



RAN - 2203000206026006

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B.Sc. Microbiology (Sem. VI) Examination April - 2023

Genomics, Proteomics and Bioinformatics (Paper - MB: 606)

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

(૧)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

B.Sc. Microbiology (Sem. VI)

Name of the Subject :

Genomics, Proteomics and Bioinformatics (Paper - MB: 606)

Subject Code No.: **2203000206026006**

Seat No.:

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Student's Signature

- (2) Figures to the right indicate full marks of the question.
(3) Draw neat and labeled diagrams whenever necessary.

Q-1. Give specific answers

(12)

- What do you mean by Coverage in context of Next-Generation Genomic Sequencing?
- Differentiate between genomic islands and pathogenicity islands.
- What is Meta-transcriptomics? Give one similarity of it with metagenomics.
- Differentiate: Functional Genomics and Metabolomics.
- What do you mean by Data Acquisition?
- Name any 4 search engines.

Q-2. Explain/Comment on any two of the following

(12)

- Justify: NGS is the sequencing method of choice for metagenomic analysis.
- Explain: Data Heterogeneity is very common feature in biological data base.
- Explain FASTA with its significance in bioinformatics.

Q-3. Attempt in detail any two of the following. (16)

- a. Discuss how Comparing genomes reveals information about genome structure and evolution.
- b. Describe in detail: Scope/research areas of Bioinformatics.
- c. Discuss in detail: Global, Local and Endfree Space Alignment.

Q-4. Write short note on any two of the following. (10)

- a. The chain-termination DNA sequencing method.
 - b. Aim of bioinformatics.
 - c. The technique of two-dimensional gel electrophoresis.
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