Code No: 07A80801 **R07** **Set No. 2**

IV B.Tech II Semester Examinations,APRIL 2011
INDUSTRIAL POLLUTION CONTROL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Explain briefly:
   (a) Centrifugal scrubbers
   (b) Packed bed & plate columns. [8+8]
2. How the air pollutant - Carbon monoxide is analyzed? Discuss. [16]
3. Discuss briefly recovery and recycling of used paper. [16]
4. Explain Dewatering of sludge in detail. [16]
5. How the organic vapor is treated by absorption process? Explain. [16]
6. List out the various liquid and gas emissions from various industries in India. [16]
7. Explain briefly about solvent extraction. [16]
8. Discuss in detail about the pollution control for liquid effluents in pulp and paper industry. [16]

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Code No: 07A80801 **R07** **Set No. 4**

IV B.Tech II Semester Examinations,APRIL 2011
INDUSTRIAL POLLUTION CONTROL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. What is the importance of primary treatment of waste water? Explain [16]
2. Write short notes on:
   (a) Water pollution
   (b) Noise pollution. [8+8]
3. What are the two commonly used systems for biological waste treatment? Explain them. [16]
4. Write in detail about the filtration and impingement techniques for collection of particulate pollutants in atmosphere. [16]
5. Explain recovery and recycling of various chemicals wastes in detail. [16]
6. Discuss in detail about the treatment of liquid effluent of a fertilizer industry. [16]
7. Discuss about the treatment of liquid effluent from a petrochemical industry. [16]
8. Explain cleaning of gaseous equipments. [16]

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Code No: 07A80801 **R07** **Set No. 1**

IV B.Tech II Semester Examinations,APRIL 2011
INDUSTRIAL POLLUTION CONTROL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Explain the suspended growth process in detail. [16]
2. (a) What are the different sources for the solid waste?
   (b) Classify the solid wastes from industries. [8+8]
3. Write in detail about the gas sampling. [16]
4. The following BOD results are observed for a sample of raw sewage at 20^0C:

t(days) -	0	1	2	3	4	5
y(BOD, mg/l)-	0	60	105	135	156	170

   Calculate the reaction rate constant k_1^l and the ultimate BOD, L_u? [16]
5. How the environment legislation can prevent the pollution of environment? Explain. [16]
6. List and explain the chemical reactions which cause pollution in the atmosphere. [16]
7. List out the various fertilizer plants emit liquid and gaseous effluents and discuss about the treatment of effluents. [16]
8. Explain the Characteristic Settling Curve in detail. [16]

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Code No: 07A80801 **R07** **Set No. 3**

IV B.Tech II Semester Examinations,APRIL 2011
INDUSTRIAL POLLUTION CONTROL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. How the gaseous air pollutants are collected from atmosphere? Explain. [16]
2. Write briefly on:
   (a) Water act
   (b) Air act. [8+8]
3. Describe cyclone separators in detail. [16]
4. (a) Write about the potential methods for solid waste disposal.
   (b) Write short notes on utilization of solid waste. [8+8]
5. Explain Aerobic process of waste water treatment. [16]
6. Describe the various dry processes for removal of SO_2. [16]
7. Write in brief about the sources of pollutants in Fertilizer, Paper and petroleum industries. [16]
8. Explain DuPonts powdered activated carbon process in detail. [16]

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