrams, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 44. B** — The correct response is a before-and-after measure tied to the project goal. It reflects improvement validation, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 45. A** — The correct response is specific, measurable, achievable, relevant, and time-bound. It reflects SMART goals, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 46. C** — The correct response is a precise, consistent rule for classifying or measuring. It reflects operational definitions, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 47. B** — The correct response is the natural variation built into a stable process. It reflects common causes, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 48. D** — The correct response is a unit waits for the rest of its batch. It reflects batching, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 49. A** — The correct response is the problem, customers, and project goal. It reflects the Define phase, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.
- 50. C** — The correct response is a potential special-cause signal requiring investigation. It reflects control-chart signals, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

51. B — The correct response is evidence shows changing it changes the problem. It reflects root-cause verification, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

52. B — The correct response is involving those who do the work in improvements. It reflects respect for people, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

53. D — The correct response is removes barriers and supports the project team. It reflects the champion role, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

54. C — The correct response is incapable of meeting specification requirements. It reflects stability versus capability, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

55. D — The correct response is customer, design, or regulatory requirements. It reflects specification limits, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

56. A — The correct response is generate ideas without judging them. It reflects brainstorming, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

57. D — The correct response is work or information moves between people or functions. It reflects handoffs, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

58. C — The correct response is different appraisers using the same method. It reflects reproducibility, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

59. B — The correct response is how frequently a failure cause is expected. It reflects FMEA occurrence, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

60. A — The correct response is a signal suggesting something unusual affected the process. It reflects special causes, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

61. A — The correct response is is accountable for ongoing process performance. It reflects process ownership, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

62. D — The correct response is displaying status and abnormalities where work occurs. It reflects visual management, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

63. C — The correct response is focus on the few categories contributing most to a problem. It reflects Pareto analysis, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

64. B — The correct response is uses resources to correct work already performed. It reflects rework, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

65. C — The correct response is a downstream person or function receiving process output. It reflects internal customers, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

66. D — The correct response is maximize customer value while reducing waste. It reflects the purpose of Lean, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

67. A — The correct response is sorting needed items from unnecessary items. It reflects the first 5S step, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

68. B — The correct response is the team defines operational measures clearly. It reflects the Measure phase, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

69. D — The correct response is assuming the cause before evidence is gathered. It reflects problem statements, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

70. A — The correct response is the elapsed time to complete one unit or task. It reflects cycle time, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

71. B — The correct response is making more or earlier than the next process needs. It reflects overproduction, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

72. C — The correct response is make the new method the normal way of working. It reflects standardization, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

73. B — The correct response is what to monitor, how often, and the response to problems. It reflects control plans, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

74. C — The correct response is most frequently occurring value. It reflects the mode, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

75. D — The correct response is a few causes often account for much of an effect. It reflects Pareto thinking, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

76. A — The correct response is observing the actual work where it happens. It reflects gemba walks, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

77. A — The correct response is the closeness of repeated measurements to each other. It reflects precision, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

78. B — The correct response is quality, delivery, cost, and safety indicators. It reflects balanced measures, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

79. C — The correct response is define value through needs and requirements. It reflects external customers, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

80. D — The correct response is the documented starting level before improvement. It reflects baselines, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

81. C — The correct response is ongoing small improvements involving the people doing work. It reflects kaizen, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

82. B — The correct response is has the lowest effective capacity. It reflects bottlenecks, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

83. A — The correct response is extra activities created to fix errors and manage failures. It reflects hidden factories, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

84. D — The correct response is take countable values such as number of defects. It reflects discrete data, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

85. D — The correct response is lead time and the visibility of flow problems. It reflects work in process, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

86. B — The correct response is the accepted reference or true value. It reflects accuracy, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

87. C — The correct response is what is collected, by whom, when, and how. It reflects data collection planning, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

88. A — The correct response is adjusts a stable process for routine common-cause noise. It reflects tampering, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

89. B — The correct response is common-cause variation from special-cause signals. It reflects control charts, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

90. C — The correct response is anticipate failures and prioritize preventive action. It reflects FMEA, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

91. D — The correct response is the same appraiser measures the same item repeatedly. It reflects repeatability, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

92. A — The correct response is middle value after data are ordered. It reflects the median, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

93. A — The correct response is a possible relationship between two variables. It reflects scatter plots, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

94. D — The correct response is group many ideas into meaningful themes. It reflects affinity diagrams, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

95. C — The correct response is who needs which information and when. It reflects communication planning, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

96. B — The correct response is measured against the agreed baseline and goal. It reflects benefit tracking, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

97. A — The correct response is collecting every observation is impractical. It reflects sampling, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

98. B — The correct response is test a change on a limited scale before full rollout. It reflects piloting changes, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

99. C — The correct response is a monitored measure signals unacceptable performance. It reflects response plans, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.

100. D — The correct response is can affect or is affected by the project. It reflects stakeholders, a foundational Lean Six Sigma concept. The other choices name different tools, roles, or measures and do not directly answer the stem. A Green Belt connects terms to practical process improvement, customer value, and evidence-based decisions before recommending consistent action.