

**7619**

**BOARD DIPLOMA EXAMINATION, (C-20)**

**MAY/JUNE—2023**

**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. Define environment. List the components of ecosystem.
2. Define hardness. List any three methods of removal of hardness.
3. Define coagulation and state any three requirements of good coagulant.
4. State any three measures to prevent leakages in water supply system.
5. Define the terms (a) sewage, (b) sullage and (c) refuse.
- \* 6. Draw a neat sketch of ordinary man hole.
7. Distinguish COD and BOD.
8. State any six sanitary fittings used in house drainage.
9. List the advantages of vermi composting.
10. Differentiate primary and secondary air pollutants.

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**PART—B**

8×5=40

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **eight** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

**11.** (a) Explain the factors affecting per capita demand.

**(OR)**

(b) What is an intake structure? Explain canal intake with a neat sketch.

**12.** (a) Explain any two layouts of distribution with the help of a neat sketch.

**(OR)**

(b) With the help of neat sketch, explain the systems of distribution of water.

**13.** (a) State the merits and demerits of combined and separate sewerage system.

**(OR)**

(b) Differentiate between conservancy and water carriage system.

**14.** (a) With the help of flowchart, explain activated sludge process.

**(OR)**

(b) List the methods of sludge disposal and explain any three sludge disposal methods.

**15.** (a) Briefly explain (i) single stack system, (ii) gully trap and (iii) inspection chamber.

**(OR)**

(b) Explain briefly (i) incineration and (ii) composting.

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[ Contd...

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**PART—C**

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** (a) Explain briefly merits and demerits of KVIC and Janata models of biogas plants. 6  
(b) Write a short note on decomposition of sewage. 4

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