

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

T1 EXAMINATION- FEB. 2018

B.Tech (BT/BI) VIII Semester

COURSE CODE: 15B1WBI834

MAX.MARKS: 15

COURSE NAME: Computational Molecular Evolution

MAX. TIME: 1 Hrs

COURSE CREDITS: 3

Note: All questions are compulsory. Carrying of mobile phone and calculator during examinations will be treated as case of unfair means.

1. What is oparin theory? How it is associated with molecular evolution? [1]
2. Define LUCA and discuss how it is an important aspect or step in the process of evolution? [1]
3. Derive one parameter model for biological sequence evolution with all possible conditions. [4]
4. Explain the process of molecular evolution through a simple mathematical model. [1]
5. Write short notes on following with their specific role in evolution: [2+2+2]
(a) Discoveries (b) Mechanisms (c) Evidences
6. Describe Orthologs and Paralogs with a suitable example. [1]
7. Give your views on genetic code evolution. [1]