



c09-c-605

**3724**

**BOARD DIPLOMA EXAMINATION, (C-09)  
MARCH/APRIL—2018  
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 three advantages of water carriage system.
2. What are the merits and demerits of rectangular sewer?
3. How are the bacteria classified based on their living conditions?
4. Explain 'equalization' in the treatment of industrial sewage.
5. What are the objects of screens in the sewage treatment?
6. Write about 'incineration' of solid waste.
7. Mention three principles of planning and design of house drainage.
8. What are the factors affecting the production of biogas?
9. Draw a neat sketch of electrostatic precipitator.
10. Give three examples to control air pollution by change in raw materials.

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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) Write the merits and demerits of combined sewerage system.  
(b) List any five requirements of good surface drains. 5+5
- 12.** (a) What is a nomogram? Mention its use.  
(b) Design a sewer running half-full and carrying a discharge of 800 lit/sec. Assume that Manning's  $n = 0.013$  and gradient of the sewer is  $i = 0.01$ . 3+7
- 13.** Explain the construction of cast iron sewers and their suitability. 10
- 14.** (a) Write any five characteristics of industrial wastewater.  
(b) Write the advantages and disadvantages of activated sludge process. 5+5
- 15.** (a) Explain the oxidation ponds.  
(b) Give the advantages and disadvantages of oxidation ponds. 5+5
- 16.** Explain—  
(a) Bangalore method;  
(b) Indore method of composting. 5+5
- 17.** Explain the construction of the following with neat sketches : 5+5  
(a) Indian type water closet  
(b) European type water closet
- 18.** (a) Explain Janata model biogas plant.  
(b) Explain the man-made sources of air pollution. 5+5

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