



C14-C-602

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BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2018
DCE—SIXTH 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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List out the objectives of sewerage works.
2. Define the following terms :
 - (a) Sullage
 - (b) Garbage
 - (c) Sewer
3. What is the necessity to provide sewer appurtenances in sewer lines?
4. List the operations involved in laying of sewers.
5. Draw a neat sketch of catch basin and label its parts.
6. What is meant by strength of sewage?
7. List four objectives of sewage treatment.

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8. Define the following :

- (a) Soil pipe
- (b) Waste pipe
- (c) Vent pipe

9. State any three advantages of biogas plant.

10. What is meant by air pollution? Explain briefly.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. (a) The catchment area of town is 250 hectares. The different types of surfaces contributing runoff are as follows :

Sl. No.	Type of surface	% Area	Run off coefficient
1.	Water tight roofs	35	0.90
2.	Asphaltic pavements	10	0.85
3.	Macadamised roads	15	0.40
4.	Unpaved streets	20	0.15
5.	Lawns and gardens of sandy soil with 4% slope	15	0.12
6.	Vacant plots	5	0.10

Calculate the impermeability factor of the complete watershed. If the intensity of rainfall is 35 mm/hour, calculate the storm water flow rate of the town. 6

(b) Explain any four factors that affect the dry weather flow. 4

- 12.** (a) What is ^{*}manhole? Explain ordinary manhole with a neat sketch. 6
- (b) State the locations at which manholes are constructed. 4
- 13.** Explain the construction and working of septic tank with a neat sketch. 10
- 14.** Explain the physical and biological characteristics of domestic sewage. 10
- 15.** State the various methods of solid waste disposal and explain any four methods in detail. 10
- 16.** (a) What are traps? Explain briefly the classification of traps. 6
- (b) List any four requirements of good drainage system. 4
- 17.** (a) How is the disinfection of wells done in rural areas? 4
- (b) State any six advantages of biogas plant. 6
- 18.** (a) Explain the effects of air pollution in detail. 6
- (b) Mention the methods for the control of air pollution. 4
