

Third Semester B.E./B.Tech Degree Examination, June/July 2024 Waste Handling and Management

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module. 2. M : Marks , L: Bloom's level , C: Course outcomes.

| | | Module – 1 | M | L | С |
|----------|----|---|-----|------------------|-----|
| Q.1 | a. | Explain briefly the method of waste logistics. | 10 | L2 | C01 |
| 2.1 | b. | Write a note on : | 10 | L2 | CO1 |
| | ~ | i) Importance of waste logistics | | | |
| | | ii) Waste handling equipments. | | | |
| | | OR | | | |
| Q.2 | a. | Explain the steps involved in waste management logistics. | 10 | L2 | C01 |
| 2.2 | b. | Explain the environmental aspects of waste collection. | 10 | L2 | CO4 |
| | | Module – 2 | | | |
| 0.0 | | Explain the characteristics of solid waste. | 10 | L2 | CO2 |
| Q.3 | a. | Write a note on mechanical treatment of soild wastes in a material recovery | 10 | L2 | CO2 |
| | b. | | | | |
| | | facility. | d | | |
| 0.1 | | Define composting and explain any two method of composting of solid | 10 | L2 | CO2 |
| Q.4 | a. | | | | |
| | - | wastes. | 10 | L2 | CO2 |
| | b. | Briefly explain the following : | | | |
| | | i) Gasification of solid wastes | | | |
| | | ii) Refuse derived fuel. | | | |
| | | Module – 3 | 10 | TA | 001 |
| Q.5 | a. | Define hazardous waste and briefly explain its characteristics. | 10 | L2 | C01 |
| <u> </u> | b. | Briefly explain the sources and environmental effects of : | 10 | L3 | CO4 |
| | | i) Industrial waste | | | |
| | | ii) Plastic waste. | | | |
| | | OR | | | GOI |
| Q.6 | a. | Write a note on effects of E-waste on society and environment. | 10 | L3 | CO4 |
| - Zio | b. | to the section | 10 | L3 | CO3 |
| | | Module – 4 | | | |
| | 1 | Write a note on remediation of hazards waste contaminated sites. | 10 | L2 | CO4 |
| Q.7 | a. | Write a note on remediation of flazards waste containinated sites. | 10 | L3 | CO4 |
| | b. | Write a note on entrepreneurship activities in waste management. OR | 1.0 | | |
| | | | 10 | L3 | CO4 |
| Q.8 | a. | Write a note on waste management a practices in India. | 10 | L2 | CO3 |
| | b. | Briefly explain large scale compositing for municipalities. | | | |
| | | Module – 5 | | TTA | 00 |
| Q.9 | a. | Write a note on the hazardous waste rules 2008. | 10 | L2 | COS |
| Y.2 | b. | 1 - 2011 | 10 | L2 | COS |
| | | OR · | | [- - | 66 |
| Q.10 | a. | Briefly explain importance of E-waste management rules in India. | 10 | 1910 | CO |
| Q.10 | b. | 1 time of constitutional bodies and ministeries in | 10 | L2 | COS |
| | | environment protection. | | | |
| | | 4 4 4 4 k | | | |