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Question Paper Code: 59112

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Elective

Civil Engineering

15UCE912- MUNICIPAL SOLID WASTE MANAGEMENT

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Vegetable wastes resulting from the handling, sale, storage, preparation, cooking and serving of food is known as CO1- R
(a) Rubbish (b) Garbage (c) Ashes (d) Bulky waste
2. Which method is most suitable for sampling techniques? CO1- R
(a) Coning and Quartering (b) Funnel techniques
(c) Manual (d) Compound
3. The important issues associated with public health aspects of storage through CO2- R
(a) Improper handling (b) Containers
(c) Disease vectors and pathways (d) Disposal
4. The process of segregation of solid waste is also known as CO2- R
(a) Grouped (b) Separation (c) Alteration (d) Individual

5. The collection of waste from community bins and transport to transfer station is called as CO3- R
- (a) Primary collection (b) Commercial
- (c) Secondary collection (d) Tertiary collection
6. The collection routes analyzed based on the type of CO3- R
- (a) Straight routing (b) Slope routing (c) Haul routing (d) Macro and Micro routing
7. The biodegrading of organic matter by microorganisms to produce stable humus byproduct called CO4- R
- (a) Composting (b) Degrading (c) Destabilizing (d) Burning
8. The thermal processing with excess amount of air is known as CO4- R
- (a) Pyrolysis (b) Gasification (c) Incineration (d) Composting
9. The liquid that has percolated through solid waste and extracted dissolved or suspended materials from solid waste called CO5- R
- (a) Leachate (b) landfill (c)Recirculation (d)Bioreactor
10. The suitable method of sanitary landfill is CO5- R
- (a)Area&Trench (b) Excavation (c)Vertical well (d) Pit

PART – B (5 x 2= 10Marks)

11. State the effects of improper disposal of solid waste on public health. CO1- R
12. What are the qualities of materials used for the containers? CO2- R
13. Mention the types of vehicles used for collection of municipal solid wastes. CO3- R
14. What are the end products of pyrolysis of solid waste? CO4- R
15. Give the composition of landfill gas. CO5 R

PART – C (5 x 16= 80Marks)

16. (a) Explain the sources and various types of municipal solid wastes. CO1- Ana (16)
- Or
- (b) Summarize the need of public awareness and role of NGOs in solid waste management. CO1- U (16)
17. (a) “Segregation of solid wastes at source is the key to waste management”-Explain with the help of a case study. CO2- Ana (16)
- Or
- (b) Explain the various issues related to public health and economic aspects of open storage of municipal solid waste. CO2- Ana (16)
18. (a) Explain the methods of residential and commercial solid waste collection. CO3- Ana (16)
- Or
- (b) Summarize the site selection and operation of transfer station. CO3- U (16)
19. (a) Discuss the various processing techniques used for resource recovery from solid waste. CO4- U (16)
- Or
- (b) Describe the various factors affecting the composting process. CO4- U (16)
20. (a) Explain the design and operation aspects of sanitary landfills. CO5- Ana (16)
- Or
- (b) Explain the collection and treatment of leachate in the landfill. CO5- U (16)

