

7619

BOARD DIPLOMA EXAMINATION, (C-20)

DECEMBER—2022

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 (a) non-renewable, energy sources and (b) renewable energy sources.
2. State the points to be considered while locating intakes.
3. Define (a) flocculation and (b) break point chlorination.
4. Define (a) stop cock and (b) ferrule.
- * 5. Draw the different shapes of surface drains.
6. State the factors influencing in selection of shape of sewers.
7. What are meant by equalization and neutralization?
8. What are meant by (a) one bin system and (b) two bin system?
9. What are meant by (a) vermiculture and (b) vermicomposting?
10. List the various types of internal separators.

PART—B

8×5=40

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- 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) The population census of a town are given below. Find the population after three and five decades by (i) arithmetical increase method and (ii) incremental increase method respectively :

Year	1980	1990	2000	2010	2020
Population (in thousands)	72	79	89	97	120

(OR)

- (b) Define disinfection. Explain any five methods of disinfection.

- 12.** (a) Explain different types of pipe appurtenances with neat sketches.

(OR)

- (b) Explain different methods of distribution with neat sketches.

- 13.** (a) Explain the classification of sewerage system.

(OR)

- (b) Define manhole. Explain about manhole with neat sketch.

- 14.** (a) Explain the construction and working of Imhoff tank with neat sketch.

(OR)

- (b) Explain any four methods of sludge disposal.

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15. (a) Explain methods of disposal of solid waste by (i) incineration, (ii) Bangalore method and (iii) Indore method.

(OR)

- (b) Explain different tests conducted for leakages and maintenance of house drainage system.

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. Explain about septic tank in detail with the help of neat sketch.

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