UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF MANAGEMENT AND FINANCE

Bachelor of Business Administration (Level 1 - Semester 1V) Examination - January 2017

MKT 1301 – Operations Management

Three (03) Hours

Answer any FIVE (05) Questions only

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1. Operations management is the business function responsible for managing the process of creation of goods and services. Discuss the key elements of an operations systems with examples.

   (Total: 20 marks)

2. Process selection and facility layout are two major decisions of operations management.

   i.   Using product – process matrix, explain four process types with examples.

   (10 marks)

   ii. What is facility layout? Explain two types of facility layouts with an illustration for each

   (10 marks)

   (Total: 20 Marks)

3. i. Discuss the significance of demand forecasting for organizations from an operations management perspective.

   (10 Marks)

   ii. Demand of a product for the last 4 months is given below

Period	September	October	November	December
Demand (units)	200	250	200	220

   Find the forecast for the month of January using,

   a) A weighted average with 0.50 for December, 0.30 for November, and 0.10 for October.

   b) Simple three- month-moving average.

   c) Exponential smoothing with a smoothing factor equal to $\alpha = 0.4$, assuming December forecast is 240 units.

   (10 marks)

   (Total: 20 marks)

4. Inventory management typically refers to the act of managing the material resources of an organization and it has several functions.

   i. Explain four functions of inventory with examples.

   (06 marks)

   ii. Explain the terms independent and dependent demand in the context of operations management.

   (06 marks)

   iii. A building materials supplier obtains its bagged cement from a single supplier. Demand is reasonably constant throughout the year, and last year the company sold 12,000 bags of this product. It estimates the costs of placing an order at around Rs. 1,500 each time an order is placed, and calculates that the annual cost of holding inventory is 10 per cent of purchase cost. The company purchases the cement at Rs. 1000 per bags.

   a. How much should the company order at a time?

   (05 marks)

   b. Company operates 300 days per year. Lead time is 10 days. Calculate the re-order point.

   (03 marks)

   (Total: 20 marks)

5. "Quality is a key concern of almost all organizations."

   i. Briefly define the term *quality*.

   (03 Marks)

   ii. Discuss the four dimensions of service quality and four dimensions of product quality.

   (09 Marks)

   iii. There are several costs associated with quality. Identify and explain such costs of quality.

   (08 Marks)

   (Total: 20 Marks)

6. Write short notes on any **FOUR** of the following.
   i. Deming wheel
   ii. Ergonomics
   iii. Method analysis
   iv. Robust Design
   v. Value engineering

   (Total: 4X5 = 20 Marks)