

Total No. of Questions : 10]

SEAT No. :

P2126

[Total No. of Pages : 2

[5254] -519

B.E. (Civil)

AIR POLLUTION AND CONTROL

(2012 Pattern) (Elective - III) (End Sem.)

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) Draw a sketch of Wind rose diagram and write about its use in air pollution studies. **[4 + 2]**

b) Enlist various methods of sampling particulate matter and explain one in detail. **[2 + 2]**

OR

Q2) a) Explain Radiation and Subsidence Inversion. **[3 + 3]**

b) Explain effects of the following on plume dispersion. **[4]**

- Wind
- Topography
- Time of the day
- Atmospheric stability

Q3) a) Write a short note on High volume sampler with sketch. **[3 + 3]**

b) Explain any four effects of indoor air pollutants with sources. **[4]**

OR

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

b) What is odour pollution? Explain. **[1 + 3]**

P.T.O.

- Q5)** a) Explain with a neat sketch principle of Electro Static Precipitator. [4 + 4]
b) What are the advantages and disadvantages of gravity settling chamber. [4 + 4]

OR

- Q6)** a) Draw a neat sketch of the standard cyclone proportions in terms of diameter D. State expression for (dpc) cut size of particle and separation factor (Fc). [4 + 2 + 2]
b) Explain working principle of Venturi scrubber with a neat sketch.[4 + 4]

- Q7)** a) What is the purpose of environmental (protection) ACT 1986? Explain the powers and duties of central pollution control boards. [4 + 4]
b) Explain Objectives and Drawbacks of “THE AIR (Prevention and Control of Pollution) ACT 1981”. [4 + 4]

OR

- Q8)** a) What is land use planning? Explain its importance in controlling air pollution. [4 + 4]
b) Write the environmental rules 1999(sitting of industries) as per the notification of Ministry of Environment and Forests. [8]

- Q9)** a) Explain Components of EIA. [9]
b) What is a need of Environmental Impact Assessment (EIA)? Also write about Indian policies requiring EIA. [4.5 + 4.5]

OR

- Q10)** a) Explain roles of public and impact Assessment agency in the (EIA) Process. [4.5 + 4.5]
b) Write a short note on the following EIA methodologies : [4.5 + 4.5]
i) Matrix and
ii) Network

