

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V • EXAMINATION – WINTER • 2014

Subject Code: 153701

Date: 26-11-2014

Subject Name: Biodegradation and Bioremediation

Time: 10.30 am - 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 natural attenuation in bioremediation. | 07 |
| | (b) | Write a note on bioremediation and discuss its constraints and priorities. | 07 |
| Q.2 | (a) | Explain the method of treatment cotton textile mill wastes with the help of flow sheets. | 07 |
| | (b) | Explain the pathway of genetic engineering of biodegradation. | 07 |
| | | OR | |
| | (b) | Explain the trickling filter towers. | 07 |
| Q.3 | (a) | Explain the bacterial examination of water for portability | 07 |
| | (b) | Explain details about bioaugmentation and biostimulation. | 07 |
| | | OR | |
| Q.3 | (a) | Explain the oxidation pond in detail. | 07 |
| | (b) | Explain the process of removal of heavy metals from wastes water. | 07 |
| Q.4 | (a) | What is the effect of chemical structure on biodegradation | 07 |
| | (b) | Define in detail the cometabolism and biotransformation. | 07 |
| | | OR | |
| Q.4 | (a) | Explain the Biosparging process in Bioremediation | 07 |
| | (b) | Explain in detail about Phytoremediation. | 07 |
| Q.5 | (a) | Explain the biological control of air pollution. | 07 |
| | (b) | Explain the biological treatment of waste water. | 07 |
| | | OR | |
| Q.5 | (a) | What are the advantages and disadvantages of Bioremediation? | 07 |
| | (b) | Explain detoxification activation in biodegradation. | 07 |
