RAN-2203000206026006

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T.Y.B.Sc. (Sem. VI) Examination March - 2025

Microbiology

MB 606 : Genomics, Proteomics and Bioinformatics

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:

☛ **T.Y.B.Sc. (Sem. VI)**

Name of the Subject :

☛ **Microbiology-MB 606 : Genomics, Proteomics and Bioinformatics**

Subject Code No.: **2203000206026006**

Seat No.:

Student's Signature

2. Figures to the right indicate full marks.
3. Draw neat and labeled diagrams wherever necessary.

Q. 1. **Give Specific Answers :-** **08**

a. Define : i) contig ii) metagenomics
b. What is Adapter Ligation based next generation sequencing?
c. State the two methods used for the study of gene expression in functional genomics.
d. What is tandem MS? Give its use
e. What is data acquisition?
f. Define: glycomics
g. Give the details of four available online search engines.
h. State various forms of BLAST.

Q. 2. **Explain/Comment on ANY TWO of the following:** **14**

a. Metagenomics provides access on uncultured microbes.
b. 2D gel electrophoresis coupled with MS and electrophoretic mobility Shift Assay are used to study protoemoics.
c. Justify: Scope & Aim of bioinformatics is four fold.

Q. 3. **Discuss ANY TWO of the following:** **14**

a.. Write a detailed note on classification of biological databases.

b. Discuss in detail: Global, Local and Endfree space alignment.

c. Give a detailed note on how comparative genomics explains the significance of movement of genetic material between organisms.

Q. 4. **Write short note on ANY TWO of the following:** **14**

a. WGS

b. DNA microarray

c. Data retrieval tools

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