

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-1 EXAMINATION, FEBRUARY 2016.
B.Tech VIII Semester (BT/BI)

Subject Code: 15B1WBI834

Maximum Marks: 15

Subject Name: Computational Molecular Evolution

Course Credits: 03

Time: 1Hr.

Attempt all questions. All parts of each question have to be answered in one place. Carrying of mobile phone in examination centre will be treated as unfair means case.

- Q.1. What is gene duplication? How we date and measure gene duplication? [3]
- Q.2. Explain various kind of selection pressures working on biological sequences? [2]
- Q.3. Discuss the evolution of genetic code systems. [2]
- Q.4. What are various steps of retrosequence generation (creation)? [1]
- Q.5. Define genetic (allelic) drift. How it is maintaining equilibrium? [2]
- Q.6. Differentiate between following: [1.5*2=3]
- (a) Homology and homoplasy
 - (b) Convergent and divergent evolution
- Q.7. Describe the process of molecular evolution through a simple mathematical model. [2]