



Uva Wellassa University, Sri Lanka

End Semester Examination – September/October 2012

SCT 309-2 Green Techniques for Industry

Time: Two (02) hours



Total six (06) questions

Answer ONLY four (04) questions. All questions carry equal marks.

- 1) A company is preparing to obtain certification on ISO 14001, Environmental Management System.
- What are the key characteristics a company should look into when preparing their environmental policy? (50marks)
 - Do you consider the environmental policy given below is an effective statement? If yes explain why? If not identify the draw backs. (50 marks)

We, Cleansing Soaps and Detergents (pvt) Ltd -CSD, are a locally established company to manufacture soaps, detergents and cleaning aids for domestic household and industrial market.

We at CSD appreciate the importance of minimizing the harmful impacts to the environment caused by our own activities. We shall be careful to use water and then dispose all the wastewater at prescribed standards stipulated in National Environmental Regulatory framework by properly treating the wastewater.

We will dispose all solid wastes daily to the nearby landfill by our own tractor. The height of the chimney of the steam boiler is designed to disperse the smoke and other gases to a safe height.

We will request the suppliers to provide most updated data on chemicals we use and will continually try to improve our products as well as the environmental protection activities.

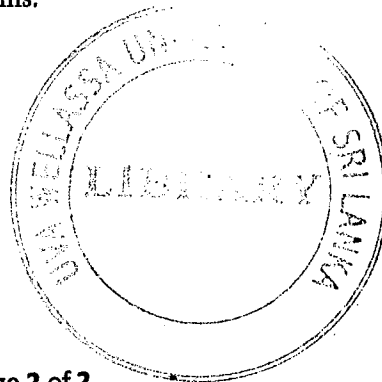
This policy is strictly for company employees and should not be shared with any outsiders with out obtaining permission from the top management.

Signed

Human Resource Manager

For Managing Director

- 2) When conducting a Cleaner Production assessment in an industrial plant it is important to follow a structured methodology.
- Explain briefly what Cleaner Production is. (40 marks)
 - List out all 6 major stages in the CP assessment methodology identifying key tasks in each step. (60 marks)
- 3)
- In the standard Cleaner Production Methodology reasons for waste are grouped into several main categories. Identify these waste cause categories and present them in chart/table. (50 marks)
 - Similarly the techniques available for generating CP solutions are also grouped into eight sub categories under three main headings. Present these CP techniques in a chart form. (50 marks)
- 4)
- Draw and label Deming's Cycle. (25 marks)
 - How can the Deming's cycle help a company to implement an Environmental Management System (EMS)? (35 marks)
 - List the tasks/activities of an EMS categorizing them under each heading of the Deming's cycle. (40 marks)
- 5) Ecological Foot Print and Ecological Rucksack are two concepts used to explain the pressure humans are causing on earthly natural resources.
- Define these concepts and briefly describe how these concepts explain the environmental pollution caused by excessive resource use. (60 marks)
 - Suggest three actions humans can take to reduce the excessive resource use in the world and explain what will be the result of each of them. (40 marks)
- 6) Briefly explain any four (04) of the following terms.
- Eco Design.
 - Ecological Rucksack
 - Global Warming
 - Process Flow Diagram
 - Brain storming
 - Emergency Preparedness



(25 marks for each)