

Code No: 158AE

**R18**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year II Semester Examinations, July/August - 2022**

**AIR POLLUTION  
(Civil Engineering)**

**Time: 3 Hours**

**Max.Marks:75**

**Answer any five questions  
All questions carry equal marks**

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1. Distinguish between  
a) Primary and secondary air pollutants  
b) Stationary and mobile sources of air pollutants. [7+8]
- 2.a) What are types of global effects of air pollution?  
b) Explain in detail the green house effect and its control measures. [7+8]
- 3.a) Explain the role of meteorological elements in the dispersion of air pollutants in the atmosphere.  
b) Define a wind rose. Explain the importance of wind roses in air pollution studies. [7+8]
- 4.a) Describe with neat sketches, how different atmospheric conditions give rise to different kinds of plumes.  
b) Discuss the uses of Box model and Gaussian model. [7+8]
- 5.a) Write a note on collection efficiency of ESP.  
b) List and explain the types of scrubbers. [7+8]
6. Explain with a neat sketch, the principle, construction and working of a settling chamber. How can its efficiency be improved? [15]
- 7.a) When do you recommend absorption as a method of control of gaseous contaminants?  
b) List out the absorbents commonly used for removing  $\text{SO}_2$ ,  $\text{H}_2\text{S}$  and  $\text{NO}_x$ . [7+8]
- 8.a) List the vehicular emissions and explain in detail the control of automobile emission.  
b) Discuss various causes of indoor air pollution. [7+8]

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