

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

**Term-End Examination**

**December, 2016**

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

*Time : 3 hours*

*Maximum Marks : 70*

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

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1. (a) What is the composition of a typical MSW in an Indian city? 4
- (b) Explain the sources of solid wastes. Discuss the types of non-hazardous solid wastes. 10
2. (a) Illustrate the factors affecting the generation rates of solid waste. 7
- (b) What is Recycling ? Explain its significance in management of solid waste. 7
3. Explain in detail the four factors that should be considered in on-site storage of solid waste. 14
4. (a) Explain in detail the various biological and chemical conversion techniques of solid waste processing. 10
- (b) Describe in brief any two types of collection services. 4

5. Discuss the solid waste disposal methods with their relative advantages and disadvantages. 14
6. (a) List out the various toxic solid wastes in industrial wastes. Explain the various methods of detoxification briefly. 8
- (b) Explain the various treatment techniques of industrial solid wastes in brief. 6
7. (a) Discuss the process and importance of transportation or conveyance of solid wastes from source to disposal site. 7
- (b) What are the various legal aspects of municipal solid waste collection ? Explain. 7
8. Write short notes on any **four** of the following :  $4 \times 3 \frac{1}{2} = 14$
- (a) Disposal of Solid Waste on Water Bodies
- (b) Segregation of MSW
- (c) Hazardous Waste
- (d) Leachate Collection
- (e) Closure of Landfills
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