

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014

Subject Code: 160403**Date: 23-05-2014****Subject Name: Environmental Biotechnology****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)** Define compost and State the quality requirements of compost that must be met in order to use it as a soil conditioner. **07**
- (b)** Describe contact stabilization process for wastewater treatment. **07**
- Q.2 (a)** Summarize briefly on secondary wastewater treatment. Give all processes and steps through charts. **07**
- (b)** Prepare a summary on “Bio gas production methods”. **07**
- OR**
- (b)** What is biomonitoring? Explain the uses of biosensors in environmental monitoring. **07**
- Q.3 (a)** Comment on naturally occurring plants for phytoremediation. **07**
- (b)** How environmental impact of agricultural practices can be reduced? Explain with examples. **07**
- OR**
- Q.3 (a)** Discuss plant biology of heavy metal accumulation. **07**
- (b)** Give a contribution of transgenic plants for phytoremediation. **07**
- Q.4 (a)** Summarize the steps for reducing environmental impact of industrial effluents. **07**
- (b)** How does toxic site reclamation help in saving environment? **07**
- OR**
- Q.4 (a)** Give an overview of the environmental risks associated with biotechnological innovations. **07**
- Q.4 (b)** Write a note on: ISO 14000 **07**
- Q.5 (a)** How are the microorganisms being utilized for improving soil fertility? **07**
- (b)** Can stress tolerance plant contribute to save environment? Justify with technical comments. **07**
- OR**
- Q.5 (a)** Narrate different strategies for biological waste gas purification. **07**
- (b)** Define: BOD and COD. Discuss its impact in ground water and surface water. Suggest the treatments of resources to keep it in permissible range. **07**
