



RAN-2203000206026006

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

Microbiology

MB 606 : Genomics, Proteomics & 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 & 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)

- State the difference between dNTPs & ddNTPs.
- In WGS how accuracy of final results can be increased?
- What is CDS
- Define: i) probe ii) transcriptome.
- Give full form of i) NCBI ii) INSDC
- Give the two examples of nucleotide sequence database.
- State the major difference between global and local alignment.
- What is database retrieval tool? Give significance

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

(14)

- Explain the importance of dNTPs and ddNTPs in DNA sequencing method.
- Justify: Transcriptomics reveals expression of a given set of gene at a given time.
- Explain the three major branches of bioinformatics

Q.3. Discuss ANY TWO of the following:- (14)

- a) Write a detailed note on massively parallel sequencing techniques.
- b) Write a detailed note on data retrieval tools.
- c) Discuss the role of 2D gel electrophoresis in functional genomics

Q-4. Write short note on ANY TWO of the following:- (14)

- a) Single cell genomic sequencing
 - b) DNA Microarray
 - c) FASTA
-