NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMERCE

DEPARTMENT OF BUSINESS MANAGEMENT

OPERATIONS MANAGEMENT - MDP 2001

SUPPLEMENTARY EXAMINATION – AUGUST 2010

TIME ALLOWED: 3 HOURS

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INSTRUCTIONS TO CANDIDATES

Answer any **four** questions.

INFORMATION TO CANDIDATES

(i)	All questions carry **(25)** marks each.
(ii)	Questions may be answered in any order.
(iii)	Credit will be given for the use of appropriate examples.
(iv)	This paper contains **seven** questions.

Question 1

A short holiday in Zimbabwe would not be complete without a visit to the mighty Victoria Falls. With over 700,000 visitors each year, this is the most popular resort site in the country, after canoeing in the mighty Zambezi River. On busy days in the summer, the attraction can handle over 5000 visitors a day. On a wet day, however there may be only 500 visitors throughout the whole day. The attraction is open for admission, seven days per week from 8.00am to 6.00 pm.

Outside the reception, on a busy day, orderly queues of expectant tourists snake along the pavement, looking in at the displays at the reception. In the public open space, National Parks authorities can do little to entertain the visitors but entrepreneurial and street artists are quick to capitalise on a captive market. On reaching the entrance of the reception, individuals, families

and groups purchase their admissions tickets. The reception is in the shape of a horseshoe, with the ticket sales booth in the centre.

On winter days or at quiet spells, there would only be one sales assistant, but on a busy day visitors can pay at either side of the ticket booth, to speed up the process. Having paid, the visitors assemble outside the booth. While waiting in this section of the reception area, photographers wander about offering to take photos of the visitors standing next to life sized wax figures of famous animals. They may also be entertained by guides to groups of visitors.

Required

Discuss the three capacity planning strategies (for coping with demand variation) available to National Parks and Wildlife management.

Question 2

(a) Why do inventory exists in most manufacturing companies in Zimbabwe?

[5 marks]

(b) A manufacturer makes monthly deliveries to a wholesaler of a product in average lot sizes of 280 units. Average demand by a wholesaler is 70 units per week and lead time from the plant is 3 weeks. How much cycle inventory and pipeline inventory does the wholesaler carry?

[3 marks]

(c) A building material stockist obtains its cement from PPC outside Bulawayo. Demand for cement is reasonably constant throughout the year. Last year the company sold 2000 tonnes of cement. It estimates the costs of placing an order at around $25.00 each time an order is placed, and charges inventory holding at 20 percent (%) of purchase cost. The company purchases cement at $60.00 per tonne.

Required:

Calculate the Economic Order Quantity (EOQ). Illustrate your answer with a diagram.

[4 marks]

(d) How Mine has the following items in its Stores, as shown in Table 1 below

Table 1.

Part No	Unit Cost	Annual Usage
1	$60.00	90
2	$350.00	40
3	$30.00	130
4	$80.00	60
5	$30.00	100
6	$20.00	180
7	$10.00	170
8	$320.00	50
9	$510.00	60
10	$20.00	120

Required:

Categorise the inventory into an ABC Analysis framework and briefly discuss the importance of the classification to effective stores management.

[8 marks]

Question 3

Why is it important for both top management and employees to commit to Total Quality Management (TQM) in their operations?   **[25 Marks]**

Question 4

Just-in-time (JIT) production systems cannot be successfully implemented in the current business environment in Zimbabwe. Discuss this statement.   **[25 Marks]**

Question 5

What contributions does Operations Management make to the competitiveness of a company?

[25 Marks]

Question 6

Discuss the contributions of Operations Strategy to the crafting of an effective corporate strategy for a company. **[25 Marks]**

Question 7

Discuss the importance of Operations Management to the provision of services in a company.

[25 Marks]

END OF EXAMINATION