TED (15/19)6012
(Revision – 2015/19)

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Reg. No……
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, APRIL - 2025

ENVIRONMENTAL ENGINEERING

[Maximum Marks: **100**] [Time: **3** Hours]

PART-A

[Maximum Marks: **10**]

I. (Answer ***all*** questions in one or two sentences. Each question carries ***2*** marks)

1. Define specific yield of well.
2. Explain the term 'residual chlorine'.
3. Name any two coagulants used for water treatment
4. Name the different plumbing systems adopted in buildings.
5. Define the terms sewage and sewer. (5 x 2 = 10)

PART-B

[Maximum Marks: **30**]

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

1. List the need for a protected water supply system.
2. Discuss the factors affecting per capita demand.
3. Explain the mechanism of filtration.
4. Discuss the requirements of a good trap.
5. Describe the process of sedimentation.
6. List the objectives of sewage treatment.
7. Write down the different methods of sludge disposal. (5 x 6 = 30)

PART-C

[Maximum Marks: **60**]

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

UNIT – I

III. a. Distinguish between deep wells and shallow wells. (6)

b. The population of a locality, as obtained from a census report, is given below.

Census year	1880	1890	1900	1910	1920	1930	1940	1950	1960
Population	8000	12000	17000	22500	29000	37500	47000	57000	66500

Estimate the population of the locality in 1980 by Incremental Increase method. (9)

OR

IV. a. Explain infiltration gallery with neat sketch. (7)

b. Explain the method of determining the yield of a well by direct pumping test. (8)

UNIT – II

V. a. Explain the working of reservoir intake with neat sketch. (7)

b. Discuss the construction and operation of slow sand filter. (8)

OR

VI. a. Draw the dead-end and radial system layouts used for water distribution. (6)

b. Explain pre-chlorination, post-chlorination and break-point chlorination. (9)

UNIT- III

VII. a. Explain the working of an ordinary manhole with neat sketch. (8)

b. Discuss different types of surface drains. (7)

OR

VIII. a. Discuss the advantages of circular sewers over non-circular sewers. (8)

b. Explain the different types of sewerage systems. (7)

UNIT - IV

IX. a. Describe the different stages in preliminary treatment of sewage. (7)

b. Explain sludge digestion. (8)

OR

X. a. Explain Activated sludge process. (8)

b. Write notes on oxidation ponds. (7)

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