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C16–C–305

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BOARD DIPLOMA EXAMINATION, (C–16)

MARCH/APRIL—2018

DCE—THIRD 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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define the term ecology.

2. What is meant by acid rain? List two adverse effects of acid rain.

3. What is meant by design period?

4. List any three objectives of a water supply scheme.

5. What is meant by cone of depression?

6. State the classification of sources of water.

7. Define the terms *(a)* E-coli and *(b)* MPN.

8. Define temporary hardness in water. How can you remove it?

9. What is the function of sluice valve.

10. Define *(a)* tee, *(b)* elbow and *(c)* goose neck.

PART—B

10×5=50

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. From the census data given below :

Year	1900	1910	1920	1930	1940	1950	1960	1970
Population	21610	28560	37640	46520	55460	63710	71320	79540

Estimate the population of the city for the year 2000 AD by *(a)* arithmetical increase method, *(b)* geometrical increase method and *(c)* incremental increase method.

12. Describe briefly the construction of infiltration wells with the help of neat sketch.

13. Explain the procedure for laying of pipes.

14. Explain the construction of a slow sand filter with the help of neat sketch.

15. What do you understand by break point chlorination? Explain with the help of diagram.

16. *(a)* Explain the process of sedimentation by coagulation.

(b) List any six requirements of good coagulant.

17. Explain different types of distribution system with sketches.

18. Explain briefly with a sketch *(a)* check valve and *(b)* air valve.

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