

COURSE CODE: **10B11BI411**

MAX. MARKS: 15

COURSE NAME: **Molecular Genetics**

COURSE CREDITS: 04

MAX. TIME: 1HR

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

1. Draw the structure of chromosome and label its various parts. Discuss various types of chromosome based on position of the centromere. (3); CoI,II
2. How the genetic variations are produced by crossing over? (2); CoI,II
3. Discuss prophase I. (2); CoI
4. List three traditional sub-divisions of genetics and summarize what each covers? (1); CoI
5. What do you understand by test cross? Give its significance. (2); CoII
6. Describe genetic map and physical maps. (2); CoII
7. Draw genetic map based on following information:- (3); CoI,II

Gene pair

Recombination Frequency (%)

A and D

8

B and D

13

C and D

23