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C16-C-503

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BOARD DIPLOMA EXAMINATION, (C-16)

MARCH/APRIL—2021

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. What is meant by per capita demand?
2. List out various surface and sub-surface sources of water.
3. List out four requirements of a good coagulant.
4. State six methods of disinfections.
5. Define hardness and state types of hardness.
6. State three requirements of a good distribution system.
7. State the factors affecting dry weather flow.
8. Explain circular sewer with a sketch.
9. Define equalization.
10. What is meant by single-stack system?

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PART—B

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

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

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

11. List types of intake. Explain river intake with a sketch. 10
12. Compare slow sand filter and rapid sand filter. 10
13. Draw the diagrams and explain the functions of the following : 10
- (a) Air relief valve
- (b) Reflux valve
14. List the sewerage systems and state the merits and demerits of each system. 10
15. Explain with sketches : 5+5
- (a) Drop manhole
- (b) Street inlets
16. List the physical, chemical and biological characteristics of domestic sewage. 4+3+3
17. Design a rectangular sedimentation tank to treat primary sewage of a town with a population of 75,000. The rate of water supply 150 lpcd. 10
18. Sketch the lay out of drainage in single storied building and name the components.

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