



Register No:

Date: 23-11-2020

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE

III SEMESTER EXAMINATION, NOVEMBER 2020

MSc IN BIG DATA ANALYTICS

BDADE 3618: BIOINFORMATICS

TIME 2 1/2 HRS

MAX MARKS 70

This Question Paper Contains One Printed Page and One Part

ANSWER ANY SEVEN QUESTIONS

7 X 10 = 70

1. Discuss the importance of sequence analysis. List various features of BLAST tool and important parameters for choosing the best alignment.
2. Write a detailed note on the major functions of five eukaryotic cell organelles.
3. What is genetic information? How it is used by the cells and propagated?
4. What are the applications of multiple sequence alignment? Write a detailed note on various features of ClustalOmega tool.
5. Write a detailed note on BLAST algorithm.
6. Write a note on the applications of next generation sequencing in research and healthcare.
7. Define genomics, transcriptomics, and proteomics. Write a note on various high-throughput data generated in these fields and their applications.
8. What are the differences between reference and *de-novo* NGS assembly? Write a detailed note on Illumina technology.
9. Write a detailed note on different phases of cell cycle.

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