



IV SEMESTER B.TECH. (CIVIL ENGINEERING) END SEMESTER EXAMINATION, APRIL/MAY 2019 SUBJECT: AIR AND NOISE POLLUTION – OE [CIE 3284]

REVISED CREDIT SYSTEM

(/ / 2019)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ✤ Answer ALL the questions.
- ✤ Missing data may be suitably assumed.
- ✤ Draw neat sketches wherever necessary.

Q. No	Question Statement	Marks	CO
1A.	What are primary and secondary pollutants? Categorize the air pollutants based on the total sources.	05	CO1
1 B .	Define Lapse rate and Inversion. Explain the different types of inversions.	05	CO2
2A.	Define: i) Aerosolsii) Smokeiii) Fumesiv) Conditional stability	04	CO1,2
2B.	Explain the formation of photochemical smog along with the characteristics and reactions involved in the atmosphere.	06	CO1
3A.	Explain any five factors to be considered for industrial plant location and planning to prevent air pollution.	05	CO4
3B.	A Power plant has two 500 megawatt units each with a 100m stack. The stack diameters are 4m. The flue gas exit velocity is 15 m/s and the gas temperature at exit is 125°C. Calculate the plume rise on a clear night with light wind when $dt/dz = 0.5$ °C/100m, At the stack wind velocity is 5m/s and ambient air temperature at stack height is 15°C.	05	CO2
4A.	Explain with a neat diagram the construction and working of a Bag house filter.	05	CO3
4B.	Illustrate with neat sketches stack sampling for different cross sections along with sampling train.	05	CO3
5A.	What are the various effects of noise pollution? Explain the methods to control it.	05	CO5
5B.	What is noise? Give the various sources of noise pollution and explain the types of noise with examples.	05	CO5