Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2017**

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|  |  |  |  |
| **Code :** | **16CE3003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SOLID AND HAZARDOUS WASTE MANAGMENT** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Discuss the physical, chemical and biological characteristics of municipal solidwaste. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Describe the design and implementation of a collection system in solidwaste management. | CO3 | 20 |
|  |  |  |  |  |
| 3. |  | Explain the design, operation and maintenance of sanitary landfill. | CO3 | 20 |
| (OR) | | | | |
| 4. |  | Explain the processing techniques for reducing the volume and size of wastes. | CO3 | 20 |
|  |  |  |  |  |
| 5. |  | Discuss the separation of various components in solidwaste management. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Explain biogasification and identify its advantages. | CO3 | 20 |
|  |  |  |  |  |
| 7. |  | Discuss in detail about Pyrolysis. | CO3 | 20 |
| (OR) | | | | |
| 8. | a. | Assess the environmental impacts of incineration. | CO3 | 10 |
|  | b. | Identify the emissions from incinerators and their control. | CO2 | 10 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Identify and classify hazardous wastes. | CO3 | 10 |
|  | b. | Explain the techniques of hazardous waste management, treatment and minimisation. | CO3 | 10 |

ALL THE BEST