

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 170405****Date: 29-11-2014****Subject Name: Genomics and Proteomics****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)** What is proteomics? Describe different branches of proteomics. **07**
(b) Describe various research and commercial applications of proteomics. **07**
- Q.2 (a)** What is genomic variation? Discuss various kinds of genomic variations. **07**
(b) Describe various advantages and applications of genomics. **07**
- OR**
- (b)** Comment on eukaryotic genome organization. **07**
- Q.3 (a)** How DNA is packed in the organization of chromosome? **07**
(b) What is synthetic biology? Describe the concept and applications of synthetic biology in the modern times. **07**
- OR**
- Q.3 (a)** Describe various types of generalized nucleotide databases. **07**
(b) Describe various types of specialized nucleotide databases. **07**
- Q.4 (a)** Describe the principle and applications of Expressed Sequence Tag. **07**
(b) Enlist important protein databases. Describe any two of them. **07**
- OR**
- Q.4 (a)** Comment on the construction and applications of protein microarray. **07**
(b) Comment on the construction and applications of DNA microarray. **07**
- Q.5 (a)** Describe the principle, construction and use of SAGE. **07**
(b) Describe the principle, procedure and use of PAGE. **07**
- OR**
- Q.5 (a)** Comment on the use of Mass Spectroscopy in protein science. **07**
(b) Comment on Rational Drug Designing. **07**
