

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

ENVIRONMENTAL ENGINEERING

(For IVth Semester EN, WR and for VIth 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