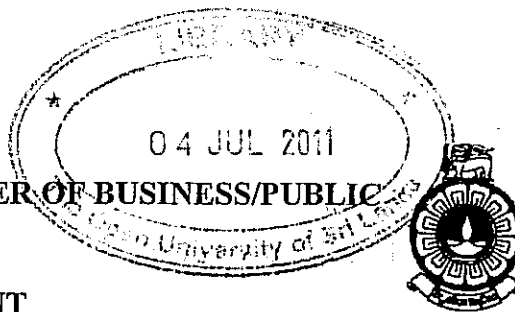


THE OPEN UNIVERSITY OF SRI LANKA  
COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC  
ADMINISTRATION PROGRAMME  
FINAL EXAMINATION 2010 /11  
MCP 1604 – OPERATIONS MANAGEMENT  
DURATION THREE (03) HOURS



DATE: 18<sup>th</sup> December 2010

TIME: 9.30am to 12.30pm

Answer any Five (5) questions.

All questions carry equal marks

Use of a non programmable calculator is allowed.

1.
  - a) Explain Operations Management comprehensively and discuss why products and services are essential for the survival of an organization.
  - b) Illustrate different types of operations with suitable examples.
  - c) Describe the factors which influence the competitiveness of an organization.
2.
  - a) Explain Work Study at work place and describe the two key components of Work Study.
  - b) Explain why Work Study is considered a very valuable but an inexpensive tool used by the management?
3.
  - a) You have been requested by the management to carry out a method study of the core activity in your office to improve the existing methods. Discuss the steps you would carry out to complete this task successfully.
  - b) You have been provided a chart with charting symbols and a list of activities of a certain task. Draw the path using the appropriate symbols.
4.
  - a) Describe the four main types of facility layouts and give examples of products that would be most suitable for these layouts.
  - b) Discuss the layout of your own office or department and comment on improvements that can be achieved with a flow process chart. Justify your recommendations.

5.
  - a) Explain why forecasts are necessary for the sustainability of an organization
  - b) Write short notes on two qualitative and two quantitative forecasting methods. In what circumstance would the said forecasting methods be used?
  - c) The demand for electricity in Kegalle district has been recorded as follows

Year	Megawatts
1999	74
2000	79
2001	80
2002	90
2003	105
2004	142
2005	122

Construct a scatter diagram and draw a regression line on the same graph. Predict the electricity demand for 2011 and 2012. Explain the limitations to your answer.

6.
  - a) Describe the ISO system related to quality and quality system popular in Sri Lanka. What are the advantages a company derives by getting accredited.
  - b) Describe quality control and quality assurance in relation to operation management. Explain which process offers more advantages to an organization.
  - c) Explain why total quality management is more beneficial to an organization and write short notes on five basic quality tools.
7.
  - a) Explain what is a supply chain and explain the importance of carrying out the related activities effectively to the success of an organization, specify in a highly competitive environment.
  - b) What are the 3 main types of organizational plans? Describe the activities involved in these types.
  - c) Explain Materials Resource Planning and its key elements
8.
  - a) Write short notes on the following, related to operation management and environment
    - i) Sustainability
    - ii) Alternate energy sources
    - iii) Cleaner production procedures
  - b) Discuss current trends in operations management and advanced manufacturing systems

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Formula for question No 5  
For linear graph (with standard notation)

$$y = mx + c$$

$$m = \frac{n(\sum xy) - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2}$$

$$c = \frac{\sum y - m \sum x}{n}$$

**Flow process chart for Question no 3-b**

Draw the path indicating the appropriate process symbols.  
Please draw the path by indicating the appropriate process symbols

Element or action carried out in preparing Tea	Op	Tra	Ins	Del	Sto
Choose a suitable non reactive kettle	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fill kettle with water and switch on the power	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wash and pre-heat ceramic or porcelain Tea pot	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Select a suitable black Tea powder	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Add Tea powder to the tea pot	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check whether the water is boiling	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Add required amount of boiling water to the Ceramic pot	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pick the Tea cozy (cloth pot cover) from the shelf	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taste after 2 minutes and check the flavor	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the flavor is good use the strainer to filter the powder	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Add sufficient milk and sugar and check the taste	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Serve the	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Op – Operation            -  

Tra – Transport           -  

Ins- Inspection           -  

Del – Delay                -  

Sto – Storage              -