

Printed Pages : 2



ECH-032

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 151752**

Roll No.

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**B. Tech.**(SEM. VII) (ODD SEM.) THEORY  
EXAMINATION, 2014-15**INDUSTRIAL POLLUTION ABATEMENT &  
WASTE MANAGEMENT**

Time : 3 Hours]

[Total Marks : 100

- 1 Attempt any four parts : 5×4=20
- a) Characterise the gaseous emissions from chemical industries.
  - b) Define air pollution and discuss the national standards for ambient air.
  - c) Mention any 5 major polluting chemical industries and explain in detail about any one.
  - d) Write short notes on
    - i) Acid rain
    - ii) Photo chemical smog
  - e) Explain the role of CPCB in the pollution control activities of India.
  - f) Write short notes on people participation on environmental issues and their awareness.
- 2 Attempt any two parts : 10×2=20
- a) Discuss the ways that can be adopted for waste minimisation and cleaner production in industries.

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- b) In a textile industry explain how you will recover energy and utilize waste released.
- c) Explain the material and energy balance for pollution minimization.
- 3** Attempt any two parts : **10×2=20**
- a) With a neat sketch explain the working principle and design of electro static precipitator.
- b) Discuss the gaseous emission control by absorption and fabric filters.
- c) Explain the following
- i) Sedimentation
- ii) Coagulation and flocculation.
- 4** Attempt any two parts : **10×2=20**
- a) Briefly explain aerobic digestion and its biochemical kinetics.
- b) Discuss the operation of trickling filter with a neat sketch
- c) Describe the aeration systems in an industry you know.
- 5** Attempt any two parts : **10×2=20**
- a) Explain the various provisions available in environmental laws with reference to hazardous wastes.
- b) Elaborate the utilization and management of non-hazardous wastes.
- c) Explain the waste management in a sugar industry.
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