

Total No. of Questions : 8]

SEAT No. :

PB-2224

[Total No. of Pages : 2

[6263]-61

**B.E. (Civil Engineering)**

**AIR POLLUTION AND CONTROL**

**(2019 Pattern) (Semester - VII) (401004A) (Elective - IV)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.*
- 2) *Figures to the right indicates full marks.*
- 3) *Draw neat figures wherever necessary.*
- 4) *Assume necessary data.*
- 5) *Use of scientific calculators is allowed.*

- Q1)** a) Discuss basis and statistical considerations of sampling sites. [6]  
b) Explain the purpose of ambient air and stack gas sampling. [6]  
c) Compare national ambient air quality standards, 2009 and WHO air quality guidelines 2021. [6]

OR

- Q2)** a) State the objectives of ambient air monitoring. [6]  
b) Explain with a neat sketch location of sampling ports and traverse points in case stack sampling. [6]  
c) Discuss the components of air quality standards. [6]

- Q3)** a) Define emission factor and relate its significance in preparation of emission inventory. [6]  
b) Classify air quality models based on time period, pollutant type and level of sophistication. [6]  
c) Compare the physical, statistical and deterministic air quality models. [5]

OR

**P.T.O.**

- Q4)** a) Explain the role of emission inventory in air quality management. [6]  
b) Enumerate and discuss the basic components and importance of air quality modelling. [6]  
c) State the basic equation of emission estimation and describe its terminologies. [5]

- Q5)** a) Discuss the measures taken to control the emissions from vehicles. [6]  
b) State and explain the carbon sequestration. [6]  
c) State the principle mechanism, advantages and applications of cyclone as a particulate control equipment. [6]

OR

- Q6)** a) Explain the measures to be taken to control gaseous air pollutants. [6]  
b) Describe the factors responsible for selection of particulate control equipment. [6]  
c) Describe the control of air pollution at source by process modification, change of raw material and equipment modification. [6]

- Q7)** a) Explain the sources and remedial measures to control odour. [5]  
b) Explain sick building syndrome and its solution. [6]  
c) Relate improved ventilation to indoor air quality. [6]

OR

- Q8)** a) Explain the radon removal technique. [5]  
b) Discuss the causes and mitigation technologies for indoor air pollution. [6]  
c) List and explain the sources of contaminants in indoor air pollution. [6]

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