



12. (a) Demonstrate different plume pattern possible from a stack with respect to prevailing atmospheric stability conditions and lapse rate.

Or

- (b) Explain in detail the Gaussian dispersion model for the prediction of Ground level concentration of pollutants emitted from a stack.

13. (a) Explain with a help of neat sketches the working principle of a cyclone separator and a wet scrubber. Bring out the merits and demerits of both system.

Or

- (b) Illustrate with neat sketches the performance and working mechanism of a bag house filter. Also discuss the operational troubles encountered in it.

14. (a) Describe an absorption and adsorption tower and its operational principle in the removal of gaseous contaminants from a contaminated air stream.

Or

- (b) (i) Make a brief description on Bio-Scrubbers in the removal of dirty gases. (7)

- (ii) Explain the working principle of an incinerator in converting a pollutional gas stream into pollution free. (6)

15. (a) Explain the air pollution control strategies for a building subjected to indoor air pollution from different sources.

Or

- (b) Explain different noise pollution control strategies available and discuss the factors influencing noise pollution.

PART C — (1 × 15 = 15 marks)

16. (a) As an environmental/Town planner, how would you plan for a city being free from possible air pollution from various sources including industries situated.

Or

- (b) An industry is emitting huge amount of gaseous including particulate matters and objectionable gases (organic and inorganic). Suggest a pollution control measure for the industry.