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**B. TECH**  
**(SEM 5) THEORY EXAMINATION 2021-22**  
**AIR & NOISE POLLUTION CONTROL ENGINEERING**

*Time: 3 Hours**Total Marks: 100***Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 10 = 20**

a.	What are the sources of Air pollution?
b.	Write a short note on photo-chemical smog?
c.	Write short notes on Kyoto Protocol
d.	Define wind rose and draw its diagram.
e.	What is Air Quality Index?
f.	What is Threshold Shift?
g.	Define Heat Island Effect.
h.	Define Adsorption.
i.	Write down the permissible noise levels in different zones.
j.	Explain in detail about the primary and secondary air pollutants with examples

**SECTION B****2. Attempt any three of the following: 10 x 3 = 30**

a.	Write a note on lapse rate, temperature lapse rate and adiabatic lapse rate.
b.	Discuss Air (Prevention & Control of pollution Act). with its Salient features.
c.	Explain the factors affecting the selection of the particulate air control devices
d.	Enlist impact of noise pollution on human health and environment.
e.	Write a short note on effects and causes of noise pollution.

**SECTION C****3. Attempt any one part of the following: 10 x 1 = 10**

(a)	Describe in detail about the various control methods of gaseous pollutants for controlling oxides of sulphur, nitrogen and carbon
(b)	Briefly discuss the Absorption sampling collection techniques and sampling devices for gaseous air pollutants.

**4. Attempt any one part of the following: 10 x 1 = 10**

(a)	Discuss Gaussian plume model for dispersion of air pollutants and its applications
(b)	Write a note on subsidence inversion and double inversion in relation to atmospheric stability.

**5. Attempt any one part of the following: 10 x 1 = 10**

(a)	What are factors considered while selecting the air pollution control devices? Discuss the working procedure of ESP with diagram.
(b)	What is meant by air quality monitoring? Explain any four methods of calculation of air pollution indices for monitoring of air pollutants



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6. Attempt any *one* part of the following: 10 x 1 = 10

(a)	Describe the principle of operation, advantages and limitations of Gravitational settling chamber for particulate contaminants.
(b)	Describe the principle of operation, advantages, and limitations of Fabric filter for particulate contaminants.

7. Attempt any *one* part of the following: 10 x 1 = 10

(a)	What is power and intensity in noise pollution? Explain in detail the outdoor noise propagation and indoor noise propagation in relation with noise pollution and control.
(b)	Describe various types of pollutants emitted from petrol-driven and diesel driven motor vehicles. Also write Euro-1, Euro-II and Euro-III specifications for pollution control in petrol driven passenger cars.