



c16-c-503

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BOARD DIPLOMA EXAMINATION, (C-16)

JANUARY/FEBRUARY—2022

DCE - FIFTH SEMESTER EXAMINATION

ENVIRONMENTAL ENGINEERING

Time : 3 hours]

[Total Marks : 80

PART—A

- 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. Differentiate between 'Climate' and 'Weather'. (1½+1½)
2. Define (a) Drawdown and (b) Cone of Depression. (1½+1½)
3. List any three objectives of treatment of water. (1+1+1)
4. Define 'Coagulation' and name any four coagulants. (1+4×½)
5. List any six types of 'Chlorination'. (½×6)
6. State any three measures to prevent the leakage of water supply system. (1+1+1)
7. List any six chemical characteristics of sewage. (½×6)
8. What are the sources of sludge in waste water sedimentation tank?
9. What are the sources of sludge in waste water treatment?
10. List the appurtenances used in house drainage system.

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PART—B

10×5=50

- 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.** State various methods of forecasting population and explain in detail the methods and their suitability under different situations.
- 12.** List various types of pipes used for conveyance of water and explain the merits and demerits of concrete pipes.
- 13.** Explain various methods of removal of permanent hardness in water.
- 14.** Compare and contrast between continuous system and intermittent system of water supply.
- 15.** Explain various operations involved in laying of sewers.
- 16.** The catchment area of a town is 100 hectares out of which 30% with water tight roofs, 15% Asphalt roads, 25% unpaved streets, 30% with lawns and gardens. The impermeability factors are 0.9, 0.85, 0.15 and 0.12 respectively. Calculate the stormwater flow for rainfall intensity of 40 mm/hour by rational method.
- 17.** Explain the construction and design procedure of Septic tank.
- 18.** State the requirements of good drainage system.

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