

TED (10) – 4011

(REVISION – 2010)

Reg. No. ....

Signature .....

FOURTH/SIXTH SEMESTER DIPLOMA EXAMINATION IN CIVIL  
ENGINEERING/TECHNOLOGY—MARCH, 2015

**ENVIRONMENTAL ENGINEERING**

(For IV<sup>th</sup> Semester EN & WR and 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. State the factors affecting estimation of water requirement.
2. Distinguish between distribution pipe and supply pipe.
3. Define dry and wet weather flow.
4. List the air pollution depends both living and non livings.
5. What is meant by pre-chlorination ?

(5×2=10)

PART—B

(Maximum marks : 30)

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

1. Explain the different types of demand of water.
2. Describe the canal intake with a neat sketch.
3. Explain sedimentation with coagulation.
4. Write any six comparison of conservancy system and water carriage system.
5. Explain the working of air valve with a neat sketch.
6. Write any six functions of Pollution Control Board.
7. Write any six requirements of surface drain.

(5×6=30)

## PART—C

(Maximum marks : 60)

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

## UNIT—I

- III (a) The population of a locality as obtained from census report is as follows. Calculate the population of the locality in the next two decades by incremental increase method.

Year	1960	1970	1980	1990	2000	2010
Population	3000	3800	5000	7000	10000	15000

- (b) What are the factors affecting per capita demand of water ?

OR

- IV (a) With a neat sketch, explain flanged joint for the pipe joints.

- (b) Write any four advantages and disadvantages of cast iron pipe.

## UNIT—II

- V (a) Describe Grid-iron method of laying distribution pipe with figure and write any two advantages.

- (b) Draw a neat sketch and explain the working of a rapid sand filter.

OR

- VI (a) List the chemical tests for water and state the various standards for colour, taste and odour for potable water.

- (b) Draw a neat sketch of slow sand filter. List the essential parts, rate of filtration and efficiency.

## UNIT—III

- VII (a) Write short notes on stoneware sewer and cement concrete sewer.

- (b) Explain the working of an automatic flushing tank with a neat sketch.

OR

- VIII (a) Mention physical characteristics of sewage.

- (b) Write any eight points to be considered in the design and location of sewage pumping station.

## UNIT—IV

- IX (a) Explain the working of flushing cistern with a neat sketch

- (b) Draw a neat sketch of a typical section of a septic tank and explain its component parts.

OR

- X (a) Explain Aerobic decomposition and anaerobic decomposition of sewage.

- (b) Draw the flow diagram of activated sludge process and explain the basic operation involved in the process.