

00479

B.TECH. CIVIL ENGINEERING
(BTCLEVI)

Term-End Examination
June, 2013

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

Time : 3 hours

Maximum Marks : 70

*Note : Answer **any five** questions . All questions carry equal marks.*

1. (a) Define solid waste. What are the sources of it ? Write the physical, chemical and biological properties of solid wastes ? 8
- (b) What are the sources and types of hazardous and infectious wastes in municipal solid wastes ? 6

2. (a) Write short notes on : 2x3½=7
 - (i) Incineration
 - (ii) Composting
- (b) Explain the various stages in processing and transportation of solid wastes to landfill site. 7

3. (a) Explain in detail, the various biological and chemical conversion techniques of solid waste processing. 7

- (b) What is Landfill ? Explain the different types of landfill. Also mention the gas collection system in a secured landfill. 7
4. Write detailed notes on the following : 2x7=14
- (a) Recycling of materials in municipal solid wastes.
- (b) Handling and storage of solid wastes.
5. (a) What is Industrial solid waste ? What are it's composition ? What are the different types and sources of industrial solid waste ? 7
- (b) Explain various treatment techniques and disposal methods of Industrial Solid Wastes. 7
6. (a) What is Hazardous Waste ? How is it classified based on Quality Parameters ? 7
- (b) Explain the various land disposal techniques of Hazardous Wastes. 7
7. Write short notes on the following : 4x3½=14
- (a) Site remediation
- (b) Closure of landfills
- (c) Leachate collection and treatment
- (d) Methods of detorification.