

Total No. of Questions : 4]

SEAT No. :

P-5183

[Total No. of Pages : 2

[6188]-135

B.E. (Civil) (Insem.)

AIR POLLUTION & CONTROL

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

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Assume any other data, if necessary.

- Q1)** a) What are zones of atmosphere and explain any 2 layers of atmosphere.[4]
- b) Explain Air Pollution accident on Bhopal Gas Tragedy 1984. [6]
- c) Define Air Pollutants and what are effects of air Pollutants on Human health. [5]

OR

- Q2)** a) If your car consumes 12.5 liters of diesel per day 120 km and the total distance covered by you is 280 km. how much CO₂ is added to your personal carbon footprint. [4]
- b) Explain Air ACT 1981. [6]
- c) What do you understand from NCAP, Explain in brief [5]

- Q3)** a) What are the Scales of Meteorology? Explain [5]
- b) Explain Plume Rise and how it is estimated? [5]
- c) Determine the effective stack height by using following data.

Physical stack height = 136 m, diameter of stack = 2m, wind velocity 4m/s, Ambient temperature = 27°C, having Barometric pressure = 1300 millibar, stack gas velocity = 15 m/s, stack, gas temperature = 180° C.[5]

OR

P.T.O.

- Q4)** a) What are different behavior types of Plume, state coning plume and looping plume. [5]
- b) What are the limitations of Gaussian Diffusion model? [5]
- c) Calculate for Thermal power plant burns 180 tonnes of coal with 6.9 % of Sulphur content. Find. The minimum stack height required. The particulate concentration in fuel gases is 14 g/m^3 and the gas flow rate is $21 \text{ m}^3/\text{s}$. [5]

