C09–C–605

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BOARD DIPLOMA EXAMINATION, (C–09)
MARCH/APRIL—2017
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. Define *(a)* sewage, *(b)* sewer and *(c)* sewerage.

2. What are the merits and demerits of egg-shaped sewers?

3. Distinguish between BOD and COD.

4. Mention the methods for the reduction of volume and strength of industrial sewage.

5. Write any three objectives of treatment of sewage.

6. What is composting of solid waste?

7. Write any three objectives of building drainage.

8. Mention different types of rural latrines.

9. Draw a neat sketch of louver collector.

10. Mention any three natural sources of air pollution.

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. Explain conservancy system. Give the demerits of this system.

5+5=10

12. Design a sewer running full which receives only storm water from watershed of area 50 hectares. The storm duration is 15 minutes. The impermeability for the total area is 0·50. Take Manning's n 0 013 and sewer gradient i 0 01.   10

13. *(a)* What are the objects of manholes?

(b) Describe manholes with a neat sketch.   3+7=10

14. Describe oxidation ditches with a neat sketch.   10

15. Explain the construction and working of a trickling filter with a neat sketch.   10

16. Explain the following methods of solid waste disposal :   5+5=10

(a) Sanitary landfill

(b) Incineration

17. Explain the different systems of plumbing of a residential building.   10

18. *(a)* Explain KVIC model of biogas plant.

(b) Explain the construction and working of a venturi scrubber with a neat sketch.   5+5=10

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