

## Lean Six Sigma Black Belt Professional Certification

### Sample Exam V022023

1. Which of the given options best describes the definition of Lean? (Select the best answer)
  - a. A short-term improvement philosophy
  - b. A set of tools to improve processes
  - c. An aid in the improvement cycle
  - d. A set of quality tools
  
2. Select the best definition for variation
  - a. Measurement of materials
  - b. Measurement of process inputs
  - c. Measurement of process outputs
  - d. Dispersion of data from the mean
  
3. What is waste?
  - a. Everything included in the process for which the customer will not pay
  - b. All that is included in the process and the customer is willing to pay for
  - c. Perform on processes
  - d. Perform constant measurements
  
4. What is added value?
  - a. Necessary activity, although it does not generate value
  - b. Activity to standardize processes
  - c. Any activity that is carried out to meet customer requirements
  - d. Generate competitive results
  
5. Select the options that correspond to Lean waste.
  - a. Motion
  - b. Overprocessing
  - c. Integrations
  - d. Transportation
  - e. Procurement

6. When is DMADV used?
  - a. When an improvement of a current process is required
  - b. When it is required to redesign an entire process or design a new one
  - c. When process standardization is required
  - d. When you want to be ISO certified
7. The projects can be classified according to their level of difficulty
  - a. True
  - b. False
8. Select the possible difficulty levels of a project
  - a. Chaotic
  - b. Suitable
  - c. Complex
  - d. Commercial
9. With which tool can I categorize customer-critical features?
  - a. FMEA
  - b. CTQ
  - c. Tree Diagram
  - d. QFD
10. At what stage of the improvement cycle is the decision matrix used?
  - a. Define
  - b. Analyze
  - c. Measure
  - d. Control
11. What types of variables exist?
  - a. Attributes-Features
  - b. Continuous - Discrete
  - c. Value-No value
  - d. Discrete Only

12. What tool would you use to ensure the reliability of your measurement systems?
  - a. CTQ
  - b. Box Plot
  - c. QFD
  - d. MSA
  - e. None of the above
  
13. What tool would you use to evaluate customer requirements vs. the final characteristics of a product?
  - a. House of quality
  - b. Voice of the Customer
  - c. Process Capability Analysis
  - d. SWOT
  
14. Gage R&R is used to measure the bias of measurement systems.
  - a. True
  - b. False
  
15. Statistically determining whether there are differences in outputs between two or more processes is part of the results of:
  - a. Hypothesis test
  - b. ANOVA
  - c. Regression
  - d. A and B are correct
  - e. B and C are correct
  
16. Failure mode and effect analysis is used in the phase of:
  - a. Measure
  - b. Check
  - c. Analyze
  - d. None of the above
  
17. Tool to identify the causes related to a problem:
  - a. Pareto diagram
  - b. Fish Diagram
  - c. Scatter diagram
  - d. Tree Diagram

18. Select the tools used in the Verify Phase
  - a. Control plan
  - b. Graphic C
  - c. Prioritization matrix
  - d. Graphic P
  - e. Scatter Chart
  
19. Helps to build experimental situations
  - a. Pareto diagram
  - b. Distributions
  - c. House of quality
  - d. CTQ
  
20. It is used to predict the behavior of a process according to its variation.
  - a. MSA
  - b. Regression
  - c. Process capability analysis
  - d. Correlation
  
21. They are the specialists in solving problems by identifying their root cause and support the whole team.
  - a. Champion
  - b. Green Belt
  - c. White Belt
  - d. Black Belt
  
22. Manage change at the executive level
  - a. Master Black Belt
  - b. Yellow Belt
  - c. Black Belt
  - d. Green Belt
  
23. When is DMAIC used?
  - a. When an improvement of a current process is required
  - b. When it is required to redesign an entire process or design a new one
  - c. When operators do not have a standardized job.
  - d. When you want to be ISO certified

24. At what stage of the DMADV cycle are processes standardized?
- a. Measure
  - b. Check
  - c. Analyze
  - d. Standardize
25. At what stage of the DMADV cycle are the best solutions reviewed?
- a. Check
  - b. Design
  - c. Measure
  - d. Analyze
26. Select the answers that you consider should be the objectives of a Project Manager
- a. That the project complies with the defined schedule
  - b. Customer satisfaction
  - c. Monitoring the FMEA
  - d. Measuring variations
  - e. All of the above
27. Select the option that represents the correct order of a project cycle.
- a. Initiation, Planning, Selection, Execution, Control, Closure
  - b. Initiation, Planning, Selection, Execution, Closing, Controlling
  - c. Selection, Initiation, Planning, Execution, Monitor & Control, Closure
  - d. Planning, Selection, Execution, Closing, Controlling

## ANSWERS

1. B
2. D
3. A
4. C
5. A, B, D
6. B
7. A
8. A, C
9. B
10. A
11. B
12. D
13. A
14. B
15. D
16. C
17. B
18. A, B, D
19. B
20. C
21. D
22. A
23. A
24. B
25. B
26. A, B
27. C