KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

BME 807: OPERATIONS MANAGEMENT

DATE: THURSDAY 28TH NOVEMBER 2017 TIME: 5.30 P.M. - 8.30 P.M.

INSTRUCTIONS:

1. **Question 1 is compulsory and carries 40 marks.**
2. **Answer question 1 and any other THREE questions.**

QUESTION ONE

Read the case study below and answer the questions that follow:

Product redesign, not offshoring holds cost advantage for U.S. Manufacturers

Redesign, not offshoring production to countries such as China, holds the greatest promise of cost advantage for U.S. manufacturers, according to a study that attacks the long standing assumptions about product costs that have troubled manufacturers for decades, both in the United States and other parts of the world. The study suggests that companies should do a much better job of integrating cost analysis into product design. If rigorous cost analysis were to be instituted as a foundation for product design, U.S. manufacturers would be able to develop innovative products that are more economical to produce in the United States.

One of the more proactive conclusions of the study is that it can be more advantageous for U.S. manufacturers to lower costs by redesign and identify two principles of design best practices that as study points out, many manufacturing companies overlook when making outsourcing decisions. First, it is possible to redesign products to reduce component-part count and cost. Second, it is necessary to account for all the additional costs associated with offshore manufacturing and apply those additional costs to the product. The study warns that companies many not be accounting the full costs when they consider sending production overseas to countries with very low labour rates such as China. The study mentioned a number of hidden costs including shipping and logistics that add an estimated 24% to labour and material costs at the offshore location.

The study seeks to demonstrate that if companies consider the potential for design improvement along with a realistic estimate for the full costs of outsourcing, it would most of the time make sense to manufacture the product in the United States. The study also warns that outsourcing should not be the first step in lowering product costs. Considering the competitive nature of the global economy, and many hidden risks associated with outsourcing ventures, U.S. companies should scour product designs for efficiency before resorting to offshore production.

a) Do you agree with the above study that product redesign is the solution to lowering product cost? Why or why not? (5 marks)

b) Besides costs such as shipping and logistics, identify **four** other 'hidden' operating costs associated with offshoring. (4 marks)

c) Identify and expound on the stages of new product development. (16 marks)

d) Other than manufacturing costs, explain **five** other factors that influence management's decision when selecting the appropriate location of business operations. (10 marks)

e) The global economy is competitive in nature. Low manufacturing costs may result in overall lower product costs giving a competitive edge over similar products in the market. Explain **five** other sources of competitive advantage for international companies. (5 marks)

QUESTION TWO

a) Discuss two responsibilities of operations managers. (2 marks)

b) Describe the operations of the following organizations using the transformation model. Carefully identify the transforming resources, transformed resources, the type of transformation process and the outputs from the transformation process for:

  i. An international airport (6 marks)

  ii. A high-volume car plant (6 marks)

  iii. A high-volume car plant (6 marks)

QUESTION THREE

a) Using an example of your own choice, describe how the cost of the operation might be affected by changing the levels of performance of quality, speed, dependability and flexibility. (12 marks)

b) Explain **four** factors that managers must consider when selecting plant layout designs. (12 marks)

QUESTION FOUR

a) Many universities and colleges around the world are under increasing pressure to reduce the cost per student of their activities. How do you think technology could help operations such as universities to keep their costs down but their quality of education high? provide **five** arguments. (10 marks)

b) Operations managers have had to deal with the issue of flexible working hours and location to meet the demand for their products or services while maintaining an efficient labour force. Discuss five ways in which operations managers can ensure flexible working in the organizations. (10 marks)

QUESTION FIVE

a) In operations management, capacity management is important in order to meet the demand requirements for the product or service. In what ways can the operations manager vary short-term capacity to address fluctuating demand? (10 marks)

b) Use a project of your choice to explain the stages of the project life cycle and state two activities that are performed at each stage of the life cycle. (10 marks)

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