



Institute of Human Resource Advancement (IHRA)

University of Colombo, Sri Lanka

Masters Degree in Business Management

Course - No 04 - 3rd Semester Examination

(Held in April 2017)

MBM/ 09 –Production & Operation Management

Instructions to the Candidates

1. Total number of questions is Six (06)
2. Answer any Five (05) questions.
3. Time allocated for the examination is Three (03) hours.
4. Total number of pages Two (02).
5. If a page or a part of this question paper is not printed properly, please
Inform it to the Supervisor immediately.
6. Write your index number on all pages of the answer script.

01. i. "Operations management is concerned with converting materials and labor into goods and services as efficiently as possible to maximize the profit of an organization." Elaborate this statement highlighting the importance of operations management for firm's success.

(10 Marks)

- ii. It is generally accepted that operations priorities are common to manufacturing and service organisations. How do you respond to this statement?

(10 Marks)

(Total: 20 Marks)

02. i. Differentiate between product layout and process layout giving an example for each.

(08 marks)

- ii. Factory layout is not merely an engineering or architectural design. It involves legal considerations as well. Do you agree with this statement? Explain your answer with examples from Sri Lanka.

12 Marks

(Total 20 Marks)

03. i. Demand forecasting is the art and science of forecasting customer demand to drive holistic execution of such demand by corporate supply chain and operations functions. Discuss the significance of demand forecasting from an organization from an operations management perspective.

10 Marks

- ii. Demand of a product for the last 5 periods is given below:

Period	1	2	3	4	5
Demand (units)	100	90	130	110	150

Find the forecast for the sixth period using,

- (a) Weighted moving average with weights of 0.20, 0.30 and 0.50 for the periods 3, 4 and 5 respectively.

- (b) Simple four month-moving average

- (c) Exponential smoothing with $\alpha = 0.3$ and the forecast for period 5 is 140 units

(10 marks)

(Total 20 Marks)

04. i. "Total quality management ensures that every single employee is working towards the improvement of work culture, processes, services, systems and so on to ensure long term success." Do you agree with this statement? Elaborate your answer with examples

(10 Marks)

- ii "The cost of quality is the accumulated cost of not creating a quality product.". Elaborate this statement using four (04) categories of cost of quality.

(10 Marks)

(Total 20 Marks)

05. i. "Green production is a business strategy that focuses on profitability through environmentally friendly operating processes." Briefly explain the initiatives that a manufacturing organization can use to perform a green production system.

(10 marks)

- ii. Stopping waste is a vital part of Just In Time (JIT) system. Identify sources of waste and discuss how they may be eliminated.

(10 marks)

(Total: 20 Marks)

6. i. A lap top computer assembling firm obtains its motherboards from a single supplier. Demand is reasonably constant throughout the year, and last year the company bought 12,000 motherboards of this product. It estimates the costs of placing an order at around Rs. 1,500 each time an order is placed, and calculates that the annual cost of holding inventory is 2% of purchase cost. The company purchases the motherboards at a cost of Rs. 10,000 per board.

- a. How much should the company order at a time?

(08 marks)

- b. Company operates 300 days per year. Lead time is 10 days. Calculate the re-order point.

(04 marks)

- ii. Although global supply chain is prevalent in today's manufacturing and service organizations, there still some obstacles to global chain transactions. Discuss those obstacles in brief.

(08 marks)

(Total 20 Marks)
