



THE OPEN UNIVERSITY OF SRI LANKA

POSTGRADUATE DIPLOMA/MSC IN ENVIRONMENTAL SCIENCES

LEVEL 7

NEP 2203/1204 – INDUSTRIAL AND URBAN ENVIRONMENTAL HAZARDS

FINAL EXAMINATION – 2012 (OPEN BOOK EXAMINATION)

DURATION: THREE HOURS

Date: 06 July 2013

Time: 9.30 a.m. – 12.30 p.m. (3hrs)

**ANSWER ANY FOUR (04) QUESTIONS ONLY**

**PLEASE ENSURE THAT ANSWERS FOR EACH QUESTION SHOULD  
BE GIVEN IN SEPARATE BOOKS**

1. Solid waste management is done using several methods such as incineration, land-fill, biodegradation both aerobic and anaerobic.
  - a). Discuss these methods with reference to pollution caused, recycling of materials, and the potential to recover energy and soil additives.
  - b). Assess the energy balance for each of these options as embedded energy in processing and net energy gain as byproducts.
  
2. "Tea plantations use chemical fertilizer to replace soil nutrients taken away in harvesting green leaves on a regular basis. As tea is grown in hilly areas most of the fertilizers get washed away".
 

Describe alternative methods that could be adopted to enrich soil fertility and prevent leaching and waste in surface run-off.
  
3. "Rubber industry produces pollutants in the form of effluent in processing and wood waste in producing sawn timber".
 

Describe means of converting these two waste product into generate energy, and how the generated energy could be used within.
  
4. "If you live in a slum in Manila, you pay more for your water than people living in London." That is the conclusion of a report from the United Nations Human Development Programme, 2006: We rely on clean water to survive, yet right now we are heading towards a water crisis. Sustainable water usage is pre requisite to improve health & sanitation of community people. Briefly discuss the gaps

among community, available policies and institution to promote water efficiency strategies to decrease the amount of water wastage.

5. "Visual pollution refers to the man-made constructions that are unattractive and affects people's ability to enjoy or appreciate the view and vista".

Briefly discuss the possible health and environmental effects that arise from different scenes given below that depict visual pollution.

*Scenario 1:* Rubbish piles left around public areas, unclean public toilets, and landfills that are near to residential areas.

*Scenario 2:* Telephone towers and overhead power lines.

*Scenario 3:* Billboards.

6. "Nowadays, indoor air pollution has drawn more and more attention when people spent more than 80% time in indoor environment, such as home, workplace and school".

Based on above statement, write an article for newsletter published by your institute to up lift the community awareness on sources of indoor air pollution, health outcomes and the adoptable preventive measures.