

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- April 2018

B.Tech. IV Semester

COURSE CODE: 10B11BT413

MAX. MARKS: 25

COURSE NAME: Molecular Biology

COURSE CREDITS: 04

MAX. TIME: 1.5Hrs

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

- Q1. What is the contribution of following scientists in molecular biology? (2 marks)
a) Kary Mullis b) Arthur Kornberg
- Q2. Differentiate between prokaryotic replication and eukaryotic DNA replication. (3 mark)
- Q3. How do you prove that the growth of the DNA chain occur in the direction of 5' -to-3' direction by incoming nucleotides? Justify your answer. (3 mark)
- Q4. Although replication occur at fast rate; but in general this process has an extraordinary degree of fidelity. Explain different mechanisms which prevent errors and proof read the process. (3 mark)
- Q5. Explain an experimental method by which you can prove that a specific stretch of DNA sequence is associated with protein. Also explain the process of retrieving these DNA sequences.. (4 mark)
- Q6. Describe the following terms in brief. (10 mark)
a) Similarity and difference between DNA replication and Polymerase chain reaction
b) Telomerase and its role