



RAN - 2503001302046004

**RAN-2503001302046004**

**B.Sc. Biotechnology (Sem. II) Examination April - 2025**

**BT-MDC - 203 - Basic of Bioinformatics**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**સૂચના : / Instructions**

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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. Biotechnology (Sem. II)**

Name of the Subject :

**BT-MDC - 203 - Basic of Bioinformatics**

Subject Code No.: **2503001302046004**

Seat No.:

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Student's Signature

- (2) Figures to the right indicate full marks.
- (3) Draw neat and labelled diagrams wherever necessary.

**Q-1: Short question/One-word answer Any Ten:**

**(10)**

1. Under which tab is the watermark button available in MS Word 2016?
  - a. Home
  - b. Insert
  - c. Design
  - d. Page Setup
2. HTML stands for \_\_\_\_\_
  - a. HyperText Markup Language
  - b. HyperText Machine Language
  - c. HyperText Marking Language
  - d. HighText Marking Language
3. Which of the following is not a type of page margin in MS Word?
  - a. Center
  - b. Bottom
  - c. Left
  - d. Right
4. BLAST can be used to search for similarities between:
  - a. DNA sequences only
  - b. Protein sequences only
  - c. Both DNA and protein sequences
  - d. RNA sequences only

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**[ 1 ]**

**[ P.T.O. ]**

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5. Which of the following is used to read an HTML page and render it?
  - a. Web server
  - b. Web network
  - c. Web browser
  - d. Web matrix
6. Which type of BLAST is used to compare protein sequences against a protein database?
7. Define: Orthologous
8. Among the following which one is not the approach to the local alignment?
  - a. Smith-Waterman algorithm
  - b. K-tuple method
  - c. Words method
  - d. Needleman-Wunsch algorithm
9. What are HTML tags?
10. What is Local Alignment?
11. Write three types of gap penalties.
12. What is E-value?

**Q-2: Short note Any Two of the following: (10)**

- a) Demonstrate how to add an image and a hyperlink in an HTML document.
- b) What is HTML? Explain its basic structure and write an example code to create a simple webpage.
- c) Describe the difference between container tags and empty tags in HTML with examples.

**Q-3: Short note Any Two of the following: (10)**

- a) Describe the function of the Title Bar in MS Word.
- b) Define the term “Worksheet” in MS Excel. Describe the function of Rows, Columns, and Cells in an Excel worksheet.
- c) Define MS PowerPoint and its primary use. Explain the purpose of MS PowerPoint in creating presentations.

**Q-4: Short note Any Two of the following: (10)**

- a) What is BLAST in Bioinformatics? Explain different types of BLAST in detail
- b) Explain various methods of sequence alignment.
- c) Define sequence alignment in bioinformatics. Explain the significance of sequence alignment in biological research.

**Q-5: Short note Any Two of the following: (10)**

- a) Describe the Sum of the Pair Method.
  - b) Write a short note on ClustalW.
  - c) Difference between pair-wise sequence alignment and multiple sequence alignment.
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