C16–C–502

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BOARD DIPLOMA EXAMINATION, (C–16)

NOVEMBER—2020

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. List any six factors affecting per capita demand. 3

2. Define spring. State the types of springs. 1+2=3

3. State any three objectives of filtration. 3

4. Define the following : 1½+1½=3

(a) E-coli Index

(b) Most probable number

5. State three requirements of a good coagulant. 3

6. Define the following : 3

(a) Service pipe

(b) Communication pipe

(c) Supply pipe

7. State any three objectives of sewerage works. 3

8. State functions of a manhole. 3

9. List any six methods of sludge disposal. ½×6=3

10. State classification of traps according to shape. 3

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 with sketches *(a)* river intake, *(b)* canal intake. 5+5=10

12. Explain the construction and operation of rapid sand filter. 10

13. Explain grid iron system of distributions stating advantages and disadvantages with sketch. 2+3+3+2=10

14. Explain following sewerage systems : 5+5=10

(a) Combined system

(b) Separate system

15. Explain ordinary manhole with a neat sketch. 10

16. Explain the construction and working of trickling filter with a neat sketch. 10

17. Design a septic tank for a hostel of 500 students with a water supply of 135 lpcd. 10

18. Explain, with sketches, different types of plumbing system. 3+3+4=10

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