**Sample Test**

* Real test will have Multiple Choice (Question 1-23, 0.5 points each)
* Short Analytical Problems (Question 24-26, 2.5-3 points each)

**Questions are representative of the type of multiple choice questions you can expect. This is not a comprehensive list of questions nor do they cover every part of the course covered in the final examination.**

1.

2.

In its most recent phase as an original brand manufacturer, one of the main

challenge faced by Galanz is  
a. Lack of qualified low-cost workers for its manufacturing plants  
b. Lack of creative designers who know the foreign market  
c. Low quality product that does not meet international safety standards **d. Lack of brand recognition in international markets**

In the Ritz-Carlton case, employees entered data into the DQIS system after the problem was resolved. Which of the following is a reason to doubt the quality of the data entered.

1. Employees are not trained to know the importance of data collection
2. The gathered data is often not entered into the DQIS system by Information

systems staff

1. **Employees sometimes fail to file a DQRP because they get too busy after**

**resolving the complaint**.

1. Employees enter complaint data at the end of the month and often forget

complaint incidents that may have happened earlier in the month.

The objective of the “Define” phase of a Six Sigma DMAIC process improvement project is to identify...

1. the quality management policy and weights for different organizational

priorities.

1. **the project objectives, core business process involved, and team members who will work on the project.**
2. the statistics approach to use and appropriate levels of significance (alpha).
3. the takt time for value stream mapping

Over the last year, 1,054 injections were administered at a clinic. Quality is measured by the proper amount of dosage as well as the correct drug. In two instances, the incorrect amount was given, and in one case, the wrong drug was given. The defects per million opportunities (DPMO) level is:

1,581

**1,423**

1,898

3.

4.

a.

**b.**

c.

d. 2,846  
5. The “5 Why” technique is useful in identifying...

a. strategic priorities for process improvement initiatives. b. out of control points.  
c. a suitable control plan for DMAIC.  
**d. the possible root cause of a problem.**

1. Which of the following statements about process capability analysis is accurate?
   1. **Cpk includes information about the process mean.**
   2. Cp is always twice the Cpk.
   3. Given a capable process, Cpk is always equal to Cp.
   4. None of the above.
2. Why did Galanz choose to design and produce its own component parts (magnetrons) for its microwave ovens, becoming an original design manufacturer (ODM)?
   1. There were huge tax breaks offered to companies willing to manufacturer and sell products locally in China
   2. Galanz could afford to manufacture its own components because competition was low
   3. The cost of manufacturing magnetrons was less in China than in the U.S.
   4. **Galanz was unable to purchase enough magnetrons to keep up with growing**

**demand for its microwaves**

1. The observed throughput rate for a bank teller is 40 checks per hour. The clerk at this teller can process 50 checks per hour. The utilization of the clerk is

a. 125%

**b. 80%**

c. 100%

d. Not enough information available

1. A hot dog stand serves 20 customers per hour and each customer spends on average 6

minutes at the hotdog stand, then the average number of customers waiting at the hotdog stand will be

a. 1

**b. 2**

c. 3  
d. Inadequate information

10. The average daily demand for a part is Normally distributed with mean 20 and standard deviation of 4. The lead time to receive the part from the time it is ordered is 8 days. The appropriate re-order point for this part if we want a 95% service level is

**a. 179**

b. c. d.

11. A buy a. **b.**

c. d.

180 200 210

decision is preferred over a make decision if  
Production assets are unique to the part being considered  
**Only codified knowledge is being shared with the supplier and property rights are well enforced**Technology must be shared with the supplier and Intellectual property rights are weakly enforced  
None of the above

12. A manufacturer of 50-inch LCD television sets would like to monitor the number of defective pixels in each screen produced. Each screen has 8 million pixels and a defective pixel is a pixel which does not change color. What is the appropriate chart to use in this situation?

a. X-bar chart b. p-chart  
**c. c-chart**d. R-chart

13. The takt time for producing machined cast-iron components at a workshop is 9 minutes. The workshop works one 8-hour shift every day for 5 days/week. However, employees get a 30-minute lunch break during which no production occurs (effectively reducing the work day to 7.5 hours). The demand for the component per week must be

a. 1000 b. 267 **c. 250** d. 500