

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER IV– EXAMINATION –WINTER 2013

Subject Code: 143503

Date: 26/12 / 2013

Subject Name: Environmental Bioscience

Time: 2:30pm to 5:00pm

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) What are proteins? Write the classification of proteins along with the functions? **07**
(b) What are carbohydrates along with classification and functions? **07**
- Q.2** (a) Write the definition and classification of amino acids? **07**
(b) Explain the importance of water in our biological system? **07**
- OR**
- (b) What are microbes and write the classification of microbes? **07**
- Q.3** (a) Write a note on DNA replication? **07**
(b) Write a note on mutations and explain different types of mutations? **07**
- OR**
- Q.3** (a) Write the properties of plasmids and how will you cut and join DNA? **07**
(b) What are prokaryotes and how are they applicable? **07**
- Q.4** (a) Explain R-DNA technology with examples and explain fatty acids? **07**
(b) Explain the process of transcription in detail along with diagram? **07**
- OR**
- Q.4** (a) What is bioremediation and explain with microbial bioremediation. **07**
(b) What are enzymes and explain all three types of enzyme inhibition. **07**
- Q.5** (a) What are carbohydrates and explain the classification with examples? **07**
(b) Explain the process of translation in prokaryotes in detail along with examples. **07**
- OR**
- Q.5** (a) What is biogas? Which conditions are required for biogas production? **07**
(b) What is biotechnology and explain the term with suitable examples. **07**
