

Total No. of Questions : 10]

SEAT No. :

P3033

[Total No. of Pages : 2

**[5354]-519**  
**B.E. (Civil)**  
**AIR POLLUTION AND CONTROL**  
**(2012 Pattern) (Elective - III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:-*

- 1) *Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables are allowed.*
- 5) *Assume suitable data, if necessary.*

**Q1) a)** Explain the following secondary meteorological factors influencing air pollution: **[2+2+2]**

- i) Precipitation
- ii) Humidity and
- iii) Visibility

b) Explain the purpose of ambient air sampling and stack gas sampling. **[2+2]**

OR

**Q2) a)** Draw schematically a sampling train for stack sampling indicating the equipment required. **[6]**

b) Explain stable and unstable atmosphere. **[2+2]**

**Q3) a)** What is iso kinetic sampling? Explain with a neat sketch. Why it is required? **[2+2+2]**

b) Explain method of measurement of odour. **[4]**

OR

**Q4) a)** Explain Troposphere and Ionosphere. **[3+3]**

b) What are the causes of indoor air pollution? **[4]**

**P.T.O.**

- Q5)** a) Explain with a sketch principle of bag filter. State factors required considering while selecting filter media for fabric filter. [3+2+3]  
b) Write a short note on control of air pollution from automobiles. [8]

OR

- Q6)** a) Explain working principle of a gravity settling chamber with a neat sketch and how the smallest size of particles removed can be found out?[3+2+3]  
b) Explain principle of Spray tower with a neat sketch. [4+4]

- Q7)** a) Explain the important provision made in “THE AIR (Prevention and Control of Pollution) ACT 1981”. [8]  
b) What is the purpose of environmental (protection) ACT 1986? Explain Objectives and the powers of central pollution control board. [3+2+3]

OR

- Q8)** a) Explain with a neat sketch an importance of land use planning in controlling air pollution. [4+4]  
b) Explain Cost-benefit analysis (CBA) or Cost- Benefit Ratio in view of: Purposes of CBA, Process, Evaluation, and Cost-benefit ratio analysis with example. [8]

- Q9)** a) Explain roles of Project Proponent and Environment Consultant in the EIA Process. [4.5+4.5]  
b) Explain the EIA cycle and procedures. [4.5+4.5]

OR

- Q10)**a) What is a need of Environmental Impact Assessment (EIA)? Also write difference between environmental audit and EIA. [5+4]  
b) Write a short note on the following EIA methodologies: [4.5+4.5]  
i) Network and  
ii) Overlays

