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10CV765

**Seventh Semester B.E. Degree Examination, Aug./Sept.2020**  
**Air Pollution and Control**

Time: 3 hrs.

Max. Marks:100

**Note:** Answer any FIVE full questions, selecting atleast TWO questions from each part.

**PART – A**

- 1 a. Define Air Pollution and discuss the different sources of Air pollutants in detail. (10 Marks)  
b. Explain with their effects Photochemical smog and coal induced smog. (10 Marks)
- 2 a. Explain the effects of air pollution on human beings. (10 Marks)  
b. Explain briefly on air pollution episodes of London smog and Bhopal tragedy. (10 Marks)
- 3 a. List the meteorological parameters that influence the dispersion of pollutants in atmosphere and explain each briefly. (10 Marks)  
b. Sketch and explain different kinds of plumes depending upon different environmental conditions. (10 Marks)
- 4 a. Define the term Air sampling and explain the basic considerations to be made during air sampling. (10 Marks)  
b. What is Inversions? Explain different types of inversions. (10 Marks)

**PART – B**

- 5 a. Determine the effective height of stack from the following data :  
i) Physical height of stack = 185m      ii) Inside diameter of stack = 0.95m  
iii) Wind velocity = 2.80 m/sec      iv) Air temperature = 20<sup>0</sup>C  
v) Barometric pressure = 1000mb      vi) Stack gas velocity = 11.12m/sec  
vii) Stack gas temperature = 160<sup>0</sup>C. (10 Marks)  
b. Explain the principle and working of a cyclone separator, with a sketch. (10 Marks)
- 6 a. What are the factors to be considered while selecting a site for industrial plant location? Explain. (10 Marks)  
b. Explain Air pollution due to automobiles. (10 Marks)
- 7 a. Explain the causes and effects of ozone layer depletion in stratosphere with remedy. (10 Marks)  
b. Explain the causes and effects of acid rain with remedy. (10 Marks)
- 8 Write short notes on the following :  
i) Ambient air quality standards  
ii) Noise pollution standards  
iii) Distinguish between ambient air quality standard and emission standards.  
iv) Water pollution standards. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.