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C09–C–405

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BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2018

DCE—FOURTH 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. Explain greenhouse effect and its adverse effect.

2. Write about hourly variation of water demand.

3. List any three objectives of protected water supply.

4. Differentiate between shallow well and deep well.

5. What is an intake? List various types of intake.

6. Define hardness of water and write different types of hardness.

7. List any three methods of disinfection.

8. List the various methods of detecting leakages.

9. State the classification of service reservoirs.

10. State the function and location of reflux valve.

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, estimate the population of the city for the year 2031 AD by *(a)* arithmetical increase method and *(b)* geometrical increase method.

Year	1921	1931	1941	1951	1961	1971	1981
Population	25423	27263	38284	49909	67105	82432	103547

12. *(a)* List the merits and demerits of AC pipes.

(b) Write the requirements of a good pipe joint and explain socket and-spigot joint.

13. *(a)* Explain the classification of various impurities present in the water.

(b) Write short notes on dissolved oxygen and residual chlorine.

14. Write the objective of filtration and explain the mechanisms that are responsible for filtration process.

15. Explain the different methods of chlorination.

16. *(a)* With the help of neat sketch, explain elevated reservoir.

(b) Differentiate between continuous and intermittent supply systems of water.

17. Name the different distribution systems and explain any two of them with neat sketch.

18. Draw the sketch of general layout of water supply arrangements for single-storey building and write details.

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