Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
MID TERM EXAMINATION - OCT 2023

Semester : Semester V- 2021
Course Code : CIV2047
Course Name : Sem V - CIV2047 - Water Infrastructure Systems
Program : B.TECH

Date : 30-OCT-2023
Time : 2:00PM - 3:30PM
Max Marks : 50
Weightage : 25%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS **(2 X 5 = 10M)**

1. During the fire breakdown large quantity of water is required for throwing it over the fire to extinguish it. write down all the formula's to calculate fire demand.

(CO1) [Knowledge]

2. Sedimentation is a process of removal of settable solids (Suspended or colloidal particles) present in raw water. Write a short note on types of settling in theory of sedimentation.

(CO2) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS **(2 X 10 = 20M)**

3. Duty of an engineer in designing a water supply scheme for a particular section of community is to evaluate the amount of water available and amount of water demanded by the public and to design a water supply. Discuss the objectives of the community water supply system.

(CO1) [Comprehension]

4. A rectangular sedimentation tank is designed for a surface overflow rate of 12,000 liters/hr/m2. What percentage of suspended particles of diameter 0.03 mm will be removed in the tank. Take kinematic viscosity (?) = 0.897 mm2/sec and specific gravity of particles 2.65.

(CO2) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS **(1 X 20 = 20M)**

5. Water available in various sources contains various types of impurities and cannot be directly used by the public for various purposes, before removing the impurities. For potability water should be free from unpleasant tastes, odours and must have sparkling appearance. The water must be free from disease-spreading germs. The amount and type of treatment process will depend on the quality of raw water and the standards of quality of raw water and the standards of quality to be required. With the help of flow chart explain treatment of surface water.

(CO2) [Application]