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**Question Paper Code: 59112**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Elective

Civil Engineering

15UCE912- MUNICIPAL SOLID WASTE MANAGEMENT

(Regulation 2015)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

- Perapita generation of solid waste is \_\_\_\_\_ CO1- R  
(a) 100 -150 g/d      (b) 200-600 g/d      (c) 50 g/d      (d) 100-800 mg/d
- Refuse consists of \_\_\_\_\_ CO1- R  
(a) Garbage and street waste      (b) Trash and industrial waste  
(c) Ashes and metals      (d) Garbage and rubbish
- Completely decomposed organic matter is called \_\_\_\_ CO2- R  
(a) Mulch      (b) Humus      (c) Compost      (d) Scum
- The capacity of small transfer station is \_\_\_\_\_ tonnes CO2- R  
(a) 50      (b) 100      (c) 500      (d) 200
- Which of the following waste is not compostable? CO3- R  
(a) Food waste      (b) Paper      (c) Dry leaves      (d) Ashes
- The range of C/N ratio in composting process is \_\_\_\_\_ CO3- R  
(a) 31 to 35      (b) 21 to 25      (c) 26 to 30      (d) 36 to 45
- What is the optimum temperature for growth of mesophilic anaerobic bacteria? CO4- R  
(a) 30-38 °C      (b) 0-4 °C      (c) 55-60 °C      (d) None of the above
- Which of the following is present in landfill gas? CO4- R  
(a) Furans      (b) Potassium      (c) Methane      (d) Argon

9. Which of the following is a biological aerobic treatment of solid waste? CO5- R  
(a) Landfilling (b) Composting (c) Incineration (d) None of the above
10. Which of the following is included in 3 Ts of combustion? CO5- R  
(a) Temperature (b) Time (c) Turbulence (d) All of the above

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Explain the sampling methods and characterization of municipal solid waste. CO1- U (8)
12. Explain in detail the Onsite processing / Segregation methods for solid waste. CO2-U (8)
13. Differentiate hauled and stationary container system used for solid waste collection with neat diagrams. CO3- U (8)
14. Describe the incineration technologies with the emphasis on air emissions and control techniques. CO4- U (8)
15. What is a sanitary landfill? Explain with neat sketch of the components of landfill. CO5- U (8)

