

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

Lecture Plan

Subject Name: - Air and Noise Pollution Engg.

Branch/Semester: -ME - 7th SEM

Subject Code: - MEO-411A

Sr No.	Lecture No.	Topics To Be Covered	ICT Mode
1	L 1	Concept of unpolluted air, gaseous and vapor pollutants in atmosphere, scales of air pollution	Ppt
2	L 2	primary and secondary pollutants, ambient air quality	Ppt
3	L 3	monitoring of pollutants (SO ₂ , NO ₂ , O ₃ , PAN, particulates, hydrocarbons, PAH's) and their health effects	Ppt
4	L 4	stack monitoring for SO _x , NO _x , CO, CO ₂ , Hydrocarbons, Fluorides, Ammonia, VOCs	Ppt
5	L 5	effects of air pollution on vegetation	Ppt
6	L 6	materials and structures	Ppt
7	L 7	stack monitoring for thermal power plant, oil refinery industry	Ppt
8	L 8	fertilizer industry, non-ferrous metal industry. recent techniques of online stack monitoring	Ppt
9	L 9	emission inventory	Ppt
10	L 10	trends of AAQ in urban, rural and Industrial areas.	Ppt
11	L 11	UNIT-II Air quality: National and International air emission standards	Ppt
12	L 12	AAQ guidelines,	Ppt

13	L 13	GLC estimates for multiple sources using standard software (e.g., EPA's ISC model)	Ppt
14	L 14	indoor air quality	Ppt
15	L 15	averaging time, air pollution system	Ppt
16	L16	alternative control strategies	Ppt
17	L 17	determination of effective stack height.	Ppt
18	L 18	UNIT-III Emission Standards and Particulate matter: Distribution and sources of particulate matter	Ppt
19	L 19	emission reduction by fuel changes	Ppt
20	L 20	emission reduction by engine design changes	Ppt
21	L 21	flue gas control methods for NO _x , emission standards for automobiles	Ppt
22	L 22	origin of exhaust emissions from gasoline	Ppt
23	L 23	diesel, CNG and LPG engines,	Ppt
24	L 24	crankcase and evaporative emissions	Ppt
25	L 25	emission reduction by engine design changes	Ppt
26	L 26	catalytic converters	Ppt
27	L 27	diesel engine emissions	Ppt
28	L 28	Noise: Characteristics	Ppt
29	L 29	Noise: sources	Ppt
30	L 30	Noise: types of noise	Ppt
31	L 31	Noise: impact of noise	Ppt
32	L 32	Physics of sound- Speed of sound	Ppt

33	L 33	Physics of sound- sound pressure, frequency	Ppt
34	L 34	wavelength, RMS sound pressure, sound pressure level	Ppt
35	L 35	loudness, sound power level and sound energy density	Ppt
36	L 36	sound propagation, wind and temperature gradient.	Ppt
37	L 37	Enclosures and Barriers: Lead as a noise barrier	Ppt
38	L 38	plenum barriers, barrier around pipe, wires	Ppt
39	L 39	rectangular ductwork, high transmission loss ceilings	Ppt
40	L 40	acoustical foams, nylon in noise reduction	Ppt
41	L 41	damping compounds.	Ppt
42	L 42	Noise measuring equipments: Sound level meter	Ppt
43	L 43	octave band analyzer, statistical analyzer and noise average meter	Ppt

Signature