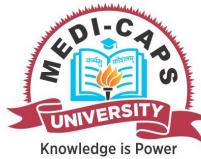


Enrollment No.....



Faculty of Engineering
End Sem Examination Dec 2024
CE3CO26 Environmental Engineering -II
Programme: B.Tech. Branch/Specialisation: CE
Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

| | Marks | BL | PO | CO | PSO |
|---|-------|----|----|----|-----|
| Q.1 | 1 | 2 | 7 | 3 | 2 |
| i. The process that involves connecting pipelines and sewer appurtenances to transport waste to sewage treatment centres is called- | | | | | |
| (a) Sewage construction | | | | | |
| (b) Pipelines construction | | | | | |
| (c) Sewer construction | | | | | |
| (d) Connecting pipelines | | | | | |
| ii. Sewer systems can also be referred as- | 1 | 1 | 7 | 1 | 2 |
| (a) Sewage | | | | | |
| (b) Sewerage | | | | | |
| (c) Storm | | | | | |
| (d) Wastewater | | | | | |
| iii. What does BOD stand for? | 1 | 1 | 7 | 1 | 2 |
| (a) Biological Oxygen Depicit | | | | | |
| (b) Basic Oxygen Demand | | | | | |
| (c) Biochemical Oxygen Demand | | | | | |
| (d) Biological Organic Demand | | | | | |
| iv. Which of the following parameters is primarily used to measure the organic matter in water? | 1 | 1 | 7 | 2 | 2 |
| (a) COD | | | | | |
| (b) BOD | | | | | |
| (c) TOC | | | | | |
| (d) All of these | | | | | |
| v. What does the term "BOD" indicate in the context of sewage? | 1 | 2 | 7 | 1 | 2 |
| (a) The amount of organic matter present | | | | | |
| (b) The presence of heavy metals | | | | | |
| (c) The total number of microorganisms | | | | | |
| (d) The pH level of the sewage | | | | | |

Marking Scheme

CE3CO26 Environmental Engineering-II

| | | | |
|-----|---|---|---|
| Q.1 | i) a) Sewage construction d) Sewer construction | 1 | Definition 2 marks |
| | ii) b) Sewerage | 1 | Each definition 2 marks |
| | iii) c) Biochemical Oxygen Demand | 1 | |
| | iv) d) All of the above | 1 | OR iii. What is the BOD and COD and also difference between BOD and COD? 8 |
| | v) a) The amount of organic matter present | 1 | Definition 4 marks |
| | vi) b) Color d) TSS | 1 | Differences 4 marks |
| | vii) c) Microorganisms | 1 | |
| | viii) d) Chemical addition | 1 | |
| | ix) a) Industrial emissions | 1 | Q.4 i. Explain in brief skimming tank? 2 |
| | x) b) Ozone (O ₃) | 1 | Definition 2 marks |
| Q.2 | ii. Explain in brief Conservancy and? | 8 | ii. What is the secondary process of sewage treatment? 8 |
| | Definition of Conservancy 4 marks | | Definition 4 marks |
| | Definition of Water carriage system 4 marks | | Treatment process 4 marks |
| | iii. What are the different fluctuations in sewage flow? | | OR iii. Discuss in brief? |
| OR | Definition 3 marks | | Definition 4 marks |
| | types 5 marks | | screening and grit chamber 4 marks |
| Q.3 | i. What is oxygen sag analysis? | 2 | Q.5 i. What is sludge disposal? 4 |
| | Definition 2 marks | | Definition 4 marks |
| | ii. What are the physical parameters chemical parameters and biological parameters? | 8 | ii. What is an activated sludge process? 6 |
| OR | Definition & explanation 5 marks | | Definition & explanation 6 marks |
| | iii. Discuss in brief oxidation pond and ditch? | | OR iii. Discuss in brief oxidation pond and ditch? |
| | Definition & explanation 6 marks | | Definition & explanation 6 marks |
| | Attempt any two: | | |
| Q.6 | i. What are the sources of air pollution? | 5 | i. What are the sources of air pollution? 5 |
| | Definition & explanation 5 marks | | Definition & explanation 5 marks |
| | ii. How many types of air pollutants? Explain any one? | 5 | ii. How many types of air pollutants? Explain any one? 5 |
| | Definition & explanation 5 marks | | Definition & explanation 5 marks |
| Q.7 | iii. What are gravitational settling chambers? | 5 | iii. What are gravitational settling chambers? 5 |
| | Definition & explanation 5 marks | | Definition & explanation 5 marks |

[2]

[3]

P.T.O.