



**UNIVERSITY OF COLOMBO, SRI LANKA**

**FACULTY OF MANAGEMENT AND FINANCE**

**Bachelor of Business Administration (Level I – Semester IV) Examination – Jan, 2023**

**MKT 2312 – Operations Management**

**Three (03) Hours**

Answer **Five (05)** Questions in Total including Question One (01)

Use of non-programmable calculators is allowed.

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01. i. “The operations management is one of the core functions of any business and it involves designing and managing operations subsystem of the business.”

Explain briefly the key strategic decisions of operations management and the modern challenges faced by operations managers.

(10 Marks)

- ii. “When studying operations management, one should examine both the operational and the strategic aspects of operations.”

Describe the Four (04) different perspectives on operations strategy, and explain which perspective is more suitable to specify the operations strategy of current businesses.

(10 Marks)

**(Total 20 Marks)**

02. i. Compare and contrast the value-based approach for product design over the product-based approach, using the relevant steps, techniques and concepts of each approach. Comment which approach is more appropriate in the modern market context.

(10 Marks)

- ii. Describe briefly the different product strategies and how product strategy selection impacts on supply chain activities of manufacturing firms.

(10 Marks)

**(Total 20 Marks)**



03. i. A leading private hospital located in Colombo is considering the selection of a location for a new branch. They have identified four factors listed in the following table as the basis for evaluation, and have decided to use the location factor rating method for location selection. Identify two more location factors relevant for the decision and illustrate how you would use the location factor rating method to select a better location for the hospital in an attractive suburban area.

Dominant Location Factors
Average community income
Community growth potential
Availability of public transportation
Labor cost

(10 Marks)

- ii. In a time study assignment, a method and measurement analyst has made the following observations with respect to a job that has four (04) identifiable elements in it. If you are to delete the unusual or nonrecurring observations (marked with \*) and consider the allowance factor as 15%, do the calculations given below the table.

Job Element	Performance Rating	Observations ( <i>times in minutes</i> )				
		1	2	3	4	5
1	100%	1.5	1.6	1.4	4.5*	1.5
2	90%	2.3	2.2	2.1	2.2	2.4
3	115%	1.7	3.9*	1.9	1.4	1.6
4	100%	3.5	3.6	3.6	3.6	3.2

- Compute the average time for each element.
- Compute the normal time for each element.
- Compute the total normal time.
- Compute the standard time for the job.

(10 Marks)

(Total 20 Marks)



04. i. Identify the key determinants of product quality and service quality and describe them briefly.

(10 Marks)

ii. Describe briefly the main quality management activities, tasks and efforts that you may identify in operations of business organizations today.

(10 Marks)

(Total 20 Marks)

05. i. Assume that an operations manager of a manufacturing firm is planning to set up an assembly line to assemble 40 units per hour. The time to perform each task and the tasks that precede each task are given in the following table. Consider that 57 minutes per hour are productively used for the above process, as per the observations of operations manager.

Task	Preceding Task	Time to perform (min.)
A	-	.69
B	A	.55
C	B	.92
D	B	.59
E	B	.70
F	B	1.10
G	C, D, E	.75
H	G, F	.43
I	H	.29
<b>Total</b>		<b>6.02</b>

- Draw a network diagram of precedence relationships.
- Compute the required cycle time per unit in minutes, and the theoretical minimum number of workstations required to produce 40 units per hour.
- Balance this line using the longest processing time heuristic.
- What is the efficiency of the line obtained in part c?

(10 Marks)

ii. Compare and contrast the jobbing manufacturing process type over repetitive (assembly line) process type. Use suitable examples in your answer.

(10 Marks)

(Total 20 Marks)



06. i. Consider a manufacturing or a service organization of your choice, and describe the main operations capacity modification techniques available, if its management is planning to consider the chase demand capacity strategy.

(10 Marks)

- ii. "Productivity approach (physical considerations approach) is still the most dominant method that is frequently used for designing operational jobs."

Do you agree with the above statement? Justify your answer while briefly describing the main job designing techniques and concepts applicable.

(10 Marks)

**(Total 20 Marks)**

07. Write short notes on any Four (04) of the following.

- i. Concurrent engineering
- ii. Flexible operations capacity
- iii. Costs of quality
- iv. Operations performance objectives
- v. Service process types
- vi. Quality of conformance
- vii. Forms of waste in Lean approach

**(05 Marks\*04 = Total 20 Marks)**