



C16-C-503

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BOARD DIPLOMA EXAMINATION, (C-16)

JUNE—2019

DCE—FIFTH SEMESTER EXAMINATION

ENVIRONMENTAL ENGINEERING

Time : 3 hours ]

[ Total Marks : 80

PART—A

3×10=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. State the methods of forecasting population.
2. Define the terms aquifer and drawdown.
3. Define the terms 'E-coli' and 'MPN'.
4. Define hardness of water and state types of hardness.
5. Define disinfection of water.
6. State the functions of fire hydrant.
7. Define dry weather flow.
8. State where manholes are to be located.
9. Define BOD.
10. State classification of traps according to shape.

**PART—B**

10×5=50

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

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. Explain the canal intake with a sketch.
12. With the help of a sketch explain the working of a rapid sand filter.
13. Explain the different systems of water distribution with sketches.
14. The catchment area of a town is 200 hectares, out of which 30% with water tight roofs, 15% asphaltic roads, 25% unpaved streets, 30% lawns and gardens. The runoff coefficients are 0.9, 0.85, 0.15 and 0.12 respectively. Calculate the storm water flow for a rainfall intensity of 40 mm/hr by rational method.
15. State and explain different shapes of cross-sections for sewers with sketches.
16. Explain with a sketch the method of sludge digestion in a digestion tank.
17. Explain with sketch the treatment of sewage by septic tank.
18. Explain the procedures involved in inspection and testing of sanitary fittings.

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