Code No: 07A70103 **R07** **Set No. 2**

IV B.Tech I Semester Examinations,November 2010
ENVIRONMENTAL ENGINEERING-II
Civil Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Technological innovation - a boon or a bane to the environment in the context of solid waste generation? Discuss. [16]
2. Describe the chemical treatment processes available for treatment of hazardous waste materials. [16]
3. (a) Differentiate Non-point pollutants and point pollutants. Give examples. What are the general characteristics of non-point source pollution?
   (b) Classify and outline the characteristics of particulate pollutants. [8+8]
4. (a) How the temperature will affect the Nitrification and Denitrification.
   (b) Describe the process of removal of Phosphates from industrial waste waters. [8+8]
5. Discuss the various health and hygiene factors involved in the MSW management. [16]
6. What are the different types of pollution? Write down the main sources of pollution? Explain in detail about noise pollution. [16]
7. (a) Write a note on the types of Reverse Osmosis membranes.
   (b) Compare the different types of Reverse Osmosis membranes. [8+8]
8. (a) Write a note on plume patterns.
   (b) Write a note on cleaning of gaseous pollutants. [8+8]

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Code No: 07A70103 **R07** **Set No. 4**

IV B.Tech I Semester Examinations,November 2010
ENVIRONMENTAL ENGINEERING-II
Civil Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Describe the types of industrial air pollutants with examples and their sources. [16]

2. What are the types of collection systems for solid wastes? Explain briefly about each type. [16]

3. (a)What are the health hazards of noise on human beings in different age groups?
(b) How noise level is measured? [8+8]

4.What are the benefits and issues involved in the recycling of municipal solid waste? Elaborate. [16]

5. (a)Explain the ion exchange treatment process of industrial effluent waters with a neat sketch.
(b)What are the water treatment methods to remove excess fluorides in drinking water? [8+8]

6. (a) Differentiate the Nitrification and Denitrification.
(b) Write a note on simultaneous Nitrification and Denitrification. [8+8]

7. Explain control methods for Hazard waste management. [16]

8. Compare and contrast:
(a) Gravity and cyclone separators.
(b) Wet and dry electrostatic precipitators.
(c) Spray and packed towers.
(d) Absorbers and Adsorbers. [4×4=16]

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Code No: 07A70103 **R07** **Set No. 1**

IV B.Tech I Semester Examinations,November 2010
ENVIRONMENTAL ENGINEERING-II
Civil Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Define non hazardous solid waste and describe their methods of disposal. [16]
2. (a) Define noise pollution and write the different sources of noise pollution in urban areas.
   (b) How to mitigate the effects of these noise pollution? [8+8]
3. Write the modern unit operations involved intreatment of hazardous liquid wastes? Explain with the help of a schematic diagram. [16]
4. (a) Describe the classification of industrial adsorbents.
   (b) What are the applications of Activated Carbon? Explain. [8+8]
5. (a) Discuss in detail the harmful effects of air pollutants on materials.
   (b) Write a note on secondary pollutants. [8+8]
6. (a) Explain the terms particulate and gaseous emission. What are different dust collections devises?
   (b) An industry utilizes 0.3 million litres of oil per month. It is estimated that for every 1 million liter of fuel oil burnt in the factory per year, the quantity of various pollutants emitted are given as:
   Particulate matter = 2.9 tonnes/yr
   SO_2 = 60 tonnes/yr
   Calculate the height of the chimney required to be provided for safe dispersion of the pollutants. [8+8]
7. How the solid waste management problems are addressed in developed countries though the per capita solid waste generation is much higher than that of the developing nations like India and China? Explain. [16]
8. What are the stages of industrial waste water treatment-Explain with a flow diagram. [16]

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Code No: 07A70103 **R07** **Set No. 3**

IV B.Tech I Semester Examinations,November 2010
ENVIRONMENTAL ENGINEERING-II
Civil Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. How to control the noise pollution in road transportation and describe the sources and causes of noise in vehicles? [16]
2. What is the role of time, temperature, moisture and turbulence in the combustion of municipal solid waste in improving the efficiency of combustion? Explain. [16]
3. (a) Draw the sketch of photolytic cycle and explain the photochemistry of smog.
   (b) Write a note on classification of air pollutants. [8+8]
4. (a) What is the composition and properties of solid wastes?
   (b) How technological changes contribute to solid waste generation in commercial and domestic sector. [8+8]
5. What do you understand by the term "Equalization"? Illustrate your answer with examples. [16]
6. (a) Explain the preparation of Activated Carbon.
   (b) How does the activated charcoal absorb toxic materials from the industrial waste water? [8+8]
7. (a) List out the various meteorological instruments used to measure:
      i. Atmospheric pressure
      ii. Humidity
      iii. Temperature
   (b) With the help of a neat sketch explain the working of Wind Speed Recorder. [8+8]
8. Write about the hazardous waste disposal methods with examples? [16]

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