

Code No: **R41013**

R10

Set No. 1

IV B.Tech I Semester Regular/Supplementary Examinations, Nov/Dec - 2015

ENVIRONMENTAL ENGINEERING

(Civil Engineering)

Time: 3 hours

Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks

- 1 a) Define Air Pollution. Name general air pollutants along with the sources. Discuss the impact of air pollution on humans. [8]
b) Write a detailed note the importance of Air Emission Standards. [7]
- 2 a) Enumerate the significance of special treatment methods. [8]
b) What is adsorption? Explain the principle of adsorption with examples. [7]
- 3 a) What is the need for volume and strength reduction in industrial waste water treatment? [8]
b) What is the impact of Common Effluent Treatment Plants in industrial growth? [7]
- 4 a) What is composting? Mention different methods of composting and explain. [8]
b) What is incineration? With sketch explain the process of incineration along with merits and demerits. [7]
- 5 a) What is bio-medical waste? Classify bio medical waste. [8]
b) Describe the methodology for collection, treatment and disposal of Electronic waste. [7]
- 6 a) Define the term sanitation and environmental sanitation and enumerate its importance. [8]
b) Describe the Environmental Sanitation to be followed for swimming pools and public bathing places. [7]
- 7 a) Define Environmental Impact Assessment. Explain the role of EIA in sustainable development. [8]
b) Assess the impacts on air and water environments from a thermal power plant. [7]
- 8 a) Write note on the following: i) Noise, ii) sanitary land fill [8]
b) Briefly Explain: i) Wind rose, ii) Scrubbers [7]

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Set No. 2

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ENVIRONMENTAL ENGINEERING

(Civil Engineering)

Time: 3 hours

Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks

- 1 a) Discuss the need for air pollution control. Explain the importance of wind rose diagrams. [8]
b) Draw the sketch of ESP and explain its functioning. [7]
- 2 a) Explain different methods for phosphorous removal. [8]
b) Explain the effects of excess fluorides. What is defluoridation? Discuss. [7]
- 3 a) Discuss the objectives of Neutralization, and Equalization. [8]
b) Write about the importance of Effluent Standards. [7]
- 4 a) Mention and explain different methods that are followed for MSW. and disposal [8]
b) Define Municipal solid waste and explain the effect of MSW on sanitation and health. [7]
- 5 a) What is Hazardous waste? Discuss the process of collection, storage and transportation of Hazardous waste. [8]
b) Write an essay on procedure to be followed to handle Chemical waste. [7]
- 6 a) Discuss the Environmental methods to be adopted for melas and fares. [8]
b) Discuss various ways of reducing noise in industrial and residential activities. Also discuss the effect of noise on humans. [7]
- 7 a) Describe the methodology in the preparation of Environmental Impact Statement. [8]
b) Discuss the need for screening and scoping in EIA studies. [7]
- 8 a) Explain briefly: i) Bag filters, ii) Composting and vermi-composting. [8]
b) Writ Notes on: i) Measurement and control of noise ii) ISO1400 [7]

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Set No. 3

IV B.Tech I Semester Regular/Supplementary Examinations, Nov/Dec - 2015

ENVIRONMENTAL ENGINEERING

(Civil Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any FIVE Questions
All Questions carry equal marks**

- 1 a) Explain Primary and Secondary pollutants with examples. [8]
b) Write an essay on general methods for controlling gaseous emissions. [7]
- 2 a) Explain the role of Ion exchange in waste water treatment process. [8]
b) Explain the term Reverse Osmosis. Discuss with examples. [7]
- 3 a) Write about the need for Common Effluent Treatment Plants in India. [8]
b) What is the importance of Recirculation of Industrial waste? [7]
- 4 a) Enumerate various steps involved in Solid Waste Management. [8]
b) Write about sources, composition and characteristics of solid waste. [7]
- 5 a) Define Hazardous waste and discuss different types of hazardous waste. [8]
b) Explain disposal methods normally followed for bio-medical waste. [7]
- 6 a) Describe different sources of noise and means to control the noise pollution from these sources. [8]
b) Write an essay on the importance of Rural Sanitation. [7]
- 7 a) Discuss various methods used in evaluation of impact. [8]
b) What is Environmental Audit and discuss its role in Environmental Monitoring. [7]
- 8 a) Write Notes: i) Noise Standards ii) Ultra filtration [8]
b) Briefly Explain: i) Control of SPM ii) Effluent standards [7]

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Set No. 4

IV B.Tech I Semester Regular/Supplementary Examinations, Nov/Dec - 2015

ENVIRONMENTAL ENGINEERING

(Civil Engineering)

Time: 3 hours

Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks

- 1 a) Differentiate SPM and RSPM. Mention ambient air quality standards for General pollutants. [8]
b) Draw the sketch of cyclones and multi cyclones and explain its functioning. [7]
- 2 a) What do you understand by the term Nitrification and Denitrification? Discuss its role in wastewater treatment. [8]
b) What is ultra filtration? Enumerate its importance with examples. [7]
- 3 a) Discuss the approach to waste water management. [8]
b) Write about volume reduction and strength reduction and its importance. [7]
- 4 a) Mention and explain various components in Municipal solid waste (MSW). Also state characteristics of MSW. [8]
b) Explain open dumping and sanitary land fill. Also mention the problems associated with open dumping. [7]
- 5 a) What is Nuclear waste? Enumerate the precautions to be taken in handling Nuclear waste. [8]
b) Explain the methods to be adopted for disposal of Chemical waste. [7]
- 6 a) Define Noise. Briefly discuss the effect noise on humans and also mention Noise standards. [8]
b) Describe the importance Environmental Sanitation in protecting the health. Also discuss various components of Environmental Sanitation. [7]
- 7 a) Describe the process used to assess the Environmental Impacts. Also differentiate primary and secondary impacts. [8]
b) Discuss in detail adhoc and Matrix methods for evaluation of impacts. [7]
- 8 a) Explain the Environmental Sanitation methods for hotels and swimming pools. [8]
b) Write notes on: i) Electronic Waste ii) Environmental audit [7]