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8. *Delhi is one of the most environmentally challenged metropolitan cities in the country.* According to you, what are the various waste management issues experienced by its citizens and administration? Give suggestions on how Delhi can manage its waste-related issues based on current technologies and resources available. (15)

(200)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3146

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Unique Paper Code : 32187602

Name of the Paper : Solid Waste Management

Name of the Course : **B.Sc. Hons. Environmental Sciences - DSE**

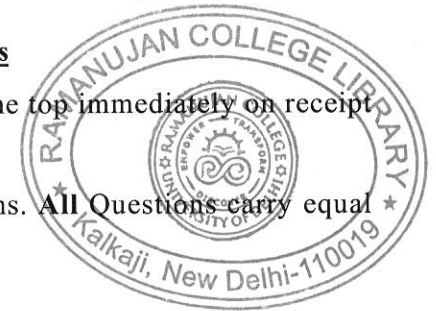
Semester : VI

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **five** questions. **All Questions carry equal marks.**



1. Briefly explain the following : (3×5=15)

(a) Bio-medical Waste

(b) RDF

(c) ETP

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- (d) Incineration
- (e) Flash Pyrolysis
2. (a) What is a sanitary landfill? Explain the various components required for a sanitary landfill to securely manage solid waste with the help of a labelled diagram. (10)
- (b) Discuss the main provisions under Municipal Solid Wastes (Management and Handling) Rules 2000. (5)
3. Write short notes on the following (**any three**): (5×3=15)
- (a) Effect of Landfill leachate on Soil and Groundwater
- (b) Stack Emission Control and Monitoring
- (c) 4R's
- (d) LCA
4. (a) How, in today's technologically advancing world, the concept of recovering energy from waste can help mitigate various environmental problems. Discuss with the help of a case study. (10)

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- (b) With the help of a labelled diagram, explain the fluidized-bed incinerator. (5)
5. (a) What are the different types of biological processes for waste management? Discuss, with the help of examples, the merits and demerits of these biological methods. (10)
- (b) What is stack emission control and monitoring? (5)
6. Differentiate between the following (**any three**): (5×3=15)
- (a) Municipal Solid Waste and Bio-Medical Waste
- (b) Dumping yard and Sanitary Landfill
- (c) Pyrolysis and Gasification
- (d) Composting and Vermicomposting
7. (a) Elucidate the impacts of solid waste on the environment and human health. Provide relevant case studies for your answer. (10)
- (b) Discuss how the Indian City of Indore has efficiently achieved sustainable waste management practices. (5)

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