

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY



FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING

Master of Engineering in Manufacturing Engineering/Systems and Operations Management

Supplementary Examination

COURSE : OPERATIONS MANAGEMENT
CODE : TIE 6134
DATE : AUGUST 2013
DURATION : 3 HOURS

INSTRUCTIONS AND INFORMATION TO CANDIDATE

1. Answer any four (4) **questions**.
 2. Each questions carries **25 marks**.
 3. This paper contains six (6) questions.
 4. There are three (3) printed pages.
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REQUIREMENTS

QUESTION 1

- a) Discuss the major developments in the Service sector that impact on the Operations Management function in Zimbabwe. [10]
- b) Explain the meaning of the following statement in relation to Operations Management, “The World has shrunk in space and time”. [10]
- c) Why should organizations harness Advanced Production Technologies? [5]

QUESTION 2

- a) Discuss the three main categories of Social Responsibility issues that Operations Managers should deal with. [9]
- b) Explain the relationship that exist among Cost, Quality, Dependability, Flexibility and Speed in the Operations Strategy Mix. [16]

QUESTION 3

- a) Describe the concept of a Product Life cycle and the implications of Positioning Strategies in each of the stages of a product life cycle. [15]
- b) Explain the circumstances under which the following two strategies can be selected during Operations Strategy formulation.
 - i. Product-Focused [5]
 - ii. Process-Focused [5]

QUESTION 4

- a) Define and describe how you would establish the capacity of an education institute such as the National University of Science and Technology. [10]
- b) What are the major considerations in establishing the Rated Capacity of an organization? [5]
- c) Explain using an example the concept and impact of the Customer Order Decoupling Point (CODP) on the capacity of an organization. [10]

QUESTION 5

- a) Explain the advantages and disadvantages of Qualitative Methods of forecasting. [10]
- b) Which forecasting method would you recommend, and what type of data would you collect for the following:
 - i. Estimating the demand for electricity in an industrial city for the next 5 years. [5]
 - ii. Estimating the unskilled labour requirements next season for a summer resort complex (hotels, restaurants, etc). [5]
 - iii. Estimating the requirements for passenger-cabin personnel of a commercial airline with transatlantic routes. [5]

QUESTION 6

- a) Explain how the Supply Chain thinking enhances business growth in organisations? [5]
- b) To gain competitive advantage in the marketplace, organisations need to route a Strategic direction in Supply Chain management. One such concept is to develop “a framework for building sustainable advantage based on a unique set of well linked activities”. - **“linked activities and processes are especially resistant to competitive pressures” – Michael Porter.** Discuss this notion and highlight how this can be achieved.
[10]
- c) Explain the Product Position grid and the associated categorisation of products in the market. [10]

END