

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
B.Tech. BI and BT (Semester VIII), Test 2 (April 2016)

Course Code: 15B1WBI834

Max. Marks: 25

Course Name: Computational Molecular Evolution

Course Credit: 3

Max. Time: 1:30 Hrs

Attempt all questions. Carrying of mobile phones will be treated as the case of unfair means.

- Q.1. What is exon shuffling? What are various phases of exon shuffling? Discuss its significance. (4)
- Q.2. What are nested genes? How these are related to overlapping genes? Explain with an example. (3)
- Q.3. What are important criteria to solve the mystery of genome evolution. Explain genetic code evolution and base composition factors in detail w.r.t. genome evolution. (4)
- Q.4. What is C-value? Explain its usage for genome level analysis. (2)
- Q.5. Explain the role of introns in gene's overall evolution with a case study. (4)
- Q.6. Discuss three specific theories of genome evolution with an example of each. (4)
- Q.7. Discuss introns evolution through early and late theories with detailed examples of each. (4)