

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2023

M.Tech-II Semester (BT)

COURSE CODE (CREDITS): 14M11BT213 (3)

MAX. MARKS: 15

COURSE NAME: FUNCTIONAL GENOMICS

COURSE INSTRUCTOR: DR JATA SHANKAR

MAX. TIME: 1 Hour

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*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

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- Q1. What is re-association kinetics, how it helps to understand the complexity of an organism such as Human genome/human? [2.5 marks] CO I
- Q2. If the size of human genome is 3 billion bp and genes encoding protein is 48 Mb, calculate the percentage of bp in the genome that encodes the proteins? [2.5 marks] CO I
- Q3. To study functional genomics, selection of model organism is important, state a model organism applicable to functional genomics studies for neurological diseases or cancer and why? [2.5 marks] CO I
- Q4. What is *CFTR*, state the disease associated with *CFTR* and the describe model organism to study the diseases? [2.5 marks] CO I
- Q5. Write on Pyrosequencing and their types? And how this sequencing technology helps in functional genomics studies? [2.5 marks] CO II
- Q6. In genomics, assigning coding and non-coding sequence in the genome project is important task? What are basic strategies you would construct to distinguish prokaryotic vs eukaryotic genes? [2.5 marks] CO II