Paper Code: ENV 32E ROLL NO

## M. TECH.

# (SEM III) ODD SEMESTER EXAMINATION, 2015-16 HAZARDOUS WASTE MANAGEMENT

[Time:-3 Hours] [Max Marks: 100]

Note: Attempt All Questions. All Questions carry equal marks:-

### Q. 1. Attempt any *two* of the following:

[10x2]

- (a) Define hazardous waste. How are hazardous wastes categorized? Explain.
- (b) Discuss in detail about the toxicity of hazardous wastes.
- (c) How are hazardous wastes collected and transported? What are the responsibilities of the hazardous waste transporter?

#### Q. 2. Attempt any *two* of the following:

[10x2]

- (a) Discuss in detail about The Hazardous Waste (Management and Handling) Rules, 1989.
- (b) Explain National Hazardous Waste Management Strategy.
- (c) Discuss the common attributes of (i) The Hazardous Waste (Management and Handling) Rules, 1989; (ii) RCRA and (iii) CERCLA.

#### Q. 3. Attempt any *two* of the following:

[10x2]

- (a) Discuss pollution prevention of hazardous wastes. Explain various ways of hazardous waste minimization in industries.
- (b) What is Environmental Audit Scheme and what are its objectives. Considering the format of Environment Audit Report explain how it is prepared.
- (c) Explain different types of physico-chemical treatment methods of hazardous wastes.

#### Q. 4. Attempt any two of the following:

[10x2]

- (a) What is the main objective of Quantitative Risk Assessment? Explain how it is achieved.
- (b) Discuss Emergency Preparedness Plan (EPP) by focusing on On-Site EPP. Explain the structure of emergency management along with functions of each.
- (c) Write a brief note on contaminant release. Write a brief note on atmospheric transport of contaminants.

#### Q. 5. Write short notes on any *four* of the following:

[5x4]

- (a) Basel Convention.
- (b) Land disposal of hazardous wastes.
- (c) Thermal treatment methods.
- (d) Solidification and Stabilization.
- (e) Stockholm Convention.
- (f) Dioxins and PCB's.