JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-1 EXAMINATION- FEBRUARY -2019

B.Tech 4th Semester

COURSE CODE: 15B11BI411   MAX. MARKS: 15

COURSE NAME: Genetic Engineering and Genomics

COURSE CREDITS: 04   MAX. TIME: 1 HR

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

Q.1   5x1.0=5 (15 minutes) CO I, II
   a. Write any three general objectives of genetically modifying organisms?
   b. Define Recombinant DNA and Recombinant DNA technology. How it is related with genetic engineering?
   c. What do you understand with palindrome with rotational symmetry? Give an example.
   d. Give any three examples of cross-species transfer of genes.
   e. How restriction enzymes contaminated with exonucleases and phosphatases affect cloning experiment?

Q.2   Attempt any three of following questions.   3x2.0=6 (20 minutes) CO I, II, V

   I.   Write a note short on structural genomics and functional genomics.
   II.   What are the differences between Prokaryotic and Eukaryotic genomes?
   III.   Write a short note on LINEs and SINES.
   IV.   Write a short note on transgenic fish recently approved by FDA USA, to enter human food chain.

Q.3   4 (20 minutes) CO II

Explain the phenomenon of host restriction and modification. Why type II restriction enzymes are important? What is the principle and steps involved in construction of recombinant DNA?