VIT

Vellore Institute of Technology

SCHOOL OF CIVIL ENGINEERING

CONTINUOUS ASSESSMENT TEST – I

WINTER SEMESTER 2019-2020

Programme Name & Branch: B Tech Civil Engineering
Course Name Code: CLE2019
Course Name: Pollution Control and Monitoring
Faculty Name(s): Dr. Bhaskar Das
Class Number(s): VL2019205006024 Exam Duration: 90 mins Maximum Marks: 50

General instruction(s): *Graph sheet is required*

Section – A (3 x 10 = 30 Marks)

1. Write short note on the following
   (a) State Pollution Control Board
   (b) Central Pollution Control Board
   (c) The Environment (Protection) Act – 1986
   (d) The National Green Tribunal Act – 2010

2. (a) What are the significance for formulating Environmental Law? [5]
   (b) List down the legislative bodies responsible for following activities related to
      (i) Making the Law
      (ii) Interprets the Law
      (iii) Enforces the Law [5]

3. A textile industry need to implement ZLD for the treatment of their effluent.
   (a) List down the challenges for implementing the ZLD. [5]
   (b) Suggest suitable unit operations/process for ZLD with flowchart [5]

Section – B (1 x 20 = 20 Marks)

4. A city discharges 15 MLD domestic sewage into a stream whose average flow is 150 MLD. The average depth and velocity of the stream are 2.4 m and 2 km/hr respectively The temperature of both the stream and sewage is 20 °C. The 20 °C BOD_5 of the sewage is 80 mg/L, while that of the stream is 1.2 mg/L. The sewage contains no DO, and the stream is having 90% of saturated DO. At 20 °C, k_1, saturated oxygen concentration are 0.34 per day, and 9.1 mg/L respectively.

   Plot the DO sag curve and identify the time and distance for minimum DO level.