

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY  
Test-1 Examination September-2018  
BTDD/PHD BIOTECHNOLOGY

COURSE CODE: 13M11BT114

MAX. MARKS: 15

COURSE NAME: HIGH THROUGHPUT TECHNOLOGIES

COURSE CREDITS: 03

MAX. TIME: 1HR

*Note: All questions are compulsory. Carrying mobile phone during the examination will be treated as case of unfair means. Marks are indicated against each questions.*

1. Writes on (5 marks- 1 each)
  - a. Bridge amplification
  - b. Colonies
  - c. 1<sup>st</sup> generation sequencing
  - d. 2<sup>nd</sup> generation sequencing
  - e. Genome size of *E. coli* and human genome
  
2. What are the basic methodologies for the Sanger Sequencing, Pyrosequencing and Solid phase Illumina Sequencing Technology? (2)
  
3. Write on Pyrosequencing with reaction steps involved in it? Describe the role and source of the enzymes that are used in the sequencing process. What are the different applications of the Pyrosequencing? (4 marks)
  
4. High Throughput sequencing Technology is an important and successful in answering many biological question, Describe the each steps with labelled diagram for the solid phase Illumina Sequencing Technology? (4 marks)