

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-1 EXAMINATION - February 2019
B.Tech Vth Semester (BI)

COURSE CODE: 10B11BI612

MAX. MARKS: 15

COURSE NAME: Machine Learning for Bioinformatics

COURSE CREDITS: 04

MAX. TIME: 1 HR.

Note: All questions are compulsory.

Use technical lexicon and answer all questions succinctly. Keep calm and attempt the questions.

1. Discuss how you could build 'intelligent clouds' in order to contribute to the advancements in bioinformatics domain. You could choose any applications of your choice. (Be creative and sensible). (CO-I) (2)
2. Describe the application of k-NN for the development of electronic nose. (CO-IV) (4)
3. How will you avoid overfitting while developing a machine-learning a machine-learning based classifier? Explain what procedure will you use along with its various types. (CO-I) (4)
4. (a) Is it possible to calculate accuracy of a classifier using ROC curve? Justify your answer using mathematical expressions. (CO-I) (2)
- (b) Explain how distance-weighted and Fuzzy K-NN provide leverage over the canonical version of k-NN. Use mathematical equations to substantiate your answer. (CO-IV) (3)