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P479

SEAT No. :

[Total No. of Pages : 2

TE/Insem/APR - 5
T.E. (Civil)
ENVIRONMENTAL ENGINEERING - I
(2012 Pattern)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) *Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6*
- 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 is allowed.*
- 5) *Assume suitable data, if necessary.*

Q1) a) Draw a neat sketch of Electro Static Precipitator and mention its advantages. **[5]**

b) Explain any one technique for control of gaseous pollutants. **[5]**

OR

Q2) a) What sound pressure level results by combining following SPLs by Difference level method : **[5]**
65, 70, 78, 82, 85, and 90 dB

Difference between level dB	0	1	2	3	4	5	6	7	8	10	12	14
Nos. of dB to be added to higher level	3	2.6	2.1	1.8	1.5	1.2	1.0	0.8	0.6	0.4	0.3	0.2

b) Write down the permissible noise levels for various zones. **[5]**

Q3) a) Enlist and explain the data to be collected for any water supply project of a town or city. **[5]**

b) What are the advantages (minimum 3) and disadvantages (minimum 2) of cast iron pipe? **[5]**

OR

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- Q4)** a) State various factors affecting the location of an intake structure. [5]
b) Explain two graphical methods for population forecasting. [5]
- Q5)** a) Mention HDL and MPL values with proper unit for the following: [5]
Turbidity, Colour, Nitrates, Total Dissolved, Solids and Chlorides.
b) Draw a neat sketch of cascade aerator and mention limitations of aeration. [5]

OR

- Q6)** a) What are the methods for collection of sample for testing? Also explain why excess hardness of water is undesirable in industrial process. [5]
b) What is principle of sedimentation? Explain various factors of affecting sedimentation. [5]

