

Total No. of Questions : 12]

SEAT No. :

[Total No. of Pages : 2

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[4859]-6

B.E. (CIVIL)

AIR POLLUTION AND CONTROL
(2008 Course) (Semester - I) Elective-I

Time : 3 Hours]

[Max. Marks : 100

Instructions:

- 1) *Answers to the two sections should be written in separate answer-books.*
- 2) *Your answer will be valued as a whole.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
- 5) *Assume suitable data, if necessary.*
- 6) *Answer any three questions from section I and any three questions from section-II.*

SECTION - I

Q1) Discuss the following:

- a) Gaussian diffusion model. [6]
- b) Temperature lapse rate. [5]
- c) Metrological parameter. [6]

OR

Q2) a) Determine the effective height of stack, given the following data. [9]

- Physical stack is 180 m tall with a 0.95-m inside diameter.
- Wind velocity is 2.75 m/s.
- Air temperature is 20°C.
- Barometric pressure is 1000 millibars.
- Stack gas velocity is 11.12 m/s.
- Stack gas temperature is 160°C.

b) Explain plume behavior with neat sketch. [8]

Q3) a) Explain in detail how air pollution survey is carried out? [8]

b) What is stack emission monitoring? How it is carried out? [8]

OR

Q4) a) What are the different instrumental methods for analysis of air sampling? Explain any one in detail. [8]

b) What are different ambient Air Quality standards? Explain Ambient air quality monitoring? [8]

P.T.O.

- Q5)** a) What is mean by air pollution? What are its sources and effects? [9]
b) Explain the method for controlling indoor air pollution in brief? [8]

OR

- Q6)** a) What is mean by odour pollution? Give its sources and measurements?[9]
b) How odour pollution can be controlled? Explain any one in detail. [8]

SECTION - II

- Q7)** a) Write short note on: [10]
i) Process equipment and process operation.
ii) Control of air pollution by fuels.
b) What are the specific air pollution control devices are available for control of particulate emissions at their source? Indicate the size range of the particulate that each type of unit is capable of removing efficiency. [7]

OR

- Q8)** a) Explain the control of air pollution from automobiles. [5]
b) Explain what is process modification? How it will helpful in controlling air pollution. [6]
c) Explain with neat sketch in detail about settling chamber. [6]

- Q9)** a) What is mean by land use planning? Explain in detail. [8]
b) Explain benefit ration and optimization for control of air pollution? [8]

OR

- Q10)**a) Explain environment protection act (1986) in detail. [8]
b) What are various national Ambient Air Quality Standards. [8]

- Q11)**a) Explain the methodology for preparing environ mental impact assessment in detail. [9]
b) What is the role of regulatory agency and control boards for environmental clearance for projects? [8]

OR

- Q12)**a) Explain the role of environment in thermal power plant. [8]
b) What are the environmental rules 1999 for sitting of industries. [9]

