



C14-C-602

4711

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DCE - VI SEMESTER EXAMINATION

ENVIRONMENTAL ENGINEERING - II

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=30

- Instructions :**
- (1) Answer **ALL** questions.
 - (2) Each question carries **THREE** marks.
 - (3) Answer should be brief and straight to the point and shall not exceed five simple sentences.

- 1 Define terms :
(i) Sewer (ii) Sewerage (iii) Dry Weather Flow
- 2 Write any three situations where combined system of sewerage is suitable.
- 3 List various shapes of sewers.
- 4 List various steps involved in laying of sewers.
- 5 State the necessity of pumping sewage.
- 6 Differentiate Grab sampling and Composite sampling.
- 7 State the objects of sewage treatment.
- 8 What are 'traps' in building drainage system ? Write its importance.
- 9 State how the sanitation in rural areas is achieved.
- 10 Define air pollution. List any two natural sources of air pollution.

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[Contd...

PART - B**10×5=50**

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

- 11** The catchment of a town is 400 ha. It consists of different types of surfaces, contributing run off as shown in the table. Calculate average impermeability factor of the catchment, if the rainfall intensity is 30 mm/hr., estimate the storm discharge from the town. **10**

S. No.	Type of Surface	% area	Run off coefficient
1	Water tight roofs	40	0.95
2	Asphaltic pavements	08	0.87
3	WBM roads	12	0.45
4	Unpaved streets	15	0.20
5	Lawns & gardens, with heavy soil, of 2% slope	18	0.15
6	Vacant plots	07	0.12

- 12** (a) State the importance of sewer appurtenances and list various sewer appurtenances provided in sewerage system. **2+3**
 (b) Explain the construction and working of a flushing tank with the aid of a sketch. **5**
- 13** Draw a neat sketch of a sludge digester and explain working of the digester.
- 14** Explain the construction and working of septic tank using a neat sketch.
- 15** (a) List out different methods of solid waste disposal.
 (b) Explain briefly indoor method of composting.
- 16** Explain the 'one pipe' and 'two pipe' systems of plumbing using sketch.
- 17** Explain construction and working of KVIC model of biogas plant using neat sketch.
- 18** What are the different wet collection devices generally used in controlling air pollution and explain the working of a ventury scrubber with a sketch.