

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T1 EXAMINATION- February 2018
B.Tech VI Semester (Biotechnology)

Course Code: 10B11BT611

Max. Marks: 15

Course Name: Comparative and Functional Genomics

Course Credits: 04

Max. Time: 1Hrs

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

1. Write down the principle of Illumina solid phase sequencing? (1)
2. Describe the term "Central dogma", which year it was proposed by..? (2)
3. Draw a well labeled structure of a *Sachharomyces cerevisiae* gene and describe the points that help to distinguish it from an *E. coli* gene? (2)
4. Write down the number of genes and genome size of *E. coli* and Human genome, describe the relation you can derive using these numbers? (2.5)
5. Draw the structure of ribose, deoxyribose and dideoxyribose sugar? Where do you find the application of dideoxyribose sugar in Sanger sequencing? (2.5)
6. Describe the mechanism of pyrosequencing, reactions steps, enzymes with their source agent? What are the different applications of the Pyrosequencing? (5)