

Code: 9A01704

B.Tech IV Year I Semester (R09) Supplementary Examinations June 2017

ENVIRONMENTAL ENGINEERING - II

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Classify air pollutants into different categories, indicating their sources.
(b) Elucidate briefly national ambient air quality standards.
- 2 (a) The dust has particles with a drift velocity of 0.15 m/s. For a total air flow of 60 m³/s, determine the number of 10 x 10 m² collecting plates needed to achieve 90% removal in an electrostatic precipitator.
(b) Describe with a neat sketch, the principle and working of cyclone separator used for removal of air pollutants.
- 3 Describe the process of adsorption. Give examples of how it would apply in air pollution control applications.
- 4 (a) Discuss the various methods for volume reduction in industrial waste treatment.
(b) With a neat sketch, explain in detail the activated sludge process in wastewater treatment.
- 5 (a) What is the importance of transfer station? What factors will you consider while planning and designing a 'transfer station' for municipal solid waste?
(b) Discuss on the various properties of solid waste.
- 6 With a neat sketch, show the major components of landfill. How do you decide a location to put a landfill and what are the criteria to be considered for locating it?
- 7 (a) What do you mean by biomedical wastes? How these wastes segregated in hospitals?
(b) Discuss the methods for disposal of biomedical wastes.
- 8 List the various sources and effects of noise pollution. Also briefly explain the factors and actions that may help in noise reduction at source, in transmission and at receiving end.
