

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- FEB-2023

COURSE CODE(CREDITS): 18B11BT413 (4)

MAX. MARKS: 15

COURSE NAME: Introduction to Bioinformatics

COURSE INSTRUCTORS: Dr. Raj Kumar

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. Consider you are working on a prokaryotic organism. Which bioinformatics resources will you use if you want to study the genetics relatedness of the organisms? (CO-1) [2]

Q2. Write down the possible steps taken to submit your data from Q1 to public databases? (CO-1) [2]

Q3. A 'record', a 'field' and a 'relation' are necessary items in construction of a Biological database. Imagine you are constructing a biological database of your choice, what type of data will you fill in the given portions of the database? (CO-3) [2]

Q4. The discipline of Bioinformatics has various subfields and components. Give a brief account on components of Bioinformatics. (CO-1) [3]

Q5. The 'Central Dogma' is the process by which the instructions in DNA are converted into a functional product. Give a brief account on what type of Bioinformatics data is obtained at different stages of the Central Dogma? (CO-2) [3]

Q6. The Human Genome Project (HGP) was a landmark global scientific effort whose aim was to generate the first sequence of the human genome. What were the major goals of HGP? Did HGP project achieve all the goals successfully? Justify. (CO-2) [3]