

**BOTSWANA
OPEN UNIVERSITY**
In collaboration with
THE COMMONWEALTH OF LEARNING

Commonwealth Executive Masters in Business Administration
Commonwealth Executive Masters in Public Administration

OPERATIONS MANAGEMENT
OM311

Sessional Examination

Marks: 100

Time allowed: 3 hours

Instructions

1. This paper comprises of Part A and Part B. Answer **ALL** questions in Part A and any **THREE** (3) questions in Part B.
2. Answer questions according to instructions given in each section
3. Write answers in the answer booklet provided
4. Answer **ALL** questions, in grammatical **English**.

Part A

(40 marks)

Answer all questions

Toyota's JIT Revolution

Just-In-Time Production System

Developed by the Japanese, the JIT production system was one of the most significant production management approaches of the post-World War II era. The system comprised a set of activities aimed at increasing production volume through the optimum use of inventories of raw materials, work-in-process, and finished goods. In a JIT production system, a workstation gets a part just in time, completes its work and the part is moved through the system quickly.

JIT was based on the principle of producing only what is needed and nothing more than needed. The Japanese believed that anything produced over the quantity required was a waste.

JIT in Toyota

In the early 1930s, the technology used by American automobile companies was superior to that used by Japanese companies. Kiichiro therefore decided to learn new automobile production techniques from American manufacturers. He soon realized that to catch up with the Americans, he had to master basic production techniques. He then reorganized the production system in Toyota in a unique way. This reorganization eventually led to the development of JIT concept.

Future of JIT

Although many automobile companies around the world adopted JIT, the system was far from perfect and difficult to implement. It was based on the key assumption that sources and channels of supply were reliable and dependable at all times. Analysts felt that it did not take



into account the possibility of labor strikes at automotive plants. Moreover, JIT involved high set up costs and Special training and reorganization of policies and procedures in the company were necessary to implement JIT. The supplier relations of the company also needed to be improved to ensure timely delivery. In the absence of good supplier relations, JIT increased the risk of inventory shortage.

Question 1

- a) Discuss the cost associated with the following in the case study
- i. Raw material
 - ii. Work in Progress
 - iii. Finished goods

(20 marks)

- b) “Although many automobile companies around the world adopted JIT, the system was far from perfect and difficult to implement “. Why would the system be difficult to implement especially in developing countries?

(10 marks)

- c) From your point of view, why is JIT easier to implement in service industry than in manufacturing industry?

(10 marks)

Part B

(60 marks)

Answer any THREE (3) of the following questions. Each question contributes 20 marks.

Question 1

[20 MARKS]

- (a) The infrastructural decisions cover the supporting mechanisms and philosophies relating to operations. State and explain the different categories of infrastructural decisions

(10 marks)



- (b) You are regarded as an expert in operations management. Explain how the management of demand attempts to influence buyer behavior so that it fits in with available capacity. What would you say are the options to manage supply?

(10 marks)

Question 2

[20 MARKS]

- a) What do you understand by the term ‘waste’? Describe the eight wastes.
- b) Zeithaml, Parasuraman and Berry (1990) have published numerous qualitative studies on the dimensions of quality and their list of dimensions has evolved into five dimensions for service. List and explain the five dimensions of quality.

Question 3

[20 MARKS]

- a) Describe five defining characteristics of a collaborative supply chain
- b) With the modern approach to collaboration each supplier, discuss any five of the criteria used to select the supplier.

Question 4

[20 MARKS]

The balanced scorecard measures business performance from four perspectives. State and explain the four perspectives.

(20 marks)

End of Exam.