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BOARD DIPLOMA EXAMINATION, (C-09) OCTOBER/NOVEMBER-2018 DCE-SIXTH SEMESTER EXAMINATION

ENVIRONMENTAL ENGINEERING-II

Time: 3 Hours] [Total Marks: 80

PART-A

3X10=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) Sullage ii) Sewage iii) Sewer.
- 2. List various steps involved in laying of sewers.
- 3. List three precautions to be observed in sampling of sewage.
- 4. What are the principles involved in treatment of industrial wastewater?
- 5. List out the method of sewage disposal.
- 6. List the components of solid waste.
- 7. Define soil pipe and waste pipe.
- 8. List different types of sanitary latrines used in rural areas.
- 9. State different Natural sources of Air pollution
- 10. State any three effects of air pollution human health.

PART-B

10X5=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. (a) List any four factors that affect Dry Weather Flow.
 - (b) Compare conservancy system and water carriage system in any four aspects.
- 12. Design a circular sanitary sewer running half full to serve a population of 50,000. Sewage flow is at 180 lpcd. Natural slope of the ground is 1 in 1250. Ratio of max. to average flow is 2.5 Manning's coefficient is 0.012.
- 13. (a) List various sewer appurtenances and
 - (b) Explain the components of ordinary manhole with the help of a sketch.
- 14. (a) Draw the flow chart of a typical sewage treatment plant
 - (b) Write the functions of i) Grit Chamber (ii) Skimming Tank.
- 15. Explain the construction and working of trickling filter with a neat sketch.
- 16. (a) List different methods of solid waste disposal.
 - (b) Explain Bangalore method of composting.
- 17. State the requirements of good drainage system in buildings.
- 18. (a) Write the factors affecting biogas production.
 - (b) Explain briefly the working of a gravity settling chamber with a sketch.
