Subject Code: RCE077

PAPER ID-310169

Roll No: | | | | | | | | | | | | | |

B. TECH
(SEM-VII) THEORY EXAMINATION 2020-21
AIR AND NOISE POLLUTION CONTROL

Time: 3 Hours ***Total Marks: 70***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a.	What is air pollution?
b.	Define sampling.
c.	What is stack plume?
d.	Describe indoor air pollution. Name any four indoor air pollutants.
e.	Define Lapse rate, DALR and ELR.
f.	What do you mean by the term acoustic?
g.	Name some of the special noise environment.

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a.	Discuss the effect of noise pollution.
b.	What are the standards for noise control? What are the various air pollution control technologies?
c.	Explain the electrostatic precipitator (ESP) in detail.
d.	Describe the catalytic convertor. Also, explain how it can be used to reduce the automobile emissions with the help of reactions?
e.	Describe the principle of operation, advantages, and limitations of Gravitational settling chamber for particulate contaminant.

SECTION C

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

(a)	With a neat sketch explain the working of a Fabric filter in removing Air Pollutants.
(b)	What are the different control technologies adopted for reducing oxides of Sulphur?

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

(a)	What are the primary meteorological factors that influence air pollution?
(b)	What do you mean by atmospheric stability and explain the different types of inversion?

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

(a)	Explain with neat sketches, how different atmospheric conditions give rise to different kinds of plumes.
(b)	Explain the Estimation of Plume rise by using various formulae.

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

(a)	Explain the concept of equivalent continuous energy level (Leq).
(b)	Briefly discuss the Adsorption sampling collection techniques and sampling devices for gaseous air pollutants.

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

(a)	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.
(b)	What are ways to reduce noise pollution? How to control noise pollution?