

**B.TECH. CIVIL ENGINEERING**

**BTCLEVI**

**Term-End Examination**

**June, 2013**

00910

**BICE-018 : ENVIRONMENTAL ENGINEERING-II**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Attempt any seven questions. Use of scientific calculator is permitted.*

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1. Describe the various stages followed in the construction of sewers. 10
2. Explain the necessity of providing a manhole in a sewer line. Describe with the help of a neat sketch the components of a manhole. 10
3. A 2% solution of a sewage sample is incubated for 5 days at 20°C. The depletion of oxygen was found to be 5mg/l. Determine the BOD of the sewage. 10
4. Mention various methods of waste water disposal. Discuss the merit and demerits. Explain the conditions favourable for their adoption. 10

5. What do you understand by secondary treatment of wastewater ? Enumerate various processes employed for this purpose. 10
  6. Design a primary settling tank of rectangular shape for a town having a population of 50,000, with a water supply of 180 litres per capita per day. 10
  7. Give various flow diagrams used for single stage and double stage trickling filter. How do you determine the efficiency of these ? 10
  8. Explain, with the help of flow diagram, the essentials of activated sludge process. 10
  9. Explain, with neat sketch, the working of an oxidation ditch. Distinguish clearly between an intermittent type and continuous flow type oxidation ditch. 10
  10. How do you propose to treat wastewater from sugar industry ? 10
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