| Seat No.: | Enrolment No. |
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GUJARAT TECHNOLOGICAL UNIVERSITY

| BE - SEMESTER-VIII (OLD) - EXAM | IINATION – SUMMER 2017 |
|----------------------------------------------|------------------------|
| Subject Code:181301 | Date:04/05/2017 |
| Subject Name: Municipal and Hazardous Se | olid Waste Management |
| Time:10:30 AM to 01:00 PM | Total Marks: 70 |
| Instructions: | |
| 1. Attempt all questions. | |
| 2. Make suitable assumptions wherever necess | ary. |
| 3 Figures to the right indicate full marks | |

| Q.1 | (a) | Define the following terms: collection, refuse, leachate, sanitary landfill, Hazardous waste | 07 |
|-----|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| | (b) | Give classification of materials comprising municipal solid waste | 07 |
| Q.2 | (a) (b) | Explain the methods to determine generation of solid waste. Describe in detail Solid waste collection systems OR | |
| | (b) | Explain the properties of solid waste | 07 |
| Q.3 | (a) (b) | What do you mean by the term Landfill mining? Explain in detail classification of hazardous solid waste OR | 07 07 |
| Q.3 | (a) | With reference to hazardous waste management explain waste exchange and recycling | 07 |
| | (b) | Discuss the important characteristics of hazardous waste | 07 |
| Q.4 | (a) (b) | Explain the factors that must be considered in evaluating potential landfill site Enlist the processing techniques for municipal solid waste and explain any two in detail. | 07 07 |
| | | OR | |
| Q.4 | (a) (b) | Explain landfilling methods and operations Write a short note: recovery of biological conversion products | 07 07 |
| Q.5 | (a) (b) | Draw only the sketches of hardware used for the sampling of hazardous waste Write a short note: Stabilization and solidification of hazardous waste OR | 07 07 |
| 0.5 | (a) | Explain the biological treatment for hazardous waste with example | 07 |

Explain the means of treatment for biomedical waste.

(b)

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