

## B.Tech 7th Semester Exam., 2017

## SOLID WASTE MANAGEMENT

Time : 3 hours      akubihar.com      Full Marks : 70

## Instructions:

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **NINE** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question No. 1 is compulsory.

1. Choose the correct alternative (any seven) :

- (a) Landfills must control litter
  - (i) on-site
  - (ii) off-site
  - (iii) in quantities that create a nuisance
  - (iv) All of the above
- (b) The term 'municipal solid waste' (MSW) generally is used to describe
  - (i) wastes from industrial process, construction and demolition debris

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- (i) wastes from private homes, commercial establishment and institutions
- (ii) mining wastes
- (iii) agricultural wastes
- (c) The problem of solid waste disposal can be reduced through
  - recycling
  - (ii) lesser pollution
  - (iii) more timber
  - (iv) population control
- (d) The most serious environmental effect posed by hazardous wastes is
  - (i) air pollution
  - contamination of groundwater
  - (iii) increased use of land for landfills
  - (iv) None of the above
- (e) Making new container from crushed glass helps to
  - save materials
  - (ii) save fuel
  - Both of the above
  - (iv) None of the above

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- (f) Leachate is  
 (i) a by-product of waste incineration  
 (ii) a type of waste storage container used in 'clean coal' plant  
 (iii) a non-recyclable type of plastic  
 (iv) a liquid that results when garbage in landfill dissolves in water
- (g) Two biodegradable components of municipal solid wastes are  
 (i) plastic and wood  
 (ii) cardboard and glass  
 (iii) leather and tin cans  
(iv) food wastes and garden trimmings
- (h) What is waste disposal?  
 (i) The placement of waste into or on the land  
 (ii) The increase in earth's average temperature  
 (iii) The release of dirty particles into the air from industries  
(iv) None of the above
- (i) Landfill is the most common method of disposing wastes.  
(i) True  
 (ii) False

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~~2~~ Describe in detail the mostly used methods of solid waste disposal. Also write their advantages and disadvantages associated with them.

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~~3~~ What do you mean by 'collection of waste'? Also write the types of solid system. Describe one equipment of collection of solid waste.

~~4.~~ (a) Discuss the problem generated due to solid waste.

(b) Describe about collection routes for solid wastes.

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~~5~~ Describe the physical, chemical and biological properties of municipal solid wastes

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~~6.~~ (a) What are the sources of solid waste and types of solid wastes?

(b) Describe the waste characterization

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~~7~~ (a) Explain with examples of recycling of materials found in MSW.

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~~7~~ (b) What is solid waste management? Describe.

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8. Discuss about on-site storage methods, their containers, types of containers used and size and location in detail. 14  
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9. (a) Discuss about the factors that affect waste generation rates. 7  
(b) What are the types of transfer stations?  
Discuss any one type. 7