

Total No. of Questions :6]

SEAT No. :

P12

TE/Insem./APR-15

[Total No. of Pages : 2

T.E. (Civil)

301011 : ENVIRONMENTAL ENGINEERING-I

(2015 Pattern) (Semester - II)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.
- 2) Figures to the right indicate full marks.
- 3) Use of electronic pocket calculator and steam tables is allowed.
- 4) Neat diagrams must be drawn wherever necessary.
- 5) Assume Suitable data, if necessary.

**Q1)** a) Write in tabular form maximum permissible noise levels during day and night for various categories of area. [5]

b) What is lapse rate? Explain dry adiabatic lapse rate and wet adiabatic lapse rate. [5]

OR

**Q2)** a) Explain the terms: i) Dust ii) Smoke iii) Mist iv) Fog and v) Fumes. [5]

b) Differentiate between sound and noise also discuss audiological effects of noise pollution. [5]

**Q3)** a) Explain necessity and importance of water supply scheme. [5]

b) What is need of population forecasting? Mention various methods to estimate the future population. [5]

OR

**Q4)** a) Define design period. State design period for various components of water supply scheme. [5]

b) Find fire demand for a city with population of 15lakh by various formulae. [5]

P.T.O.

**Q5) a)** Draw neat sketch of fill and draw type rectangular sedimentation tank and explain its working. [5]

b) Find diameter of the particles with specific gravity of 2.65 removed in the sedimentation tank having surface area of 250m<sup>2</sup> and treating 8MLD of water. Assume temperature of water as 26°C. [5]

OR

**Q6) a)** Mention various objectives of aeration. Also discuss various limitations of aeration. [5]

b) Explain : i) detention period ii) flow through velocity iii) surface loading rate and iv) weir loading. [5]

