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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent institution of MAHE, Manipal)

IV SEMESTER B.TECH. (CIVIL ENGINEERING)

END SEMESTER EXAMINATIONS, APRIL/MAY 2018

SUBJECT: AIR AND NOISE POLLUTION- OE [CIE 3284]

REVISED CREDIT SYSTEM

(30/ 04/ 2018)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer ALL the questions.
- ❖ Missing data may be suitably assumed.

Q.No		Marks	CO
1A.	List the different meteorological factors influencing air pollution and explain the different methods of identification of air pollution.	05	2
1B.	Explain with a neat sketch the different atmospheric stability regions	05	1
2A.	What causes plume rise? Explain with neat sketches any three types of plume behavior	04	2
2B.	Explain the formation photochemical smog along with the characteristics and reactions involved in the atmosphere	06	1
3A.	Explain in detail any five factors to be considered for industrial plant location and planning	05	3
3B.	A coal plant of 1000 megawatt is to be built using a tall stack. The ambient temperature is 60°F. The stack radius and height is 2m & 75m respectively. The stack exit velocity is 14m/sec and exit temperature is 290°F. Calculate the plume rise and effective stack height for a neutral atmosphere with wind speed of 10mph	05	3
4A.	With a neat sketch explain the construction and working of a fabric	05	4
4B.	Explain with a neat sketch isokinetic and non-isokinetic sampling	05	4
5A.	Narrate with examples the types of noise, its effects and laws of noise pollution.	05	5
5B.	What are the different sources of noise pollution? Explain in detail the methods to control it.	05	5