

Total No. of Questions : 6]

SEAT No. :

P267

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Oct./BE/Insem. - 585
B. E. (Chemical Engineering)
ENVIRONMENTAL ENGINEERING
(2015 Course) (Semester - I) (409344A) (Elective - I)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) Answer any 3 questions.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Assume Suitable data if necessary.*
- 4) Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is permitted.*

Q1) Discuss the environmental impact of hydro energy with example. **[10]**

OR

Q2) Discuss the environmental impact of solid waste? **[10]**

Q3) Give the types of sources of pollutants, with examples. **[10]**

OR

Q4) Explain sampling train in detail with figure. **[10]**

Q5) A plate type electrostatic precipitator for use in a current plant for removing dust particles consist of 10 equal channels. The spacing between the plates is 0.15m and the plates are 2 m high and 2 m long. The unit handles 10,000 m³/hr of gas. What is the efficiency of collection. What should be the length of the plates for achieving 99% collection efficiency if other conditions are same? Take $V_{pm} = 0.10$. **[10]**

OR

P.T.O.

Q6) Determine the effective stack height of stack given the following data. **[10]**

- a) Physical stack height is 203 m tall with ID 1.07 m.
- b) Wind velocity is 2.56 m/s.
- c) Air temperature is 13°C.
- d) Barometric pressure is 1000 millbars.
- e) Stack gas velocity is 9.14 m/s.
- f) Stack gas temperature is 149°C.

***** END *****