



KIBABII UNIVERSITY COLLEGE (KIBUCO)

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2014 /2015 ACADEMIC YEAR**

THIRD YEAR FIRST SEMESTER EXAMINATIONS

MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF COMMERCE

COURSE CODE: BCO 313

COURSE TITLE: ADVANCED OPERATIONS MANAGEMENT

DATE: 16TH JANUARY 2015

TIME: 3.00-5.00 P.M

INSTRUCTIONS TO CANDIDATES:

Answer Question ONE and any other Two Questions

TIME: 2 Hours

SECTION A (25 MARKS) COMPULSORY

1. Sheena had worked for the same Fortune 500 Company for most 15 years. Although the company had gone through some tough times, things were starting to turn around. Customer orders were up, and quality and productivity had improved dramatically from what they had been only a few years earlier due company wide quality improvement program, so, it comes as a real shock to Sheena and about 400 of her co-workers when they were suddenly terminated following the new CEO's decision to downsize the company.

After recovering from the initial shock, Sheena tried to find employment elsewhere. Despite her efforts, after eight months of searching she was no closer to finding a job than the day she started. Her funds were being depleted and she was getting more discouraged. There was one bright spot, though: she was able to bring in a little money by mowing lawns for her neighbors. She got involved quite by chance when she heard one neighbor remark that now that his children were on their own, nobody was around to cut the grass. Almost jokingly, Sheena asked him how much he'd be willing to pay. Soon Sheena was mowing the lawns of five neighbors. Other neighbors wanted her to work on their lawns, but she didn't feel that she could spare any more time from her job search.

However, as the rejection letters began to pile up, Sheena knew she had to make an important decision in her life. On a rainy Tuesday morning, she decided to go into business for herself taking care of neighbourhood lawns. She was relieved to give up the stress of job hunting, and she was excited about the prospects of being her own boss. But she was also fearful of being completely on her own. Nevertheless, Sheena was determined to make a go of it.

At first, business was a little slow, but once people realized Sheena was available, many asked her to take care of their lawns. Some people were simply glad to turn-the work over to her; others switched from professional lawn care services. By the end of her first year in business, Sheena knew she could earn a living this way. She also performed other services such as fertilizing lawns, weeding gardens, and trimming shrubbery. Business became so good that Sheena hired two part-time workers to assist her and, even then, she believed she could expand.

1 (a) Sheena is the operations manager of her business. Among her responsibilities are forecasting, inventory management, scheduling, quality assurance and maintenance.

- (i) What is forecasting? (2 marks)
- (ii) What inventory items does Sheena probably have? (3 marks)
- (iii) Name one inventory decision she has to make periodically (2 marks)
- (iv) What things might occur to disrupt schedules and cause Sheena to reschedule? (4 marks)

(b) Sheena is probably offering service operations to the neighbours. Distinguish between manufacturing operations and service operations. (10 marks)

(c) Mention any four reasons why Sheena should keep inventory (4 marks)

(d) State five advantages of having a work structure (5 marks)

SECTION B: Choose any 2 questions (each question carries 15 marks)

2. a) What is aggregate planning (4 marks)
- b) Explain the process of aggregate planning (10 marks)
- c) Explain two levels of production planning (6 marks)
3. a) Explain three types of inventories (6 marks)
- b) What is meant by the Economic order Quantity (EOQ) models used in inventory control? (5 marks)
- c) State five advantages of inventory control. (5 marks)
- d) Highlight four assumptions of EOQ model (4 marks)
4. a) Using a well labeled schematic model describe 8 functions of production management (16 marks)
- b) State four objectives of production management (4 marks)
5. a) Discuss four importance of facility location in production and operations management? (8 marks)
- b) Explain six general factors that influence plant location (12 marks)
6. a) Define the term “mathematical modeling.” (2 marks)
- b) Explain briefly 3 types of models in production and operations management (12 marks)
- c) State 3 benefits of modeling (6 marks)