

Code No: RT41085

**R13**

**Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February/March - 2018  
**INDUSTRIAL POLLUTION CONTROL ENGINEERING**  
(Open Elective)

Time: 3 hours

Max. Marks: 70

*Question paper consists of Part-A and Part-B*  
*Answer ALL sub questions from Part-A*  
*Answer any THREE questions from Part-B*  
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**PART-A** (22 Marks)

1. a) Write different sources of Water Pollution. [3]
- b) Write briefly about self-purification of running streams. [4]
- c) Write briefly on Carbon absorption. [3]
- d) Write briefly about rotary drum filters. [4]
- e) Write briefly about gaseous sampling. [4]
- f) Explain how the change in raw materials would control air pollution. [4]

**PART-B** (3x16 = 48 Marks)

2. a) What are the different types of emissions from chemical industries and give their environmental effects? [8]
- b) Write the guidelines and standards of effluent waste water. [8]
3. a) Explain the analytical method of determination of BOD. [8]
- b) Derive the mathematical expression for BOD. [8]
4. a) Explain  
i) Reverse osmosis and  
ii) Ultra filtration [8]
- b) Explain briefly about  
i) Flotation and  
ii) Neutralization. [8]
5. a) Explain anaerobic process of waste water treatment. [8]
- b) Explain in detail about Stabilization ponds. [8]
6. a) Describe different analytical procedures to collect and characterize particulate matter from effluent streams. [10]
- b) List out the equipment for control of gaseous emissions. [6]
7. a) Write in detail about the principle of Electro-static precipitator. [8]
- b) With the help of an example explain how the changes in the existing processes can decrease the pollution. [8]