

**THIRD SEMESTER M.Sc DEGREE EXAMINATION DECEMBER 2015
(CUCSS)**

09

**Environmental Science
ES 3C 14 WASTE AND WASTE MANAGEMENT
(2014 Admission)**

Time : Three Hours

Maximum : 36 Weightage

Part I**Short Answers (Answer all 14 questions)**

14X1 = 14 weightage

1. What is gray water?
2. Define activated sludge.
3. What is pressmud?
4. What are hazardous waste?
5. What is rubbish?
6. What is coagulation?
7. What are single cell proteins?
8. Define methanogenesis.
9. What is biomass energy?
10. What is vermiwash?
11. Define incineration.
12. What is waste segregation?
13. What is source reduction?
14. What is pyrolysis?

Part II**Short essays (Answer any seven of the following)**

7X2 = 14 weightage

15. Illustrate the hierarchy of waste management.
16. Describe the sources and types of liquid wastes.
17. Explain the potential of agricultural waste in India.
18. Explain the volume reduction techniques for solid wastes.
19. Explain the post-closure environmental monitoring of landfills.
20. Describe the segregation and collection of biomedical wastes.
21. Explain the disposal of nuclear wastes.
22. Describe the UASB reactor for anaerobic wastewater treatment.
23. What are the treatment options for dairy industry waste water?
24. Describe the vermicomposting technique.

Part III**Essay type (Answer any two questions)**

2X4 = 8 weightage

25. Explain the composition and treatment methods for sewage water.
26. Discuss the different types of landfills and their operations. What are the advantages and disadvantages.
27. "Waste to energy is a ideal option with dual advantage of waste reduction and energy production". Substantiate this statement with suitable explanations.
28. What are hazardous wastes? Describe the management techniques for hazardous wastes.