

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST III EXAMINATION (May - 2017)

M. Tech. (II- SEM.)/B.Tech. (VIII- SEM)

COURSE CODE: 14M31CE216

MAX. MARKS: 35

COURSE NAME: Hazardous Waste Management

COURSE CREDIT: 3

MAX. TIME: 2 HRS

*Note: Attempt all Questions. Carrying of mobile phones during exams will be treated as case of unfair means. Assume suitable data if required.*

1. In the context of classification of hazardous wastes, explain (a) the Regulatory Method for classification including its merits and demerits (b) Engineering Method for classification including its merits and demerits. (c) degree of hazard concept including its merits and demerits. (3+3+3)
2. Discuss some of the most fundamental hazardous waste chemicals with neat sketches and figures including (a) aliphatic (b) aromatics (c) PCB and PAH's (2+2+3)
3. In the context of energy and mass balance of a system, explain (a) system, (b) surrounding (c) system boundary (d) open system (e) closed system. (2.5)
4. Explain the major assumptions associated with development of general energy balance equation. (3.5)
5. Explain the procedure for conducting a mass balance and energy balance system (5)
6. Explain the significance of Basel Convention in Management of Hazardous Waste. (3)
7. Hazardous waste is often dumped on ground leading to soil and groundwater contamination. In this context, explain the minimum technology required for land disposal facility. Also draw a cross-sectional sketch of an engineered landfill site using liners (2+3)