

Dr Harsh

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- May-2018

B.Tech (BI) II Semester

COURSE CODE: 10B11BI411

MAX. MARKS:35

COURSE NAME: Molecular Genetics

COURSE CREDITS: 04

MAX. TIME: 2 Hours

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

1. Write a short note on followings:- (COII, VI; 1X5 = 5)
  - a. Allele
  - b. Significance of test cross
  - c. Regulatory genes
  - d. Operon
  - e. Ribosomes
2. Discuss experimental setup to prove semi-conservative model of replication. (COIV; 3)
3. How the length of teleomere is maintained by telomerase? (COIV; 3)
4. What are characteristics of the genetic code? (COIV; 3)
5. Describe translation termination step in prokaryotes. (COIV; 3)
6. What are riboswitches and how they control gene expression? (COVI; 3)
7. Describe guide RNA mediated RNA editing mechanism. (COV; 5)
8. Give detailed description of control of gene expression of *lac* operon of *E. coli*. (COVI; 5)
9. What do you understand by RNA capping and RNA tailing, give detailed description? (COV; 5)