



UNIVERSITY OF KELANIYA – SRI LANKA
Centre for Distance and Continuing Education
Faculty of Commerce & Management Studies

Bachelor of Commerce (Special) Degree Second Year Examination (External) – 2024

May – 2026

BCOM E 2065 - Operations Management

No. of questions: Five (05)

Answer any four (04) questions.

Time: 03 hours

Question No. 01

- a) Define what operations management is and who are the people directly engaging with this.
(05 Marks)
- b) Explain how Operations Management and Supply Chain Management work together in an organization.
(08 Marks)
- c) A business introduces eco-friendly products and improves employee welfare. Discuss how these actions support the Triple Bottom Line concept using Sri Lankan examples.
(12 Marks)

(Total 25 Marks)

Question No. 02

- a) What is Product benchmarking in operations management?
(05 Marks)
- b) Explain how different disciplines influence the design of products and services.
(08 Marks)
- c) Draw and discuss how a service blueprint helps a retail apparel store to manage its service operations effectively with the related examples.
(12 Marks)

(Total 25 Marks)

Question No. 03

- a) Differentiate between design capacity, effective capacity and actual capacity using an example. (05 Marks)
- b) Briefly explain what factors are differentiating the process structures. (08 Marks)
- c) A manufacturing company is evaluating three potential factories with different production capacities to produce a new electronic appliance. The company wants to determine which factory is the most suitable one based on the break-even analysis, capacity utilization, and expected profitability. The following information has been collected for each factory:

Factory Details

Factory X

Production Capacity: 15,000 units annually
Fixed Costs: LKR 55,000,000
Variable Cost per Unit: LKR 9,200
Selling Price per Unit: LKR 17,000

Factory Y

Production Capacity: 11,000 units annually
Fixed Costs: LKR 42,000,000
Variable Cost per Unit: LKR 10,000
Selling Price per Unit: LKR 17,000

Factory Z

Production Capacity: 18,000 units annually
Fixed Costs: LKR 68,000,000
Variable Cost per Unit: LKR 8,400
Selling Price per Unit: LKR 17,000

You are required to answer the following questions.

- i. Calculate the break-even point in units for each factory.
- ii. If the company expects to sell 13,000 units annually, calculate:
The capacity utilization percentage for each factory
The annual profit for each factory
- iii. Analyze the results and recommend the most suitable factory based on:
Break-even point
Capacity utilization
Expected profit level

(12 Marks)

(Total 25 Marks)

Question No. 04

- a) Explain the importance of lean operations to the SME (small and medium) sector in Sri Lanka.
(05 Marks)
- b) Explain how Just-In-Time II concept can apply to the Sri Lankan supermarkets to improve the operations.
(08 Marks)
- c) A regional commercial bank is planning to introduce a special express counter for VIP customers. Management estimates that customers will arrive at the counter at an average rate of 18 customers per hour. The employee assigned to the counter can serve customers at an average rate of one customer every 3 minutes. Assuming Poisson arrivals and exponential service times, calculate the following:
- Determine the utilization rate of the service employee.
 - Find the average number of customers waiting in the queue.
 - Calculate the average number of customers in the system.
 - Determine the average waiting time in the queue.
 - Calculate the average time a customer spends in the system, including service time.
- (12 Marks)
(Total 25 Marks)

Question No. 05

- a) Define what is Total Quality Management (TQM) and importance of it to the organizations.
(05 Marks)
- b) Discuss the benefits of internationalization of Sri Lankan businesses, supported with relevant examples.
(08 Marks)
- c) A multinational supermarket chain is planning to establish a new regional distribution center in the Western Province of Sri Lanka to improve supply chain efficiency and customer responsiveness. After preliminary analysis, management shortlisted four potential locations:
- Alternative 1: Colombo
 - Alternative 2: Negombo
 - Alternative 3: Kalutara
 - Alternative 4: Horana

To select the most suitable location, the operations management team evaluated each alternative based on multiple strategic and operational factors. The following table presents the factor weights and performance scores for each location.

Factor	Weight	Alt. 1 (Colombo)	Alt. 2 (Negombo)	Alt. 3 (Kalutara)	Alt. 4 (Horana)
Proximity to major markets	0.20	95	85	70	80
Transportation infrastructure	0.15	92	88	72	78
Land and rental cost	0.15	55	75	90	85
Availability of skilled labor	0.10	94	82	68	76
Expansion potential	0.10	65	80	92	95
Utility and operating costs	0.10	60	78	88	84
Security and environmental risk	0.10	70	75	85	90
Government incentives and tax benefits	0.10	50	65	80	92

- i. Using the weighted scoring model, calculate the total weighted score for each alternative.
- ii. Rank the four locations from most suitable to least suitable.
- iii. Identify the best location for the new distribution center and justify your recommendation using quantitative and qualitative reasoning.
- iv. Discuss two limitations of using the weighted scoring model for facility location decisions.

(12 marks)

(Total 25 Marks)