

TED (10)-4011

(REVISION-2010)

Reg. No. ....

Signature .....

FOURTH/SIXTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/  
TECHNOLOGY—OCTOBER, 2014

**ENVIRONMENTAL ENGINEERING**

(For IV<sup>th</sup> Semester EN, WR and for VI<sup>th</sup> Semester CE and QS)

[Time : 3 hours

(Maximum marks : 100)

**PART—A**

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. Define "Design Period".

2. Define Aquifer.

3. Distinguish between sewer and sewerage.

4. Define pH value.

5. Define dry weather flow.

(5×2=10)

**PART—B**

(Maximum marks : 30)

II Answer *any five* of the following. Each question carries 6 marks.

1. Explain the factors effecting percapita demand.

2. What are the objectives of water treatment ?

3. Explain the working of pressure filter with a neat sketch.

4. Write short note on :

(a) Sewage

(c) Refuse

(b) Sullage

(d) Garbage

5. Explain the terms : pre-chlorination, break point chlorination & super chlorination.

6. Explain the major components of an ordinary man-hole with a sketch.

7. List the objectives of sewage treatment.

(5×6=30)



## PART—C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each question carries 15 marks.)

## UNIT—I

- III (a) Explain any three methods of forecasting population of a town. 7  
 (b) From the census data given below : estimate the population of the city for the year 2000 AD.  
 (i) Arithmetical increase method  
 (ii) Geometrical increase method

Year	1900	1910	1920	1930	1940	1950	1960	1970
Population	21610	28560	37640	46520	55460	63710	71320	79540

8

OR

- IV (a) What is meant by yield of a well ? Explain the method of determining yield of a well by direct pumping test. 7  
 (b) Explain recuperation test. 8

## UNIT—II

- V (a) Explain the features of a river intake with a neat sketch. 7  
 (b) Explain E-coli test conducted for potable water. 8

OR

- VI (a) What is meant by continuous system of water supply ? Write down the merits and demerits of the system. 8  
 (b) What is a 'sewer appurtenance' ? Explain the working of a reflux valve with a sketch. 7

## UNIT—III

- VII (a) What is meant by water carriage system and what are the advantages of the system ? 8  
 (b) Explain grid iron system with a neat sketch. 7

OR

- VIII (a) Explain the constructional details of a trickling filter with a neat sketch. 8  
 (b) Explain briefly the methods of sludge disposal. 7

## UNIT—IV

- IX (a) With a neat sketch explain the working of an oxidation ditch. 8  
 (b) What are the sources of air pollution ? 7

OR

- X (a) List the effects of air pollution on human health. 7  
 (b) Write down any eight requirements of a good drainage system in a building. 8