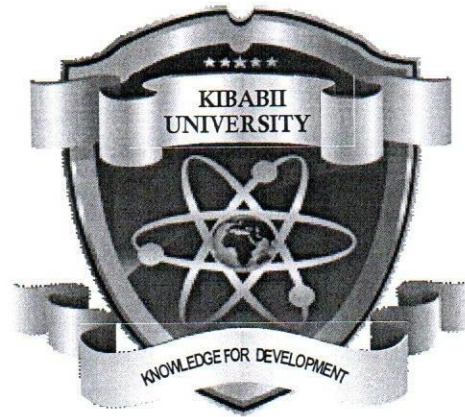


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# KIBABII UNIVERSITY



## UNIVERSITY EXAMINATIONS

**2019/2020 ACADEMIC YEAR  
FOURTH YEAR FIRST SEMESTER  
SPECIAL/SUPPLEMENTARY EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF COMMERCE**

**COURSE CODE: BCP 451E**

**COURSE TITLE: OPERATIONS MANAGEMENT IN SUPPLY CHAIN**

**DATE: 11/02/2021**

**TIME: 2.00PM-4.00PM**

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### INSTRUCTION TO CANDIDATES

- 1) The paper contains **FIVE** questions
- 2) Attempt **THREE** questions
- 3) Question **ONE** is Compulsory

**TIME: 2 Hours**

KIBU observes **ZERO** tolerance to examination cheating

## Question One

### Case study

Different Responses of Nokia and Ericsson on a Fire at Their Supplier for semiconductors - Philips Inc in Albuquerque, NM

#### Nokia's response:

They Changed the product design to source components from alternate suppliers. For parts that could not be sourced from elsewhere, they worked with Philips to source it from their plants in China and Netherlands and all this was done in about five days

#### Ericsson's experience was quite different

It took 4 weeks for the news to reach upper management and realized five weeks after the fire regarding the severity of the situation, by that time, the alternative supply of chips was already taken by Nokia.

The devastating impact on Ericsson was that, \$400M in potential sales was lost, although part of the loss was covered by insurance, it led to component shortages, Wrong product mix and marketing problems. This caused \$1.68B loss to Ericsson Cell Phone Division in 2000 and forced the company to exit the cell phone market.

- a) Discuss some of the supply chain management key issues that Erricsson should have addressed. (6 marks)
- b) In any operations setup particular processes are envisaged discuss the different types of processes in operations that was in play at Nokia. (6 marks)
- c) What are the Job Scheduling issues that may have been affected by the fire on the two companies. (6 marks)
- d) Since it took Erricsson top management four days to get news of the fire, do you think they held adequate inventory of the semiconductors? What are the merits and demerits of holding too much inventory. (6 marks)
- e) If it could have necessitated designing a new product for Ericsson to counter Nokia's Dominance, what are the design stages that they would have been forced to go through. (6 marks)

## Question Two

- (a) Explain with an appropriate example, how a materials requirement planning (MRP) system works. (10 marks)
- (b) Discuss the benefits and challenges associated with the implementation of an MRP system. (10 marks)

**Question Three**

- a) How can just-in-time and vendor-managed inventories add value to products for customers?

(11 Marks)

- b) Write explanatory notes on the following techniques of inventory control:

- (i) Two bin system [3 marks]  
(ii) ABC analysis [3 marks]  
(iii) Kanban system [3 marks]

**(20 marks)**

**Question Four**

- a) Distinguish between the following as used in operations management:

- (i) Capacity Planning and Capacity Cushion  
(ii) Postponement Supply Chain and Pull System Supply Chain  
(iii) Value Chains and Supply Chains  
(iv) Efficient Supply Chains and Responsive Supply Chains  
(v) Order Winners and Order qualifiers

10 marks)

- b) Briefly discuss each of these terms related to the historical evolution of operations management:

- a. Industrial Revolution  
b. Scientific management  
c. Interchangeable parts  
d. Division of labor  
e. Quality Revolution

(10 marks)

**(20 marks)**

**Question Five**

Discuss the role of forecasting in a company as seen from a perspective of assisting operations.

Using examples state the forecasting methods that are used and how they are used in a company.

(20 marks)