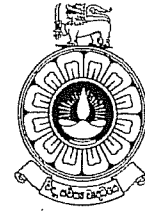


THE OPEN UNIVERSITY OF SRI LANKA
Department of Civil Engineering



M. Sc. in Environmental Science - Level 8

NEP2221 – Waste Management and Resource Recovery

Continuous Assessment Test # 1 - 2016/2017

Time Allowed: Ninety minutes

Reg. No.

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Date: 20th August, 2017

Time: 0900 - 1030

Answer all the questions in the given space.

1. (i) Classify solid waste based on mode of handling.
(ii) Briefly describe the characteristics of the above identified categories.

2. (i) List environmental consequences of open dumping of waste.
(ii) Discuss three major environmental consequences listed at 2(i).

3. (i) Briefly describe the principles of National Solid Waste management policy of Sri Lanka (published in year 2007).
(ii) List set of laws govern environment and waste management of the country.

- 4.(i) List important properties of Municipal Solid Waste.
(ii) Identify two properties listed in the above and briefly describe how those are useful in waste Management

5. Brief waste transformation techniques.

6. What are the available solid waste sorting techniques? List them.

7. (i) What is Municipal Solid Waste (MSW) compost?
(ii) List advantages of composting of Municipal Solid Waste.

8. (i) List parameters govern the municipal solid waste composting process.
(ii) Briefly discuss the effect of any two of the above parameters in composting process.

9. (i) List different solid waste composting techniques.
(ii) Identify one technique listed in the above and briefly describe.

10. Briefly discuss techniques which can be used for improving aeration in MSW windrow composting.

11. What are the environmental consequences of Windrow composting and how do they mitigate?

12. What are the criteria to be considered in selection of the best option for waste to Energy recovery?

13. (i) What is anaerobic digestion?

(ii) Describe the potential of using Anaerobic Digestion technique in waste management in Sri Lanka.

14. (i) List factors affecting Anaerobic Digestion of Municipal Solid Waste

(ii) Identify two factors listed above and describe the effect of those in anaerobic digestion.

15. (i) List types of bio reactors in Sri Lanka.
(ii) What are the advantages and disadvantages of anaerobic digestion in waste management?

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