



C09-C-405

3426

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH / APRIL - 2019

DCE - IV SEMESTER EXAMINATION

ENVIRONMENTAL ENGINEERING - I

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=30

- Instructions :**
- (1) Answer **ALL** questions.
 - (2) Each question carries **THREE** marks.
 - (3) Answer should be brief and straight to the point.

- 1 Define the terms ecology and ecosystem.
- 2 What is peak demand ? State different variations in rate of demand.
- 3 Write a short note on forecasting population.
- 4 Give any three merits and three demerits of Steel Pipes.
- 5 Define the terms specific yield and cone of depression.
- 6 List any six common water borne diseases.
- 7 State any three reasons to control taste, odour and colour.
- 8 Draw the sketch of a post fire hydrant and label the parts.

- 9 Define the terms :
- (a) Distribution pipe
 - (b) Supply pipe
- 10 State the function and location of the following :
- (a) Stop cock
 - (b) Bend
 - (c) Reducer

PART - B**10×5=50**

Instructions :

- (1) Answer any **FIVE** questions.
- (2) Each question carries **TEN** marks.
- (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11 (a) State any four objectives of a water supply scheme. **4**
- (b) Explain any six factors which influence the per capita consumption of water. **6**
- 12 (a) Define aquifer and aquiclude.
- (b) Describe the construction and working of a river intake with help of neat sketch.
- 13 (a) List any four objectives of aeration. **4**
- (b) List the four aeration methods and explain about any two. **6**

- 14 (a) Compare slow sand and rapid sand filters in any five aspects. 5
- (b) Explain the working of a pressure filter with the help of neat sketch. 5
- 15 (a) Differentiate temporary hardness and permanent hardness. 5
- (b) Explain the base exchange process to remove hardness. 5
- 16 (a) Compare a dead-end system and a grid-iron-system in any four aspects. 4
- (b) With the help of a sketch explain about Radial system of layout. 3+3=6
- 17 (a) With the help of a sketch explain briefly about the dual system of distribution. 2+3=5
- (b) List any five merits and five demerits of intermittent system. 5
- 18 (a) List any ten principles to be observed while laying pipes in a building premises. 5
- (b) Draw a neat sketch of water supply arrangements in a two storied building and name various components. 5