**D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY**

**Set-: I**

**Q. Paper Code:**

**22CE302502**

**KASABA BAWADA KOLHAPUR-416006**

**(An Autonomous Institute)**

T. Y. B. Tech (Civil), Sem-V

**END SEMESTER EXAMINATION (ESE), Nov. – 2022**

Course Name: Environmental Engineering Course Code: 201CEL302

Seat No:

**Day and Date: Thursday, 08.12.2022**

**Time: 2.00 pm to 4.00 pm Max. Marks- 50**

***Instructions:***

1. *All Questions are compulsory.*
2. *Figure to the right indicate full marks.*
3. *Use of non-programmable calculator is allowed.*
4. *Assume suitable data for design wherever necessary and mention the same.*

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| **BT** | **CO’s** | **Q. No.** |  | **Marks** |
|  |  | **Q.1** | **All Questions are compulsory** | **20** |
| **2** | **CO1** | **a** | Mention the breakup of domestic water utilization in liters in Indian condition and also comment on effect of various factors on consumption of water. | **5M** |
| **2** | **CO2** | **b** | What is breakpoint chlorination? Explain in detail with sketch. | **7 M** |
| **2** | **CO3** | c | Draw a neat sketch of service connection and mention the function of various components. | **8 M** |
|  | | | | |
|  |  | **Q.2** | **All Questions are compulsory** | **10** |
| **2** | **CO1** | **a** | Classify the sewerage system and explain the merits and demerits. | **6** |
| **2** | **CO1** | **b** | Determine ultimate first stage and standard BOD of wastewater sample having 2-day 20oC BOD as 200mg/L. BOD removal constant at 20oC base ‘e’=0.18 per day. | **4** |
|  | | | | |
|  |  | **Q.3** | **All Questions are compulsory** | **10** |
| **2** | **CO2** | **a** | Give the significance of BOD and COD in wastewater treatment. | **5** |
| **2** | **CO2** | **b** | With a neat sketch explain the DO Sag Curve. | **5** |
|  | | | | |
|  |  | **Q.4** | **Attempt any two out of three questions** | **10** |
| **2** | **CO4** | **a** | Explain the sources and characteristics of Municipal solid waste. | **5** |
| **2** | **CO4** | **b** | What is EIA and mention the importance of it. | **5** |
| **2** | **CO4** | **C** | Explain two-pipe system in building sanitation with neat sketch. | **5** |

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