

Duration: 2 hours 30 minutes

Marks: 60

Instructions to the candidates:

1. Attempt all questions
2. Neat diagrams must be drawn wherever necessary
3. Figures to the right indicate marks for each question

- Q1.** Attempt any **two** of the following
- a) Explain the Primary, secondary and tertiary wastewater treatments. 06
 - b) Describe the measurement of treatment efficiencies. 06
 - c) Explain the use of biofilms in treatment of wastewater. 06
- Q2.** Attempt any **two** of the following
- a) Describe the working of fluidized bed combustion. 06
 - b) Explain the cyclone collector. 06
 - c) Describe methods for reducing air pollution in the environment. 06
- Q3.** Attempt any **two** of the following
- a) Explain in detail on incineration as solid waste management. State its advantages and disadvantages. 06
 - b) Give a brief note on recycling of waste. 06
 - c) Explain different strategies for noise management. 06
- Q4.** Attempt any **two** of the following
- a) Define phytoremediation. Explain different mechanisms involved in the process of phytoremediation. 06
 - b) Discuss in detail ex-situ bioremediation methods. 06
 - c) Describe various factors affecting the process of biodegradation. 06
- Q5.** Attempt any **four** of the following
- a) Bioremediation. 03
 - b) Bioaugmentation. 03
 - c) Air pollution and pollutants. 03
 - d) Electrostatic precipitators. 03
 - e) Ocean dumping. 03
 - f) Effects of oil spills. 03
