



THE OPEN UNIVERSITY OF SRI LANKA
COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC ADMINISTRATION
FINAL EXAMINATION – 2015
MCP1604 OPERATIONS MANAGEMENT

DURATION: THREE (03) HOURS

Date: 23rd August, 2015

Time: 9.30 am – 12.30 pm

This question paper consists of 8 questions in 3 pages.

INSTRUCTIONS

- ANSWER ANY FIVE QUESTIONS.
- Your answers should be focused and methodical.
- All questions carry equal marks (20 marks each).
- A chart sheet for making a flow process chart is attached herewith.

Question 1

- a) Describe the key indicators of the Country's economy considered in the Annual Report of the Central Bank. Explain how the said key indicators are important to the field of Operations Management. (10 marks)
- b) Explain the different types of operations that make value addition at organizations. Provide suitable examples. (10 marks)

Question 2

- a) You have been requested by the Management to introduce Work Study to your organization. Prepare a suitable presentation indicating the importance and the key components of Work Study. (10 marks)
- b) Given below are the elements of supplying a component to a refrigerator manufacturer. Prepare a flow process chart **on the chart paper provided**. The elements are listed in order. With the help of the prepared chart, comment on the process. (10 marks)

<p>Supplier receives the order to supply components</p> <p>Prepares the Production Plan according to the requirements</p> <p>Produces the components</p> <p>Checks the quality and the performance of the products</p>
--

Sends to the stores for dispatching to the buyer
Transports to the buyer's stores
Wait for unloading after informing the personnel at the stores
Components unloaded
Numbers and the visual quality checked against order
The invoice is accepted and copy returned to supplier

Question 3

- a) Using a suitable example explain what is a “bottleneck” in an operation and its impact on the production process. What technique/s would you use to overcome such a situation? Explain with an example. (8 marks)
- b) Draw the layout diagram of a division of your office/service/factory which makes a comprehensive process, with details of its key functional areas. Highlight the inefficiencies of the present layout of the said division. Suggest possible improvements and draw them in a new diagram and list the advantages of the improvements suggested. (12 marks)

Question 4

- a) Providing suitable examples explain what is meant by multi-factor productivity and its importance to an organization. (8 marks)
- b) Following are the production figures of a company producing ornamental ceramic products. Assume they work 40 hours/week, hourly wage is Rs. 30/- per worker, overheads are 1.5 times the weekly labour cost, material cost is Rs. 250/- per Kg., and the standard selling price of the product is Rs. 750/-.
Details of the production are given below.

Week	Output (units)	No. of Workers	Material Usage (Kg.)	Energy cost (Rs.)
1	300	6	45	1500
2	338	7	46	1800
3	322	7	46	1500
4	354	8	48	1700

- i. Calculate the labour productivity for each week.
- ii. Calculate the multi-factor productivity of the operation. Comment on the results. (12 marks)

Question 5

- a) Describe what Total Quality Management (TQM) is and explain the importance of its key elements to an organization. (10 marks)
- b) Write short notes on five quality tools that are used in TQM. (10 marks)

Question 6

- a) Discuss the strategic importance of forecasting related to capacity, human resources and supply chain management. (10 marks)
- b) Explain the qualitative and quantitative forecasting techniques that are generally used at present with their advantages and disadvantages. (10 marks)

Question 7

- a) Describe the three main types of production facilities used in organizations engaged in operations highlighting why they are suitable for such operations. (10 marks)
- b) Describe the three main types of organizational plans for operations, and comment on their objectives and time durations. (10 marks)

Question 8

- a) Explain the 'sustainable development'. Describe how cleaner production benefits the environment as well as the organization. (10 marks)
- b) Briefly explain the alternate energy sources that are used effectively in the Sri Lankan context and give your observation on the use of such energy sources with the industries/services that make use of them. (10 marks)

Index No. _____

Page number _____

Q2 b) Flow process chart for recording elements or an activity

Element or action carried out	Op	Tra	Ins	Del	Sto
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼
	O	⇨	□	D	▼

Op – Operation-O

Tra – Transport- ⇨

Ins- Inspection- □

Del – Delay- D

Sto – Storage- ▼