

OPS 370
Exam #1 Format

There are two parts to Exam #1.

- **The first part (20 questions) will be closed books and notes and will be on the general concepts of Operations Management. Key would be to answer the ‘summary’ slide at the end of each learning modules**

There are a combination of multiple choice questions and short (1 sentence answers)

- **Part B – will be 10 questions involving calculations. You will be permitted to use the internet, Excel to help you solve the answers.**

Exam #1 Covers:

- Module 1 – Introduction
- Module 2 – Operations Strategy
- Module 3 – Design of Products/Services
- Module 4 – Forecasting

Sample Multiple Choice Questions

1. The primary role of operations management is _____?
 - A. Transportation
 - B. Strategic planning
 - C. Transformation
 - D. None of these
2. Which process would tend to be the most flexible?
 - A. Project
 - B. Batch
 - C. Line
 - D. Continuous
 - E. None of the above are flexible processes
3. When competing on cost, which of the following is not typical?
 - A. High volume products
 - B. Many customization options
 - C. Use of lower skill labor
 - D. All of the above are typical of competing on cost
4. A product has two components. The reliability probabilities of these components are 0.8 and 0.7, respectively. What is the probability that this product fails?
 - A. 1.5
 - B. 0.56
 - C. 0.44

- D. None of the above
- E. Not enough information given to answer

5. If demand for a product was:

April: 300
May: 200
June: 260

What is the 2-period moving average for July?

- A. 250
- B. 460
- C. 230
- D. None of the above

6. Starbucks allowing the customer to assist in the design of their beverage is considered an example of?

- A. Product tailoring
- B. Blue ocean strategy
- C. Mass customization
- D. None of these

7. Which of the following is NOT equivalent to the naïve forecasting method?

- A. A moving average with $n = 1$
- B. A weighted moving average with a $W_1 = 1$
- C. Exponential smoothing with $a = 0.5$
- D. All of the above are equivalent to the naïve method

Sample Problems

Problem #1

Bryant Industries uses forecasting to estimate the number of orders that will be placed by their customers. The table below gives the sales figures for the last four months.

Month	Sales
1	924
2	919
3	954
4	933
5	1001

- a) Develop a three-month moving average forecast using this data. Your forecast should begin as early as possible and continue to include Month 6.

Problem #2

For the system shown below, determine the probability of failure of the system. The probabilities shown in the boxes below are the probabilities of success (not failing) over the life of the product. Assume that B is a backup for A and that D is a backup for E.

