

THE OPEN UNIVERSITY OF SRI LANKA

**COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC
ADMINISTRATION**



FINAL EXAMINATION – AUGUST 2020

**MSP9304/MCP1604 - OPERATION MANAGEMENT
DURATION: THREE (03) HOURS**

Date: 23rd August 2020

Time: 9.30 am - 12.30 pm

Instructions

- **Answer any FIVE questions.**
- **All questions carry equal marks.**
- **Your answer should be methodical and focused.**
- **A Flow Process Chart is attached for question 2 b**

Question 1

- a) **What are the key indicators that define the national economy in the Annual Report of the Central Bank? Explain how these indicators are linked to Operations Management. (10 marks)**
- b) **What are the different types of operations that are used for creating/adding value to the field of Operations Management? Explain using suitable examples. (10 marks)**

Question 2

- a) **The Management of your Company has requested you to make a presentation to the middle and the Junior Managers on the advantages of using Work Study and its two main techniques. Create a presentation to be presented to Junior Managers. (13 marks)**
- b) **A flow process chart for removing a punctured tyre and fitting the spare is attached. The elements are listed in order. Complete the Chart indicating the appropriate symbol against each element. (07 marks)**

Question 3

- a) **With a suitable illustration, describe the type of layout that is most suitable for a (i) Garment Factory, (ii) Engineering Workshop and a (iii) Ship building Yard highlighting the advantages of using such layouts. (12 marks)**
- b) **Draw the present layout of your office/factory indicating the flow of product/customer service. Discuss how the layout can be improved to provide a better service to customers, if not explain why the present layout is the best option. (08 marks)**

Question 4

- a) Why forecasting is of critical importance to a business organization? Explain the importance of forecasting in manufacturing/ services, human resources management and the supply chain management areas. (08 marks)
- b) Explain how Total Quality Management (TQM) differs from normal quality management practices. (08 marks)
- c) Describe the key elements of TQM. (04 marks)

Question 5

- a) Explain with suitable examples what is meant by productivity and multi-factor-productivity and their importance to an organization. (09 marks)
- b) The production figures and the costs of Woodex Company which produces decorative wood containers for the Tea exporters are as follows.
Hourly wage rate of Rs.30/- and workers work 40 hours per week. Overheads are 1.5 times weekly labour cost. The cost of material is Rs.150/- per kg., and the standard selling price is Rs.300/- per unit.

Week	Output/Units	No. of Workers	Material usage(Kg)	Energy cost Rs.
1	200	6	120	1500
2	238	7	130	1800
3	222	7	140	1750
4	260	8	150	1900

- i Calculate the labour productivity for each week. (04 marks)
- ii Calculate the multi factor productivity of the operation and comment on the results. (07 marks)

Question 6

- a) Describe the objectives of installing an Enterprise Resource Planning system for an organization. Describe the benefits that can be gained by implementing an Enterprise Resource Planning system by customers and by enterprise. (10 marks)
- b) Explain what a 'Project' is, and the key areas involved in 'Project Management'. (10 marks)

Question 7

- a) Describe what 'Cleaner Production' is and explain how it benefits the organization as well as the environment. (12 marks)
- b) Describe the alternate energy sources presently used in Sri Lanka and advantages and disadvantages associated with such sources. (08 marks)

Question 8

- a) Write an essay on the 3 Ps (People, Process and Product) concept highlighting how the Operations Management theories enhance or add value to the 3 Ps. (12 marks)
- b) What do you understand by the word “innovation”? Discuss three types of innovations that can be practiced in an organization. (08 marks)

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2(b)

Flow process chart for Question -2 (You can attach this page with your answer scripts.)

Element or actions carried out		Op	Tra	Ins	Del	Sto
1	Open the car boot, take spare wheel, jack etc. out	O	⇒	□	D	▼
2	Take the spare wheel, jack, wheel brace and carry those to the deflated wheel	O	⇒	□	D	▼
3	Place wheel wedges to prevent slipping during lifting	O	⇒	□	D	▼
4	Check whether wedges are firmly in place	O	⇒	□	D	▼
5	Remove wheel cap to expose the wheel nuts	O	⇒	□	D	▼
6	Loosen wheel nuts partially	O	⇒	□	D	▼
7	Place the jack and operate to lift the vehicle	O	⇒	□	D	▼
8	Remove the nuts from the wheel	O	⇒	□	D	▼
9	Remove the wheel	O	⇒	□	D	▼
10	Insert the spare wheel	O	⇒	□	D	▼
11	Place the nuts and tighten lightly	O	⇒	□	D	▼
12	Lower the jack and tighten nuts to required level	O	⇒	□	D	▼
13	Check the nuts again to ensure all are properly tightened	O	⇒	□	D	▼
14	Take the damaged tyre, jack and other equipment and place in the boot	O	⇒	□	D	▼

Op – Operation O

Tra – Transport ⇒

Ins- Inspection □

Del – Delay D

Sto – Storage ▼

