

BOTSWANA COLLEGE OF DISTANCE AND OPEN LEARNING

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

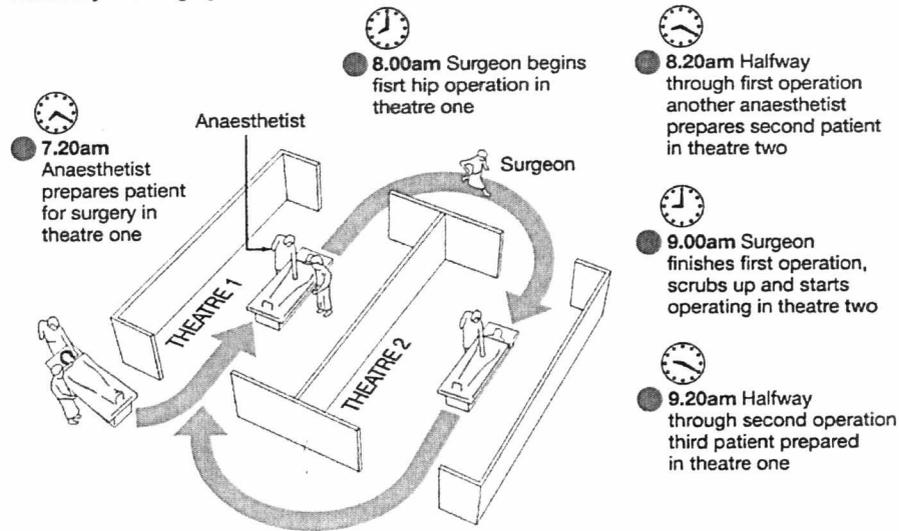
Question 1

Case Study: ‘Factory flow’ helps surgery productivity.

Surgery is a classic example of fixed position layout where patients remain stationary with surgeons and other theatre staff performing their tasks around the patient. But this idea has been taken a step further by one surgeon who moves continually between two theatres, his anaesthetist colleagues are preparing a patient for surgery in another theatre. After finishing with the first patient, the surgeon ‘scrubs up’, moves to the second operating theatre and begins the surgery on the second patient. While he is doing this the first patient is moved out of the first operating theatre and a third patient is prepared. The surgeon devised this method of overlapping operations in different theatres because he claims he was frustrated at wasting his time drinking tea while patients were being prepared for surgery. *‘If you were running a factory’* he says, *you would not allow your most important and most expensive machine to stand idle. The same is true in a hospital.*

Currently used on hip and knee replacements, this layout would not be sustainable for all surgical procedure. But since its introduction the surgeon’s waiting list has fallen to zero and his productivity has doubled.

Assembly line surgery



(Global and Southern African Perspectives, Operations Management, Mike Pycraft et al.)

Question 1

- a) What would say are the advantages and disadvantages of this arrangement when compared with the convectional layout of one surgeon remaining in one operating theatre
- [20 Marks]**

Question 2

- b) As an operations manager, what would you advise to be a better layout arrangement that will accommodate all the doctors from different areas of specialization and give a reason for your choice.
- [5 Marks]**
- c) The surgeon in question encountered some resistance from his colleagues when introducing this new layout. Why do you think some colleagues were unwilling to try out the new layout?
- [5 Marks]**
- d) Explain the characteristics of service operations.
- [10 Marks]**



Part B

(60 marks)

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

Question 1

(a) Justify to one of your friends who is intending to study MBA next year why he or she should study operations management. **[10 Marks]**

(b). Differentiate between goods and services as applied in operations management? **[10 Marks]**

Question 2

a) Identify three forecasting time horizons, and specify the appropriate time for each of them. **[10 Marks]**

b) Sales of Legwinya at a popular tuck-shop have grown steadily during a period of 5 years (see table below). Mr. Odirile had predicted in 2004 that 2005 sales would be 410. Using exponential smoothing with a weight of $\alpha = 0.3$ develop forecasts for 2006 through 2010. **[10 Marks]**

| Year | Sales | Forecast |
|------|-------|----------|
| 2005 | 450 | 410 |
| 2006 | 495 | |
| 2007 | 518 | |
| 2008 | 563 | |
| 2009 | 584 | |
| 2010 | ? | |

Question 3

a) Write short notes on the advantages and disadvantages of MRP. **[10 Marks]**

- b) Differentiate between dependent demand and independent demand using examples where appropriate? **[10 Marks]**

Question 4

- a) What is JIT. **[1 mark]**
- b) Describe the three ways in which JIT and quality are related. **[9 marks]**
- c) Successful JIT partnerships require that supplier concerns should be addressed. Briefly describe five supplier concerns **[10 Marks]**

End of Exam.