

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech. III Year II Semester Regular & Supplementary Examinations June-2025**  
**ENVIRONMENTAL ENGINEERING**

(Civil Engineering)

**Time: 3 Hours**

**Max. Marks: 60**

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 1 | a | What are the necessity and importance of water supply system?    | CO1 | L1 | 6M |
|   | b | Mention the various objectives of protected water supply system. | CO1 | L2 | 6M |

**OR**

- |   |  |   |     |    |     |
|---|--|---|-----|----|-----|
| 2 |  | Briefly explain the various sources of water. | CO1 | L2 | 12M |
|---|--|---|-----|----|-----|

**UNIT-II**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 3 | a | Briefly explain any three chemical characteristics of water. | CO2 | L2 | 6M |
|   | b | Write short notes on different water borne diseases.         | CO2 | L2 | 6M |

**OR**

- |   |  |   |     |    |     |
|---|--|---|-----|----|-----|
| 4 |  | Explain the working principle of slow sand filter with the help of neat sketch. | CO2 | L2 | 12M |
|---|--|---|-----|----|-----|

**UNIT-III**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 5 | a | What are the requirements of a distribution system?  | CO3 | L1 | 6M |
|   | b | Write short notes on methods of distribution system. | CO3 | L1 | 6M |

**OR**

- |   |  |  |     |    |     |
|---|--|--|-----|----|-----|
| 6 |  | Briefly explain about the sewerage systems with their merits & demerits. | CO3 | L2 | 12M |
|---|--|--|-----|----|-----|

**UNIT-IV**

- |   |  |  |     |    |     |
|---|--|--|-----|----|-----|
| 7 |  | Briefly explain about the various characteristics of sewage. | CO4 | L2 | 12M |
|---|--|--|-----|----|-----|

**OR**

- |   |  |   |     |    |     |
|---|--|---|-----|----|-----|
| 8 |  | Explain with the help of neat sketch the construction and working process of a conventional trickling filter. | CO4 | L2 | 12M |
|---|--|---|-----|----|-----|

**UNIT-V**

- |   |  |   |     |    |     |
|---|--|---|-----|----|-----|
| 9 |  | Explain the factors affecting the sludge digestion. | CO5 | L2 | 12M |
|---|--|---|-----|----|-----|

**OR**

- |    |  |  |     |    |     |
|----|--|--|-----|----|-----|
| 10 |  | Discuss the criterion for design of a septic tank. | CO5 | L2 | 12M |
|----|--|--|-----|----|-----|

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