JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T2 - EXAMINATION (October - 2017)
M. Tech. (I- SEM.)

COURSE CODE: 14M31CE115

COURSE NAME: Solid Waste Management

COURSE CREDIT: 3

MAX. MARKS: 25

MAX. TIME: 1.5 HRS

Note: Attempt all questions. Assume suitable data if required. Carrying of mobile phone during examinations will be treated as case of unfair means

1. Discuss the different recycling processes for (a) metals (b) glass and (c) plastic **(6)**

2. In the context of *Landfill gas formation,* explain the following (with appropriate sketches, if necessary) (a) composition and properties (b) hazards (c) migration and (d) control. **(6)**

3. Discuss the different factors which affect the selection of magnetic separation equipment. In this context, with neat sketches discuss the different type of magnetic separators **(2+2+2)**

4 a) A 200 ton/hour of solid waste is applied to a rotary screen for removal of glass prior to shredding. The percentage of glass in solid waste is 15% and total weight of material in underflow is 12 ton/hour. The weight of glass in screen underflow is 10 ton/hour. Using the information calculate (a) recovery efficiency and (b) effectiveness of screen. **(2)**

4 b) The volume of solid waste collected for a city was 28000 m³. The final volume after compaction was found to be 15000 m³. Find the percentage of volume reduction and compaction ratio **(2)**

5. In the context of miscellaneous separating techniques of solid waste, with neat sketches and figures where appropriate explain the need for processing of waste **(3)**