Total No. of Questions : 6]

SEAT No. :

P506

[Total No. of Pages : 2

APR - 18/TE/Insem. - 105

T.E. (Civil)

ENVIRONMENTAL ENGINEERING - I

(2015 Course) (Semester - II)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) *Solve Q1 or Q2, Q3 or Q4, Q5 or Q6.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data, if necessary.*
5) *Use of logarithmic tables, slide rule, mollier charts, electronic pocket calculator and steam tables are allowed.*

Q1) a) What sound pressure level will result from combining following four SPLs : **[5]**

71 dB, 64 dB, 76 dB and 79 dB.

b) Discuss various sources of municipal solid waste. Also explain sanitary land fill technique for disposal of MSW. **[5]**

OR

Q2) a) Explain the effect of atmospheric stability conditions on dispersion of pollutants. **[5]**

b) Enlist various equipments used for control of particulate matter pollution. Also explain with a neat sketch working of Fabric filter. **[5]**

Q3) a) Enlist methods of population forecast. Explain Incremental Increase method of population forecasting with formula. **[5]**

b) What are the important requirements of potable water? Also enlist various factors which affect the rate of demand. **[5]**

OR

Q4) a) Mention various physical characteristics of water. Discuss in detail laboratory procedure for determination of Alkalinity present in water. **[5]**

P.T.O.

b) Find out water demand of a town in the year 2041 by Incremental Increase method from the following census data : **[5]**

Year	1961	1971	1981	1991	2001	2011
Population in thousands	65	68	72	79	89	97

Water is supplied at the rate of 135 lpcd.

Q5) a) Enlist various units of water treatment plant. Also mention functions of each treatment unit. **[5]**

b) What is principle of sedimentation? Enlist various factors affecting sedimentation. **[5]**

OR

Q6) a) What is aeration of water? Mention various objectives of aeration. **[5]**

b) Two primary settling basins 26m in diameter with 2.1 m side water depth. Single effluent weirs are located on the peripheries of the tank. For water flow of 26000 m^3/day, Calculate, **[5]**

i) Detention period.

ii) Volume.

iii) Surface area of tank.

iv) Overflow rate.

v) Weir loading.

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