

**B.TECH. CIVIL ENGINEERING
(BTCLEVI)**

Term-End Examination

December, 2012

**BICEE-001 : SOLID AND HAZARDOUS WASTE
MANAGEMENT**

Time : 3 hours

Maximum Marks : 70

*Note : Answer any five questions . Use of scientific calculator
is permitted.*

1. (a) What is the composition of typical MSW in an Indian city ? 3
- (b) What are the various types of solid wastes ? 3
- (c) Write a detailed note on infectious waste in municipal solid wastes ? 8
2. (a) Write a detailed note on collection and Handling of solid wastes ? 7
- (b) Explain in detail about the various biological methods for the treatment of solid wastes ? 7
3. (a) Explain in detail the various thermal conversion techniques for municipal solid waste treatment. 7
- (b) Write a detailed note on materials separation and recycling of material in municipal solid wastes. 7

4. (a) What is an engineered land fill ? With the aid of a neat sketch, explain the working of different components of a secured land fill. 7
- (b) Differentiate Municipal solid waste, Industrial solid waste and Bio-medical wastes ? 7
5. (a) List out the various toxic solid wastes in Industrial wastes ? Explain the various methods of detoxification briefly. 7
- (b) Explain the various treatments and disposal techniques of Industrial solid waste ? 7
6. (a) What is Hazardous waste ? Explain the physico-chemical treatment and disposal methods of it ? 7
- (b) What are the sources of Hazardous waste ? What are the various classification of it ? 7
7. Write short notes on : 2x7=14
- (a) Stabilization and solidification of Hazardous waste.
- (b) Legal aspects of municipal solid waste collection.
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