

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

00525

June, 2019

**BICEE-024 : ADVANCED ENVIRONMENTAL
ENGINEERING**

Time : 3 hours

Maximum Marks : 70

Note : Answer any **five** questions. All questions carry equal marks. Use of scientific calculator is allowed. Assume suitable data, if missing.

1. (a) Describe the workings and significant features of a multimedia filter with the help of a neat sketch. 7
- (b) What are the various zones of pollution formed after the wastewater stream is added to a water body ? 7
2. Explain the various methods of disinfection being used for water treatment. 14

3. (a) Describe the process of self-purification in natural waters. 7
- (b) The sewage of a town is to be discharged into a river stream. The quantity of sewage produced per day is 8 million litres and its BOD is 250 mg/l. If the discharge in the river is 200 l/s and its BOD is 6 mg/l, find out the BOD of the diluted water. 7
4. (a) Explain the process of extended aeration used for treatment of waste waters. 7
- (b) Give the significant features of a Biofiltration unit. 7
5. (a) What are the various methods to recover materials from effluents ? 7
- (b) What are the harmful effects of nitrogen oxides ? How can these be controlled in ambient air ? 7
6. (a) Explain the fundamentals of sound generation in atmosphere. 7
- (b) What are the various techniques for removal of taste from water ? 7
7. (a) Describe the techniques to measure noise. 7
- (b) What are the harmful effects of sulphur dioxide and hydrocarbons in the ambient air on human beings ? 7