Lean Six Sigma Green Belt Certification Exam : For Continuous Improvement	
Step 1.	Scroll down the questions & answers you want to improve or replace
Step 2.	Zoom your screen in / out (CTRL +/ -) so you can take screen shot to show whole question and answers
Step 3.	Take Screen Shot / Photo
Step 4.	Send the Screen Shot / photot to Director's Whatsapp Group
Step 5.	Write your own version of question / answers in WORD (your suggestions for replacement
Step 6.	Take Screen Shot or Photo of your own version of question / answers
Step 7.	Send the Screen Shot / photot to Director's Whatsapp Group

1. Which ONE of the following statements BEST describes what Lean Six Sigma is really about?	○	Lean Six Sigma is about manufacturing products with single piece flow
	◉	**Lean Six Sigma is about improving our processes so that we can meet customer expectations with our products and services as close to 100% of the time as possible** **(Score 2)**
	○	Lean Six Sigma is about the application of statistical tools and techniques
	○	Lean Six Sigma is about increasing the COPQ of our processes
		Score Obtained/Total 2/2
2. Who benefits from successful Lean Six Sigma projects?	○	Internal customers
	○	Stakeholders
	○	External customers

	◉ **All of the above** (Score 2)	
	Score Obtained/Total	2/2
3. Lean and Six Sigma are often combined together because _____.	○ They were both invented by the same company.	
	○ W. Edwards Deming approved both of them.	
	◉ **Their methods, tools and techniques complement each other and it makes sense to use them together.** (Score 2)	
	○ They are both part of the Project Management Body of Knowledge	
	Score Obtained/Total	2/2
4. Which one of the following best describes the role of a Yellow Belt on a Lean Six Sigma project?	○ Yellow belts are responsible for project selection and review	
	○ Yellow belts are Lean Six Sigma project leaders	
	◉ **Yellow belts assist Green and Black belts on DMAIC projects** (Score 2)	
	○ Yellow belts remove road blocks and lead the Lean Six Sigma cultural change	
	Score Obtained/Total	2/2
5. Which of the following problems would be considered for suitable for a DMAIC project approach ?	○ A 'quick fix' is needed and we know the solution	
	○ The project must be completed within 1	

		week
	◉	**Defects in the process output are discovered but we don't know the root cause or solution** **(Score 2)**
	○	A problem with the engineering design of a product has been discovered
	☑	Score Obtained/Total 2/2
6. A successful Lean Six Sigma project should reduce	○	Internal Failure Cost
	○	External Failure Cost
	◉	**Internal and External Failure Cost** **(Score 2)**
	○	None of the above
	☑	Score Obtained/Total 2/2
7. In a Project Charter the scope of a project can be defined by any of the following factors EXCEPT	○	Location of where the problem is happening
	○	Customer groups (segments) who experience the problem
	○	Internal departments experiencing the problem
	◉	**Financial revenues of the business** **(Score 2)**
	☑	Score Obtained/Total 2/2
8. There are many reasons why statistics are important to a Green Belt. Which of the following statements is NOT a reason why we use Basic Statistics?	○	To calculate the mean average of sample of data
	○	Define the amount of variation in our

		process	
	○	Produce graphs to assist us in our understanding	
	◉	**Understand Voice of the Customer (VOC)** **(Score 2)**	
		Score Obtained/Total	2/2
9. Which is the most appropriate Hypothesis test to use when comparing the mean averages two sample of continuous data that both have a normal distribution ?	○	Moods median test	
	○	2-sample proportion test	
	○	Throughput test	
	◉	**2-sample t-test** **(Score 2)**	
		Score Obtained/Total	2/2
10. _____ is often used in the define phase of DMAIC, and as a starting point for high level process maps:	◉	**SIPOC** **(Score 2)**	
	○	CPOQ	
	○	CTU	
	○	DPU	
		Score Obtained/Total	2/2
11. The letter 'I' in 'DMAIC' refers to a phase where what happens ?	○	Internal Customers are addressed	
	○	Integration management	
	◉	**The correct Improvements are agreed upon and then Implemented.** **(Score 2)**	
	○	Induction of team members	
		Score Obtained/Total	2/2

12. The best description of Hypothesis Testing is:	◉	**A statistical tool to assist in decision making and to estimate the risk of making a wrong decision** **(Score 2)**
	○	To form a conclusion by expert opinion
	○	To identify special causes within common cause variation
	○	To understand 'value' from the perspective of the customer
	Score Obtained/Total	2/2
13. What does the 'P' stand for in the acronym SIPOC?	◉	**Process** **(Score 2)**
	○	Production
	○	Project
	○	Pareto
	Score Obtained/Total	2/2
14. Which of the following statements best describes The Pareto Principle?	○	Approximately 68% of data falls within 1 standard deviation from the mean
	○	Approximately 20% of causes can be explained by approximately 80% of problems
	○	20% of complaints come from 80% of your customers
	◉	**Approximately 80% of symptoms of a problems can be explained by approximately 20% of the causes of problems** **(Score 2)**

		Score Obtained/Total	2/2
15. Which one of the following tools could be used to help a business understand the VOC (voice of the customer) for a new product?	○	5S	
	○	Poka Yoke	
	◉	**Focus Groups and Surveys** **(Score 2)**	
	○	Value Stream Mapping	
		Score Obtained/Total	2/2
16. A high level Process Map should NOT include _____	○	Start and stop points	
	◉	**Time taken for each activity** **(Score 2)**	
	○	Directional flow	
	○	High level process activities	
		Score Obtained/Total	2/2
17. The following are examples of control charts EXCEPT:	○	p-charts	
	○	c-charts	
	○	Xbar charts	
	◉	**Y charts** **(Score 2)**	
		Score Obtained/Total	2/2
18. A Yellow Belt inspects a sample of 200 units that come off a production line and counts 10 defects. What is the DPU (Defects per Unit) metric for the sample?	◉	**0.05** **(Score 2)**	
	○	20	
	○	0.5	
	○	100	
		Score Obtained/Total	2/2

19. In which type of control chart is each observation or measurement plotted as a separate data point?	○	X Bar R Chart
	○	Moving Range Charts
	○	X Bar S Chart
	◉	**I - chart** **(Score 2)**
		Score Obtained/Total 2/2
20. In which of the following scenarios would you use an X-bar chart?	○	When the process capability is wider that the specification limits.
	○	When using a brainstorming technique with a project team.
	◉	When investigating the shape of the distribution of data.
	○	**When collecting subgroups of data and plotting the mean average value of each subgroup over a period of time.** **(Score 2)**
		Score Obtained/Total 0/2
21. Which bar chart depicts the frequencies of numerical or measurement data?	○	Sample
	◉	**Histogram** **(Score 2)**
	○	Check Sheet
	○	Process Map
		Score Obtained/Total 2/2
22. Cyclical patterns (predictable ups and downs) in production output could result from which one of the following?	◉	**Changes in shifts (day-shift vs night-shift)** **(Score 2)**
	○	Absenteeism by

	workers	
○	Random losses of customers	
○	Production equipment getting older and with lower overall equipment effectiveness (OEE)	
☑	Score Obtained/Total	2/2
23. Which statement best describes Kaizen Event?	◉ **Implementation of a small, low risk, process improvement in less than a week** **(Score 2)**	
	○ A signal used in a Pull system	
	○ The methodology for implementation of a process improvement	
	○ Continuous improvement	
	☑ Score Obtained/Total	2/2
24. Which one of the following 5S techniques is used to help remove unnecessary items from cluttering your workplace?	◉ **Sort** **(Score 2)**	
	○ Sustain	
	○ Segmentation	
	○ Cleaning tools	
	☑ Score Obtained/Total	2/2
25. Which one of the following Lean Six Sigma techniques assists in the organization and cleanliness of the workplace?	○ Poka Yoke	
	○ Kanban	
	◉ **5S** **(Score 2)**	
	○ Process Mapping	
	☑ Score	2/2

		Obtained/Total
26. Poka Yoke devices help us to obtain:	○	Near zero defect conditions
	○	Reduced costs
	○	Higher quality
	◉	**All of the above** **(Score 2)**
		Score Obtained/Total 2/2
27. Lean Six Sigma attempts to reduce which of the following?	○	Waste, VOC, SIPOC
	◉	**Waste, Variation, Stress (Overburdening)** **(Score 2)**
	○	Wear, Vibration, Strain
	○	Waste, Variance and Overpowering
		Score Obtained/Total 2/2
28. A chart used in the measure phase to help identify the 20% of defective inputs?	○	Process Chart
	○	Run Chart
	○	Control Chart
	◉	**Pareto Chart** **(Score 2)**
		Score Obtained/Total 2/2
29. The best way to start an effort to map a process and to understand the flow of value in the process is to do which of these?	◉	**The Gemba Walk** **(Score 2)**
	○	The Grenchi Walk
	○	The Gamboa Walk
	○	The Gemba Work
		Score Obtained/Total 2/2
30. When would you consider using Kaikaku (radical change), rather than Kaizen?	○	When a process

	needs small incremental improvements.
◉	**When a process is broken and needs redesign and re-structuring** **(Score 2)**
○	When the moral of workers is low
○	When there isn't enough Gemba to go around
	Score Obtained/Total 2/2

	Normal distribution **(Score 2)**
○	Universal curve
○	Skewed distribution
○	Bimodal distribution
	Score Obtained/Total 2/2

31. Gaussian distribution or 'The Bell Curve' is an alternative name for

○	How well the input of a process satisfies the customer of the process
◉	**How well the output of a process satisfies the customer of the process** **(Score 2)**
○	How many standard deviations exist between the mean and the USL
○	How many standard deviations exist between LSL and the USL
	Score Obtained/Total 2/2

32. What is the best definition of the 'Capability' of a process?

33. When carrying out a detailed process map, we should ensure that we map:	○	The process as it should be happening
	○	The documented process
	○	The improved process
	◉	**The actual process as it is happening** **(Score 2)**
	☑	Score Obtained/Total 2/2
34. What types of variation does a process have if it is "in control"?	◉	**Process has common cause variation only** **(Score 2)**
	○	Process has assignable causes
	○	Process has assignable and chance causes
	○	Process has assignable and random causes
	☑	Score Obtained/Total 2/2
35. What type of variation is undesirable when trying to control a process?	○	Random cause variation
	◉	**Special cause variation** **(Score 2)**
	○	Chance cause variation
	○	Normal variation
	☑	Score Obtained/Total 2/2
36. In a capability study, a process capability index uses both the process _____ and _____ to determine whether the process is "capable"	○	Accuracy; precision
	◉	**Variability; customer specifications** **(Score 2)**

	○	Variability; reproducibility
	○	Precision; specifications
	Score Obtained/Total	2/2
37. How is the capability index Ppk calculated?	○	The lower of (Process mean - LSL) or (USL - process mean) divided by six times the within subgroup standard deviation
	○	The process tolerance divided by three times the overall standard deviation
	◉	**The lower of (Process mean - LSL) or (USL - process mean) divided by three times the overall standard deviation (Score 2)**
	○	The process tolerance divided by six times the within subgroup standard deviation
	Score Obtained/Total	2/2
38. If a given process is stable and has a Cp= 1.0 and Cpk = 1.0; which of the following improvement approaches is most appropriate?	◉	**Variation reduction (Score 2)**
	○	Centering (move the mean to the centre of the specification)
	○	Centering and variation reduction
	○	Process stability (identify and eliminate special causes)
	Score Obtained/Total	2/2
39. What is the best definition of a 'Failure Mode' when using FMEA analysis?	○	How the customer

	will experience the failure	
◉	**The specific manner or way by which a failure could occur** **(Score 2)**	
○	How easy it will be to detect the failure	
○	The probability of a failure	
	Score Obtained/Total	2/2
○	1 sample t test	
○	HOV	
○	Regression	
◉	**ANOVA** **(Score 2)**	
	Score Obtained/Total	2/2
◉	**Chi-square** **(Score 2)**	
○	Correlation	
○	Logistic regression	
○	Normality	
	Score Obtained/Total	2/2
◉	**The ANOVA method** **(Score 2)**	
○	The range method	
○	The average and range method	
○	The bias and linearity method	
	Score Obtained/Total	2/2

40. Which hypothesis test do we use when comparing more than two samples of normal data?

41. When comparing different categories of defect causes to see if the proportions (percentages) have statistically significant differences, we could use the _____ test

42. Which method is used for quantifying gauge R and R repeatability and reproducibility?

43. What method is used to increase confidence level in the results of a DOE ?	○	Sequencing	
	◉	**Replication** (Score 2)	
	○	Blocking	
	○	Randomization	
		Score Obtained/Total	2/2
44. If the correlation coefficient is between 0.5 to 1, it means there is a	○	Negative correlation	
	○	No correlation	
	◉	**Positive correlation** (Score 2)	
	○	A&B	
		Score Obtained/Total	2/2
45. What is the best description of a hypothesis test?	◉	**A tool for comparing population parameters inferred from samples** (Score 2)	
	○	Dissecting the data	
	○	Help in solving problems	
	○	Breaking up the problem	
		Score Obtained/Total	2/2
46. Which hypothesis test is similar to the 1 sample t-test but is used when the data set is non-normal?	◉	**1- sample (Wilcoxon) signed** (Score 2)	
	○	Kruskal-Wallis	
	○	Friedman	
	○	Mann-Whitney	
		Score	2/2

		Obtained/Total
47. Who is often called the 'Father of quality control'?	◉	**W. Edwards Deming** **(Score 2)**
	○	F. Deming Edwards
	○	Dennis Edwards
	○	W. Frederick Deming
		Score Obtained/Total 2/2
48. A typical linear regression equation would look like	○	OEE = availability x performance x quality
	◉	**Y = 1.5 + 2x** **(Score 2)**
	○	S x 0 x D = RPN
	○	All of the above
		Score Obtained/Total 2/2
49. Which one of the following would NOT be considered a COMMON CAUSE VARIATION in a process? (choose the best answer)	◉	**Serious workplace accidents that cause a shutdown for more than 2 hours** **(Score 2)**
	○	Changes in the moods of customers every day that effect ticket sales
	○	Regular daily changes in average outside temperature that effect ice-cream sales
	○	The number of cars that pass a drive-through fast-food restaurant per hour during the hours 12pm – 1pm each day
		Score Obtained/Total 2/2

50. Which of the following activities is an example of non-value-added?	◉	**Rework** (Score 2)	
	○	Delivery	
	○	Packing	
	○	5S	
		Score Obtained/Total	2/2
51. What is the Japanese word for waste?	○	Mode	
	○	Muri	
	◉	**Muda** (Score 2)	
	○	Mura	
		Score Obtained/Total	2/2
52. Which of these is NOT a Measure of Central Tendency?	◉	**Quartile** (Score 2)	
	○	Mean	
	○	Mode	
	○	Median	
		Score Obtained/Total	2/2
53. What is the middle value in a data set when arranged in numerical order?	○	Variance	
	◉	**Median** (Score 2)	
	○	Mean	
	○	Mode	
		Score Obtained/Total	2/2
54. A Lean Six Sigma Green Belt practitioner constructs a control chart to display a process mean and its outer limits. In such a chart, what does UCL stand for?	○	Upper Control Length	
	◉	**Upper Control Limit** (Score 2)	

	○	Upper Cycle Limit
	○	Upper Cycle Length
	Score Obtained/Total	2/2
55. Which of the following is true about Control Limits and Specification Limits?	○	Control limits are set by the customer
	○	Specification limits are set by the process owner
	○	It is best practice to set Control Limits wider than Specification limits
	◉	**A suitable control chart and the right control limits will help to differentiate between special cause variation and common cause variation.** **(Score 2)**
	Score Obtained/Total	2/2
56. Which one of the following statements most accurately describes the following string of numbers? 1.2, 1.4, 1.4, 1.8	○	**The mean is 1.45 and the SD approximately 0.22** **(Score 2)**
	○	The mean is 1.44 and the SD is 0.685
	○	The mean is 1.1 and the SD is about 0.4
	◉	The mean is 1.45 and the SD is 0.827
	Score Obtained/Total	0/2
57. The p-value for a Moods Median Hypothesis test is 0.02 and the level of significance is 0.05, what decision is made?	○	Use a different test
	○	Fail to reject null hypothesis
	○	Cannot determine
	◉	**Reject null**

	hypothesis (Score 2)	
	Score Obtained/Total	2/2
58. What does SPC stand for?	Standard Process Charting	
	Statistical Process Control (Score 2)	
	Standard Planning for Control	
	System Performance Charting	
	Score Obtained/Total	2/2
59. A process with a process Sigma level of 6 over the long term would be expected to produce which of the following?	Approximately 3.4 defects per 1 Million Products	
	Approximately 3.4 defects per 1 Million Defect Opportunities (Score 2)	
	Approximately 3.4 defects per 1 Million Success Opportunities	
	Approximately 3.4 defects per 1 Million Process Opportunities	
	Score Obtained/Total	2/2
60. In Lean Six Sigma, we generally consider 2 categories of variation in processes. Which of the following are the correct 2 categories?	Significant Variation and Practical variation	
	Special Cause Variation and Common Cause variation (Score 2)	
	Critical Cause Variation and Random Variation	

	○ Significant Cause Variation and Low Variation	
	Score Obtained/Total	2/2

61. Which of the following could NOT be used as a measure of the variation in the output of a process ?	○ Standard Deviation (Score 0)	
	○ Inter-quartile range	
	◉ **Percent of Defectives (Score 2)**	
	○ Variance	
	Score Obtained/Total	2/2

62. A loan application can be rejected if any 1 of 20 fields are incorrectly entered. Therefore there are 20 opportunities to create a defect. There were 20 defects found out of a sample of 100 applications received. What is the estimated value of DPMO (Defects per Million Opportunities for Defects) for this process?	◉ **10,000 (Score 2)**	
	○ 0.01	
	○ 0.2	
	○ 400	
	Score Obtained/Total	2/2

63. What is the minimum level of training recommended to be a leader of a process improvement project using the DMAIC framework ?	○ Black Belt	
	○ Master Black Belt	
	○ Yellow Belt	
	◉ **Green Belt (Score 2)**	
	Score Obtained/Total	2/2

64. Value Stream Mapping is a technique that is considered to be part of the tool-kit from which methodology?	○ Kaizen	
	◉ **Lean (Score 2)**	
	○ Agile	
	○ Six Sigma	

	Score Obtained/Total	2/2
65. Understanding “the voice of the customer” is a technique used to provide customers with _____:	○ Cheaper products and services	
	○ Buy one get one free offers	
	○ Best in class quality	
	◉ **Services and products that meet the customer expectations and needs** **(Score 2)**	
	Score Obtained/Total	2/2
66. A product or service that does not meet the expectations of the customer is called a _____	◉ **A defective product or service** **(Score 2)**	
	○ A quality product or service	
	○ Scrap	
	○ A reworked product or service	
	Score Obtained/Total	2/2
67. Which of these tools attempts to quantify customer satisfaction (or dissatisfaction) based on how well (or badly) a feature of a product or service is executed ?	○ Gantt Chart	
	○ Affinity Diagram	
	◉ **Kano Diagram / Kano model** **(Score 2)**	
	○ Customer Segmentation	
	Score Obtained/Total	2/2
68. It is always important to understand who is the customer of a process. Which of the following is the best definition of ‘The Customer’?	○ Anyone who supplies products or services to the process	
	○ Stakeholders of the process	

	◉	**Anyone who receives a product or service, or could receive a product of service from the process** **(Score 2)**
	○	People or groups who are responsible for the output of the process.
	Score Obtained/Total	2/2
69. What Lean Six Sigma tool could be used to track the behavior of a process output over time?	○	SMED
	◉	**Run Chart or Control Chart** **(Score 2)**
	○	Kanban
	○	Scatter Plot
	Score Obtained/Total	2/2
70. The cost of internal rejection and scrap of products is considered to be a part of which Lean Six Sigma metric?	○	Critical to Delivery (CTD)
	◉	**Cost of Poor Quality (COPQ)** **(Score 2)**
	○	Critical to Quality (CTQ)
	○	Critical to Process (CTP)
	Score Obtained/Total	2/2
71. The Lean Six Sigma concepts called 'Critical to Quality' (CTQ) and Critical to Satisfaction (CTS) focus on what part of a business process?	○	Reducing product variation
	○	Reducing in-process inventories and minimizing product touch times
	◉	**Meeting the specific requirements and needs of the customer** **(Score 2)**

	○	Reducing the standard deviation (sigma) of a process.
	Score Obtained/Total	2/2
72. When a Kanban signal is used correctly in a Lean process it will assist in reducing _____	○	Process Sigma Level
	○	Yield
	◉	**Work in Process (WIP)** **(Score 2)**
	○	Defects
	Score Obtained/Total	2/2
73. The name of an approved written plan of the expected benefits to the business and the expected savings achieved from running a Lean Six Sigma project is called a _____	◉	**Business case** **(Score 2)**
	○	Project charter
	○	Savings document
	○	Project budget
	Score Obtained/Total	2/2
74. What is the name of the technique used where a company measures its performance against that of best-in-class companies?	○	Run Chart
	○	Six Sigma
	○	Control Chart
	◉	**Benchmarking** **(Score 2)**
	Score Obtained/Total	2/2
75. What basic quality tools would be most applicable for a work team to use when there is a need to follow procedures and work instructions more closely?	○	Fishbone Diagrams and control charts
	○	Data sheets and histograms
	○	Pareto Charts and affinity diagrams
	◉	**Standard operating instructions and**

		visual management (Score 2)
	Score Obtained/Total	2/2
76. One of the purposes of using a fishbone diagram is to	○	Define the problem in sequential order
	○	Show the relationship between inputs
	◉	**Identify the potential root causes of a problem** (Score 2)
	○	Separate a problem into smaller components
	Score Obtained/Total	2/2
77. Which of the following control charts would be best to use for a process in which measurement data on a product is difficult or expensive to obtain?	○	R-charts (range within subgroups)
	◉	**I-charts (Individuals)** (Score 2)
	○	Xbar-S charts
	○	Xbar-charts (subgroups)
	Score Obtained/Total	2/2
78. Full Factorial and Fractional Factorial are both _____	◉	**DOE designs** (Score 2)
	○	OFAT designs
	○	Sigma designs
	○	Print designs
	Score Obtained/Total	2/2
79. Which of the following is the best mathematical representation for a 2-level full factorial designed experiment containing 4 factors?	○	2 x 4
	○	K^2

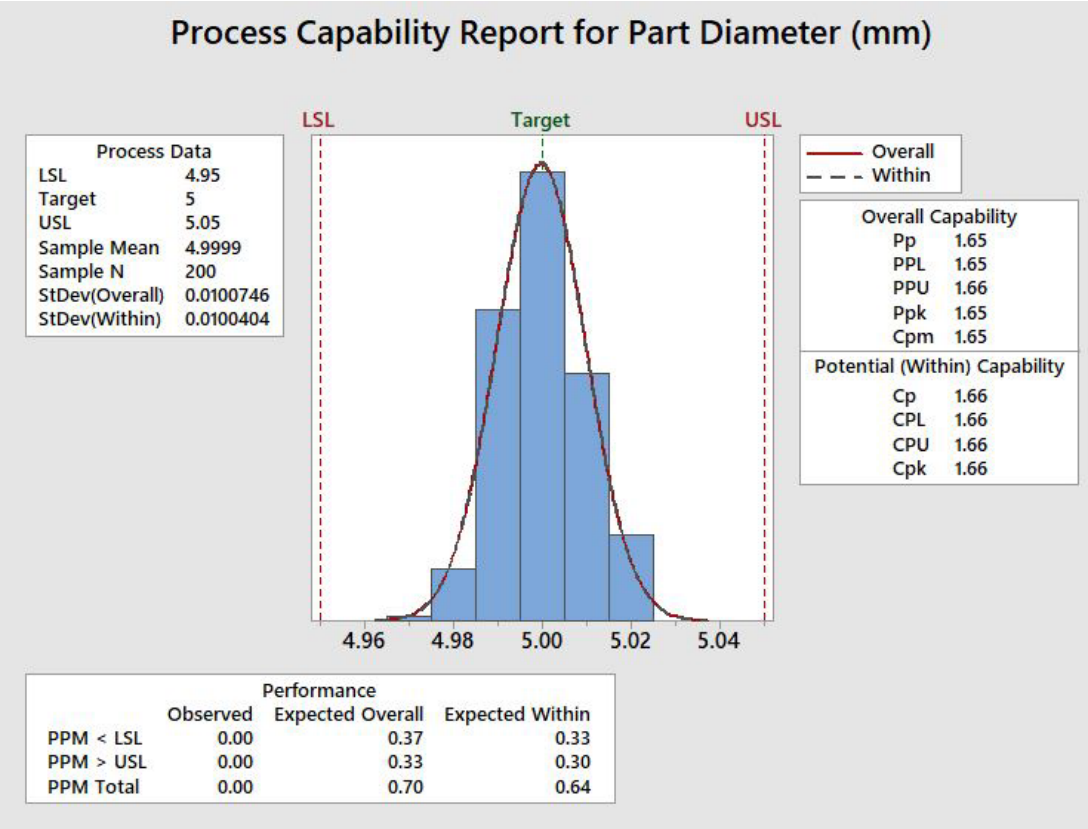
	○ 3^k	
	◉ **2^4** **(Score 2)**	
	Score Obtained/Total	2/2
80. What is an experimental factor?	○ A dependent variable	
	◉ **An input variable for a designed experiment** **(Score 2)**	
	○ A metric of a process	
	○ A standard deviation	
	Score Obtained/Total	2/2
81. A_____ equation describes the relationship between a Response Variable (Y) and a Predictor Variable (X)?	○ Linear	
	○ Correlation	
	◉ **Regression** **(Score 2)**	
	○ Non-Linear	
	Score Obtained/Total	2/2
82. Which of the following statements is true about long term goals for improvement compared to short term goals?	◉ **It is important to set both short term goals and long term goals when making process improvements.** **(Score 2)**	
	○ Both long term and short term goals are the same.	
	○ It is more important to meet your short term goals than long term goals.	
	○ Senior management should focus more on meeting short	

		term goals than long term goals.
	Score Obtained/Total	2/2
83. Which statement is most true about the 'alpha Level' of risk and the 'P-value' in a Hypothesis Test ?	○	We can be sure we have made the correct decision when the p-value is lower than the alpha level.
	○	If the p-value is high compared to the alpha level it indicates a low risk in making a decision to reject the Null Hypothesis.
	◉	**The alpha level of risk is set as a business decision and the p-value is calculated based on the measurement and analysis of sample data and the form of the hypothesis.** **(Score 2)**
	○	If the alpha level of risk goes up, so does the p-value.
	Score Obtained/Total	2/2
84. Which item should NOT be identified in the Define Phase?	○	Stakeholders
	◉	**Root causes** **(Score 2)**
	○	The Problem Statement
	○	Business Case
	Score Obtained/Total	2/2
85. Which of the following distributions is characterized by the Empirical Rule (68 / 95 / 99.7 rule)?	○	Chi-square
	◉	**Normal** **(Score 2)**
	○	Student's test

	○ F statistic	
	Score Obtained/Total	2/2
86. In a brainstorming session, an effective facilitator should never:	○ Encourage the participation of all members	
	◉ **Dismiss ideas in the early stages** **(Score 2)**	
	○ Dismiss discouraging remarks	
	○ Encourage adherence to a structure	
	Score Obtained/Total	2/2
87. How is takt time calculated?	◉ **Available time for production divided by number of units demanded by the customer** **(Score 2)**	
	○ Number of units demand by the customer divided by the amount of time available for production	
	○ Cycle time of a process strep divided by number of units demand by the customer	
	○ Total planned processing time minus time for unexpected stoppages.	
	Score Obtained/Total	2/2
88. How many experimental runs would be required in a full factorial design if there are two (2) levels and six (6) factors?	○ 32	
	○ 12	
	◉ **64** **(Score 2)**	

	○ 6	
	Score Obtained/Total	2/2
89. Which measure of a statistical distribution relates to how much it is equally balanced on each side of the mode?	◉ **Skewness** **(Score 2)**	
	○ Standard deviation	
	○ Kurtosis	
	○ Central tendency	
	Score Obtained/Total	2/2
90. All of the following are produced as outputs of a valid regression analysis EXCEPT:	◉ **A pareto chart of main effects** **(Score 2)**	
	○ R-Squared value (Coefficient of Determination)	
	○ A regression equation	
	○ p-values	
	Score Obtained/Total	2/2
91. Multiple linear regression (MLR) analysis is used in which of the following situations ?	○ Analysis of relationships between one dependent and one independent variable.	
	○ We want to produce a graph with one X and one Y axis	
	○ Analysis of a relationship between one predictor variable and one response variable.	
	◉ **Analysis of a linear relationship between one Y variable and more than one X**	

	variable. (Score 2)	
	Score Obtained/Total	2/2
92. What is the symbol used for the Null Hypothesis ?	**Ho (or H0)** (Score 2)	
	Ha (or HA)	
	Hy	
	Nu	
	Score Obtained/Total	2/2
93. Root Cause Analysis (RCA) is an important part of which phases of DMAIC ?	Define and Measure	
	Improve and Control	
	Measure and Analyze (Score 2)	
	Analyze and Improve	
	Score Obtained/Total	2/2
94. Which statement is correct about the Capability Analysis shown in Figure 1 (below)?	There were 100 parts used in this capability study	
	The Standard Deviation for part diameter is 0.00100746	
	This distribution is Skewed.	
	The upper specification limit is 5.05 mm (Score 2)	
	Score Obtained/Total	2/2
Figure 1 :	**From this study we can predict that this process will produce less than 1 part per million that is outside of**	



95. Which statement is correct about the Capability Analysis shown in Figure 1 (above)?

- **the specification limits** **(Score 2)**
- The process has a problem with centering.
- C. The parts have a mean average diameter between 4 mm and 4.9 mm
- D. The process needs significant improvements to be in control

Score Obtained/Total 2/2

96. Finish this sentence: As part of Lean Six Sigma improvement in processes we aim to reduce the "Batch and Queue" method of production and move towards a _____ method of production

- Single Team Flow
- **Single Piece Flow** **(Score 2)**
- Fluid Flow
- SPC

Score Obtained/Total 2/2

97. Which element of waste best describes the unnecessary movement of materials and / or finished goods?

- Motion
- Inventory
- **Transport / Conveyance** **(Score 2)**
- Over processing

Score Obtained/Total 2/2

98. A technique used to dramatically reduce the time to change one tool set-up to another is called _____

- 5-Whys
- **Rapid Change Over (SMED)** **(Score 2)**
-

	Regression Analysis	
○	Hypothesis Testing	
Score Obtained/Total		2/2

	○	Over production
	○	Over processing
99. Which of the 7 wastes identified by Taiichi Ohno describes the waste of a downstream worker who cannot continue the next step of a process until a large batch has finished processing in the upstream operation	◉	**Waiting** (Score 2)
	○	Motion
	Score Obtained/Total	2/2

	○	Catagorical Data
	○	Attribute Data
100. What type of data are you using when you record the number of defective items found in a production run ?	◉	**Discrete Data** (Score 2)
	○	Continuous Data
	Score Obtained/Total	2/2