

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION -2016

B. Tech II Semester

COURSE CODE: 10B11BI411

MAX. MARKS: 15

COURSE NAME: MOLECULAR GENETICS

COURSE CREDITS: 04

MAX. TIME: 1 HR

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

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| 1. Explain followings:- | (5X1= 5) |
| a. Gene and genotype | |
| b. Cell cycle check points | |
| c. Coupling and repulsion | |
| d. Genetic map and physical map | |
| e. Reverse mutation and transversion | |
| 2. What are sense and non-sense mutations? Describe in detail with examples. | (2) |
| 3. Describe Prophase-I in detail. | (2) |
| 4. What is test cross? Give its significance. | (2) |
| 5. Describe how genetic variations are produced by crossing over? | (2) |
| 6. Draw gene map based on following information. | (2) |

Gene pair	recombination frequency
A and D	8
B and D	13
C and D	23