

Total No. of Questions : 12]

SEAT No. :

P2635

[5154]-1

[Total No. of Pages : 2

B.E. (Civil)

ENVIRONMENTAL ENGINEERING-II

(2008 Course) (Semester-I) (401001)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) *Attempt Q1 OR Q2, Q3 OR Q4, Q5 OR Q6 from Section I and Q7 or Q8, Q9 or Q10, Q11 or Q12 from Section II.*
- 2) *Figures to the right indicates full marks.*
- 3) *Draw neat figures wherever necessary.*
- 4) *Assume necessary data.*
- 5) *Use of scientific calculator is allowed.*

SECTION-I

Q1) a) Write short note on collection and conveyance of sewage. [8]

b) Explain effect of change of life with respect to sewage quality. [8]

OR

Q2) a) Write the design procedure for circular sewer and check to be taken. [8]

b) Draw and explain process flow diagram of sewage treatment plant. [8]

Q3) a) Write effluent standards for domestic sewage as per BIS 2490. [8]

b) Write short note on grit chamber. [8]

OR

Q4) a) Write short note on screen chamber. [8]

b) Write short note on primary sedimentation tank. [8]

P.T.O.

- Q5) a)** Explain biological principle of aerobic and anaerobic sewage treatment plant. [9]
- b)** Define sludge bulking. Explain causes and remedial measures of sludge bulking. [9]

OR

- Q6) a)** Write short note activated sludge process. [9]
- b)** Write short note trickling filter. [9]

SECTION-II

- Q7) a)** Explain with a neat sketch, the working principle of a oxidation pond. [8]
- b)** Write short note on root zone cleaning system. [8]

OR

- Q8) a)** Explain advantages and disadvantages of stabilization pond. [8]
- b)** Write design steps of aerated lagoon for semi-arid region. [8]

- Q9) a)** Write short note on septic tank. [8]
- b)** Explain with a neat sketch the pathway of anaerobic digestion. [8]

OR

- Q10)a)** Write short note on anaerobic digester. [8]
- b)** Write principle and explain advantages and disadvantages of UASBR. [8]

- Q11)a)** Explain methods of sampling for domestic sewage and industrial wastewater. [9]
- b)** Draw and explain flow sheet for treating sugar industry waste water. [9]

OR

- Q12)a)** Draw and explain flow sheet for Paper and pulp mill industry wastewater. [9]
- b)** Write short note on treatment of automobile industry wastewater. [9]

