**The Exam is open book & notes, but you are ON YOUR HONOR to complete this Exam with no collaboration or collusion with any other student or person.**

The exam IS NOT multiple choice. You can expect questions that ask for critical thinking and test problem solving skills. Short answer, graphing, diagram construction, what if analysis, and explanation thereafter should all be expected. Especially review the homework problems.

Please read over the “Writing Guidelines” on the website regarding the final product to be delivered for the Exam. **Read and follow the instructions attached to the exam!!**

Items to help you study for the exam:

1. What is the difference between the ideas & people behind the old school operations management & new school operations management?

2. How does service quality differ from product quality? Why is service quality at times more difficult than product quality?

3. Study the seven QC tools and be able to apply them to a set of data. Specifically, be able to draw a scatter plot and a Pareto diagram. See the notes and lecture for the Quality & SQC Video Lecture & the associated power point slide.

4. Completely understand how to construct x-bar and R charts. Take a look at the exercises provided as practice (e.g., Homework #1). Hint - Do not memorize formulas and such, learn the process and think about questions such as:

(1) Why are both x-bar and R charts used? Be able to identify out-of-control points.

(2) Why should products be uniform?

(3) Can SPC be applied to the service industry? Give some examples.

5. Understand break-even and cross-over analysis. Be able to construct a break-even chart and/or cross-over chart and comment on its implications. Take a look at Homework #2.

6. Understand what block diagramming and line balancing is. Hint: Do not memorize formulas learn the process. Practice problems from the text such the solved problems in text on block diagramming and line balancing. Also see the example problems worked in the Facility Layout material/videos and Homework #3.

7. Be able to construct a block diagram and be able to balance a product layout/assembly line. Where and why would a manager use block diagramming instead of line balancing?

8. Understand aggregate production planning (APP). Be able to construct Level, Chase, & Hybrid APP’s and comment on the implications of each plan. Take a look at Homework #4.

**Remember you must explain all answers as fully as possible.** You may use graphs, charts, tables, etc. to aid in your explanation. You are telling a story in the attempt to win a contract with a client. So, justify your answers to the best of your ability. **Read the instructions attached to the exam! If you do not follow the instructions, you most likely will receive a failing grade!**

**The Exam is open book & notes, but you are ON YOUR HONOR to complete this Exam with no collaboration or collusion with any other student or person.**