

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VII (New) EXAMINATION – WINTER 2019

Subject Code: 2171303

Date: 26/11/2019

Subject Name: Industrial Water Pollution & Control

Time: 10:30 AM TO 01:00 PM

Total Marks: 70

- Instructions:**
1. Attempt all questions.
 2. Make suitable assumptions wherever necessary.
 3. Figures to the right indicate full marks.

- Q.1**
- | | | |
|-----|---|-----------|
| (a) | Explain the various sources of water pollution. | 03 |
| (b) | Give the difference between standards & criteria. | 04 |
| (c) | Enlist methods of Neutralization & explain any two in detail. | 07 |

- Q.2**
- | | | |
|-----|---|-----------|
| (a) | Give the classification of Lake based on their productivity. | 03 |
| (b) | Enlist various sources of oil pollution. | 04 |
| (c) | Enlist & explain the basic objectives of setting up common effluent treatment plant (CETP). | 07 |

OR

- | | | |
|-----|--|-----------|
| (c) | What is Volume reduction? Enlist different technique of volume reduction. Explain any one in detail. | 07 |
|-----|--|-----------|
- Q.3**
- | | | |
|-----|--|-----------|
| (a) | Enlist various factors to be considered while selecting Land as ultimate source of disposal. | 03 |
| (b) | Enlist various primary & secondary benefits of pollution abatement. | 04 |
| (c) | Write a short note on self-purification capacity of river. | 07 |

OR

- Q.3**
- | | | |
|-----|--|-----------|
| (a) | Explain the need of Proportioning in wastewater treatment | 03 |
| (b) | List various methods for treatment of Strong industrial wastewaters & explain any one in detail. | 04 |
| (c) | Write a short note on stratification of lake. | 07 |

- Q.4**
- | | | |
|-----|--|-----------|
| (a) | Explain importance to draw water balance diagram for any industry. | 03 |
| (b) | How evaporation is useful for treatment of strong industrial waste? | 04 |
| (c) | Identify sources of water pollution generated from dairy industry & suggest Effluent treatment flow diagram. | 07 |

OR

- Q.4**
- | | | |
|-----|---|-----------|
| (a) | Enlist various methods for strength reduction. | 03 |
| (b) | Define stream standards & effluent standards. | 04 |
| (c) | Draw manufacturing process diagram of Textile industry, identify various sources of wastewater generation in the same & suggest appropriate treatment flow diagram to achieve effluent standards. | 07 |

- Q.5**
- | | | |
|-----|---|-----------|
| (a) | Draw "DO Sag Curve". | 03 |
| (b) | Give the difference between sewage & effluent. | 04 |
| (c) | How does segregation reduce the strength of waste water? Give an example. | 07 |

OR

- Q.5**
- | | | |
|-----|---|-----------|
| (a) | How to determine depth of Euphotic zone in lake. | 03 |
| (b) | Enlist various challenges of CETP. | 04 |
| (c) | Write a short note on "Basic water quality parameter required for boiler feed water and cooling water." | 07 |
