

ENVIRONMENTAL POLLUTION CONTROL METHODS (11 – OE310)

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SYLLABUS

Sources, Types and Effects of Water pollutants. Measurement of pollution loads: DO, BOD, COD, TOC - Water quality and Effluent discharge standards. Role of Microorganisms in wastewater treatment. Bacterial population dynamics- growth kinetics. Pre treatment, primary treatment, secondary and tertiary treatment of wastewater. Low cost treatment unit processes. Sources, Types, and effects and Fate of air pollutants. Meteorological factors and their impacts on pollutants dispersal. Sampling and measurement of air pollutants. Air quality standards. Air pollution control methods for particulates and gaseous pollutants. Emission Control equipments for particulate and gaseous matter Sources and types of Solid wastes – Disposal methods: Land filling - Composting - Incineration – Pyrolysis . Reclamation of polluted and degraded soil by Bioremediation- Phyto-remediation. Human acoustics, Sound and its general features- Noise and its measurement - Noise pollution hazards -Control methods

Text Books

1. Environmental Pollution Control Engineering by C.S.Rao (2006), New Age International (P) Limited Publishers, New Delhi.
2. Environmental Engineering by Howard S. Peavy, Donald R. Rowe and George Tchobanoglous(1985), Mc Graw-Hill International Editions, NewYork.

ReferenceBooks

1. Sewage Disposal And Air pollution Engineering by S.K. Garg, Khanna publishers, New Delhi, 2010.
2. Waste water Engineering by M.N Rao and A.K Dutta, Oxford & IBH Publishing Co.Ltd, 2000.
- 3.Air Pollution by M.N Rao and H.V.N Rao, Tata McGraw- Hill Publishing Company Limited, New Delhi, 2000.
- 4.,Environmental Engineering by Davis Cornvel, McGraw Hill Book Co., New York, 2000.
5. Waste Water Engineering by Met Calf &Eddy, McGraw Hill Book Co., New York, 2006.