

BIO543: Big Data Mining Healthcare

(20th February 2025, Quiz2)

Maximum Marks: 20

Duration: 20 Minutes

Name: _____

Admission No: _____

Instructions: Attempt all questions, each question carry one mark. Please tick only one best option.

- Which of the following is example of functional annotation of proteins?
 - Tertiary structure
 - Secondary structure
 - Subcellular localization
 - Antimicrobial peptides
- Which method can be used to predict subcellular localization of proteins?
 - BetaTpred3
 - AlgPred2
 - HSLpred
 - Pprint
- How many total tripeptides are possible from the 20 natural residues?
 - 8000
 - 400
 - 800
 - 4000
- Which database maintain microarray or expression data?
 - PDB
 - GeneBank
 - GEO
 - UniProt
- What will be Manhattan distance between point (2, 3, 4) and (5, 6, 7)?
 - 3
 - 9
 - 6
 - 12
- Which of the following methods is not used to calculate word embeddings?
 - Word2Vec
 - GloVe
 - FastText
 - TF-IDF
- What will percent dipeptide composition of "AC" in following sequence "GGACACRGACW"?
 - 10
 - 50
 - 30
 - 70
- If $TP = 8$, $TN = 8$, $FP = 4$ and $FN = 5$; what will be percent accuracy?
 - 8
 - 60
 - 32
 - 64
- In unsupervised learning, points in a cluster have ____ similarity with each other
 - High
 - Low
 - Equal
 - None
- Protein sequence will come under which type of data
 - Cross-section data
 - Time series data
 - Sequential data
 - Longitudnal
- Which of the following is a statistical method
 - SVM
 - KNN
 - HMM
 - None
- What is range of activation function softsign?
 - $(-1, 1)$
 - $(0, \infty)$
 - $(0, 1)$
 - $(-0.5, 0.5)$

13. Which of the following kernel is not used in SVM
- a) Linear
 - b) Polynomial
 - c) **Exponential**
 - d) RBF
14. Which of the following is not a deep learning technique
- a) **HMM**
 - b) LSTM
 - c) CNN
 - d) RNN
15. Who developed concept of relational database?
- a) Larry Page
 - b) **E. F. Codd**
 - c) Carlo Strozzi
 - d) Doug Cutting
16. Which of the following is NOT a NoSQL database type?
- a) Document Store
 - b) **Relational Store**
 - c) Key-Value Store
 - d) Graph Database
17. What file format does MongoDB use to store data?
- a) CSV
 - b) XML
 - c) **BSON**
 - d) YAML
18. Which of the following is not part of MongoDB?
- a) `_id` field
 - b) Field
 - c) **ROW**
 - d) Index
19. Which of the following allow to make SQL like queries?
- a) Pig
 - b) **Hive**
 - c) HBase
 - d) MapReduce
20. ____ allow command-line interface to transfer data between RDBMS and Hadoop
- a) YARN
 - b) Oozie
 - c) **Squop**
 - d) Mahout