

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

Subject Code: 143504**Date: 02-01-2015****Subject Name: Fundamentals of Biotechnology****Time: 02:30 pm - 05:00 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 Watson and Crick model for DNA. **07**
(b) Explain types of RNA with their specific working. **07**
- Q.2** (a) Write short note on plasmid DNA. **07**
(b) Explain in detail of gene process of expression. **07**
- OR**
- (b) What is Wobble hypothesis and how it works? **07**
- Q.3** (a) Enlist type of immunity and describe in detail innate and acquired immunity. **07**
(b) Explain primary and secondary immune response. **07**
- OR**
- Q.3** (a) What is antigen? Classify antigen and explain some properties. **07**
(b) Define antibody and explain structure and types. **07**
- Q.4** (a) Write short note on ABO and Rh system. **07**
(b) How replication of Prokaryotic DNA can be realized? **07**
- OR**
- Q.4** (a) What is Unidirectional and Bidirectional replication? **07**
(b) Explain the method of passing replication through Elongation and fermentation. **07**
- Q.5** (a) Write notes on close clam and rolling circle model of replication. **07**
(b) How biotechnology can be a solution of pollution? **07**
- OR**
- Q.5** (a) Explain factor affect the enzyme activity. **07**
(b) Explain alternation of DNA. **07**
