

Total No. of Questions : 10]

SEAT No. :

P2083

[Total No. of Pages : 2

[5059] - 700

B.E. (Instrumentation & Control) (Semester - I)

ENVIRONMENTAL INSTRUMENTATION

(2012 Pattern) (Elective - II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers 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 side indicate full marks.*
- 4) *Assume suitable data if necessary.*

Q1) a) Explain the role of instrumentation & control for environment. [5]

b) Explain the role of sensor in environmental analysis. [5]

OR

Q2) a) Write a short note on : Photo Ionization. [5]

b) Explain the stationery analytical instruments. [5]

Q3) a) Explain opacity Monitors. [5]

b) Discuss water quality standards for raw and treated water. [5]

OR

Q4) a) Explain the pH analyser with their applications. [6]

b) Explain the design criteria of settling tank. [4]

Q5) a) Write short notes on Coagulation. [8]

b) What is floating? Explain its types. [8]

OR

P.T.O.

Q6) a) Define flow monitoring system. Explain open channel waste water flow measurement system. [8]

b) Explain the role of NGOs & municipal corporation in Rain water harvesting. [8]

Q7) a) Define air pollution. Explain air pollution from thermal power plant and their characteristic. [10]

b) Discuss the waste water measurement techniques. [8]

OR

Q8) a) Draw and explain the Instrumentation set up for waste water treatment plant. And list out the Latest methods of waste water treatment plants. [10]

b) Compare Non-open channel flow measurement and open channel waste water flow measurement. [8]

Q9) a) Explain the necessity of Rain water harvesting. List the methods of same. [8]

b) Define Sound pollution. Explain its effect to environment. [8]

OR

Q10) Write short notes on: [2 x 8 = 16]

a) Virtual Instruments Environmental Engineering laboratory.

b) Barometer.

