



c09-c-605

**3724**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**OCT/NOV—2014**  
**DCE—SIXTH SEMESTER EXAMINATION**  
**ENVIRONMENTAL ENGINEERING—II**

Time : 3 hours ]

[ Total Marks : 80

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**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. Write any three objects of sewage disposal works.
2. Write any six components of a sewage pumping station.
3. Name any six methods of sludge disposal.
4. What is meant by proportioning?
5. Draw the flowchart of a typical sewage treatment plant.
6. List any three aims of the drainage of building.
7. List out classification of traps according to shape and use/  
function. 1½+1½
8. Sketch an aqua privy and label the parts. 2+1
9. Define the term 'air pollution' and state any two effects of air  
pollution on physical properties of atmosphere. 1½+1½
10. Draw the sketch of cyclone collector and label the parts. 2+1

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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 the criterion for valuation is the content but not the length of the answer.

- 11.** (a) Name the two systems of sewage collections and compare them in any five aspects. 1+5  
(b) Explain any five factors affecting dry weather flow. 4
- 12.** (a) What do you understand by self-cleaning velocity? 2  
(b) Design a separate sewer running full which receives only storm water from a watershed area of 40 hectares. The duration of storm water is 15 minutes. The impermeability factor of the total area is 0.50. The coefficient of rugosity  $n = 0.013$  and slope of ground is 1 in 200. 8
- 13.** (a) List the shape of cross sections for sewers. 4  
(b) Explain the construction of a manhole with the help of a sketch. 3+3
- 14.** Explain the construction and working of a trickling filter with the help of a sketch. 4+3+3
- 15.** (a) List any three objectives of screens. 3  
(b) Explain the method of disposal of sewage into water. 7
- 16.** What is meant by composting? Explain Bangalore method and Indore method of composting. 2+4+4
- 17.** (a) How is air test conducted? 2  
(b) Sketch the layout of drainage in single-storied building and name the components. 4+4
- 18.** (a) Draw the sketch of Janata biogas. 5  
(b) Explain about air pollution control by stacks. 5

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