

BTCLEVI
Term-End Examination
December, 2012

BICE-018 : ENVIRONMENTAL ENGINEERING-II

Time : 3 hours

Maximum Marks : 70

*Note : Attempt **any seven** questions and each question carry equal marks. Use of scientific calculator is permitted.*

1. Describe in brief the methods of collection of various types of wastes in the conservancy system. **10**
2. The BOD of sewage incubated for one day at 30°C has been found to be 100 ppm. What will be the 5 day BOD at 20°C. Assume $K=0.12$ (Base 10) at 20°C. **10**
3. What do you understand by sedimentation of waste water? Describe in brief various types of settlings. **10**
4. Explain with the help of neat sketch, the construction and working of a conventional trickling filter. What are its loading rate? **10**

5. Describe various loading criteria used for aeration tank of activated sludge process. 10
6. Explain the principles of aerobic, anaerobic and facultative type stabilization ponds. 10
7. What do you mean by sludge thickening? Describe various methods of sludge thickener. 10
8. Design a septic tank for a hostel housing 125 persons. Also design the soil absorption system for the disposal of the septic tank effluent assuming the percolation rate as 20 minutes per cm. 10
9. What do you understand by the advanced waste water treatment ? How is it different from the conventional treatment? 10
10. Discuss in brief various treatment processes adopted for treating industrial waste water. 10
