

GOVERNMENT COLLEGE OF ENGINEERING, YAVATMAL
Department Of Civil Engineering
Academic Year 2022-23



Mid Sem Examination (Odd / ~~Even~~ – 2022-23)

Course: CIVIL. Engineering

Semester : V

Subject: Advanced Environmental Engg. (BTCVPE506A) Marks : 20

Duration: 1:00 Hr.

Date : 19/10/2022

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q.1 Attempt any Two .

Marks– 08.(CO1)

- A) Write a short note on Oxidation ditch.
- B) Explain Aerated Lagoons with advantages and disadvantages.
- C) Design the dimension of septic tank for a small colony of 150 persons provided with an assured water supply from the municipal headworks at a rate of 120 litres per person per day. Assume any data, you may need.

Q.2 Attempt any One .

Marks – 06.....(CO2)

- A) A town discharges 80 cumecs of sewage into stream having a rate of flow 1200 cumecs during lean days, at a 5-day BOD of sewage at the given temp. is 250mg/l. Find the amount of Critical DO deficit and its location in the downstream portion of the stream. Assume deoxygenation constant as 0.1/day & coefficient of self purification (f) as 3. Assume saturation DO at given temp. 9.2 mg/l. Velocity of flow stream is given as 0.13 m/s.
- B) Explain Self purification of natural streams. Also explain various actions involved in Self purification.

Q.3 Attempt any One .

Marks – 06.....(CO3)

- A) Explain Neutralization process for treatment of industrial wastewater.
- B) Explain Nitrification and Denitrification.
