

Printed Pages : 3



ECH-033

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

PAPER ID : 151753

Roll No.

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B. Tech.

(SEM. VII) (ODD SEM.) THEORY
 EXAMINATION, 2014-15
**ENVIRONMENTAL POLLUTION
 MONITORING AND CONTROL**

Time : 3 Hours]

[Total Marks : 100

1 Attempt any **FOUR** parts : **5x4=20**

- a) Define ecology and discuss the severity of deforestation on it.
- b) Discuss the clean air act 1956.
- c) Explain the importance of protecting biodiversity.
- d) Explain the Euro standards of ambient air and water quality
- e) What are the effects of noise pollution on human health and mention its standards.
- f) What is thermal and radio active pollution. Discuss their effects and control.

2 Attempt any **TWO** parts : **10x2=20**

- a) Discuss the air pollution control devices adopted in automobiles.

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[Contd...

- b) A 100m tall chimney emits carbon monoxide at a rate of 3.5kg/s in a highly buoyant plume. The plume rise (Δh) after exiting the chimney follows a trajectory which is given by the equation: $\Delta h = 0.15x^{2/3}$ (all dimensions in metres). The wind speed is 8 m/s and the local ground roughness length is $z_0 = 0.02\text{m}$. What is the ground level concentration along the x-axis at a distance of 3.5km down wind of the chimney?
- c) Explain the measuring techniques of the following
- Smoke density and visibility
 - Particulate pollutants

3 Attempt any **TWO** parts : **10x2=20**

- a) Write a short notes on :
- Biological oxygen demand
 - Pathogenic bacteria
 - Chemical toxicity.
- b) Discuss the type of pollutants in waste water of chemical industries.
- c) Explain the selection parameters and design of ion exchange resin in waste water treatment.

4 Attempt any **TWO** parts : **10x2=20**

- a) Describe the collection and transport system of solid waste.
- b) List the waste disposal methods. Explain sanitary landfill with neat diagram.
- c) Explain about biological solid waste treatment.

- 5** Attempt any **TWO** parts : **10x2=20**
- a) Discuss the pollution prevention and control in petroleum refineries.
 - b) Explain with a flow diagram about the waste water treatment in a tannery industry.
 - c) Elaborate various wastes from food processing industries and their control techniques.
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