

## 4619

## BOARD DIPLOMA EXAMINATION, (C-14) MARCH/APRIL—2018 DCE—FIFTH SEMESTER EXAMINATION

## ENVIRONMENTAL ENGINEERING—I

Time: 3 hours [ Total Marks: 80

## PART—A

 $3 \times 10 = 30$ 

Instructions: (1) Answer all questions.

- (2) Each question carries **three** marks.
- (3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.
- 1. What is meant by acid rain?
- 2. What is meant by design period?
- **3.** What are the reasons of pollution of water?
- **4.** State the classification of sources of water.
- **5.** Define (a) aquifer and (b) aquiclude.
- **6.** Define coagulation. List out commonly used coagulants.
- 7. Define temporary hardness in water. How can you remove it?
- 8. Define pH value.
- **9.** List the various types of layouts in distribution system.
- **10.** List the water supply fittings in the buildings.

 **Instructions**: (1) Answer any **five** questions.

- (2) Each question carries ten marks.
- (3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.
- **11.** Estimate the future population of a town in 2040 by arithmetic method and geometrical method :

 Year
 : 1950
 1960
 1970
 1980
 1990
 2000
 2010

 Population:
 60000
 62100
 65200
 68000
 70500
 75800
 80215

- **12.** Explain the construction of a socket and spigot joint with a sketch.
- **13.** Explain the river intake with a neat sketch.
- **14.** What are the points to be considered in the location and layout of a treatment plant?
- 15. Explain the working of a rapid sand filter with a neat sketch.
- **16.** Explain the gravity distribution system with sketch.
- **17.** Explain about sluice valve with sketch.
- **18.** What are measures to be taken to prevent leakages of water in pipe-lines?

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