Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2024

Course: Air & Noise Pollution Control **Semester: V**
Program: B.Tech (Sustainability Engineering) **Time 03 hrs.**
Course Code: SUEN3003 **Max. Marks: 100**

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	What is the role of chlorofluorocarbons (CFCs) in ozone depletion?	**4**	**CO2**
Q 2	Define gravitational settling chambers and their principle of operation.	**4**	**CO2**
Q 3	What is the unit of lapse rate in atmospheric stability studies?	**4**	**CO1**
Q 4	State the formula for effective stack height using Holland's formula.	**4**	**CO1**
Q 5	What is the range of particle sizes that a cyclone separator can efficiently remove?	**4**	**CO3**
	SECTION B (4Qx10M= 40 Marks)		
Q 6	Apply the plume dispersion principles to recommend stack height adjustments for a factory in a stable environment.	**10**	**CO4**
Q 7	For a bag filter system, recommend appropriate cleaning methods based on particle size and dust type.	**10**	**CO5**
Q 8	Compare the pollutant removal efficiencies of cyclone separators and fabric filters.	**10**	**CO5**
Q 9	Analyze the environmental and health impacts of sulfurous and photochemical smog. **OR** Analyze the effects of particulate matter on respiratory and cardiovascular health.	**10**	**CO2**
	SECTION-C (2Qx20M=40 Marks)		
Q 10	Propose a city-wide action plan to combat smog during winter months.	**20**	**CO5**
Q 11	Propose an integrated air pollution control system for a thermal power plant. **OR** Develop a training module for workers on the use and maintenance of electrostatic precipitators.	**20**	**CO5**