M. Sc. BIOTECHNOLOGY
Fifth Semester
COMPUTER APPLICATION AND BIOINFORMATICS
(BBT -23)

Duration: 3Hrs.   **Full Marks: 70**

Part-A (Objective) = 20
Part-B (Descriptive) = 50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.   **Marks: 50**

I.Answer any *five* of the following questions

1. a) Define Windows. Name the versions of windows family.
                                                                5

    b) What are the main elements of windows. Explain them .
                                                                5

2. Apply the Needleman and Wunusch alignment to determine the best
   alignment for the following sequence. (Fill only the table)
                                                                10

    ATTCA
    TCA

3. "Bioinformatics is multidisciplinary subject" Explain. What are the
   various scope of Bioinformatics?
   5+5=10

4. What are the first generation, second generation and third generation
   computers, write briefly about them.
                                                                10

5. Write note on (any two)   5x2=10
   a) NCBI   b) TrEMBLE
   c) DDBJ   d) Swiss Prot

                                                                PTO

6.   a) Draw the processor and memory architecture of a computer system.

4

b) Name two nucleotide database with their URL

3

c) Name two protein database with their URL

3

7. Describe the process and types of RAM and write briefly on ROM.

5+5=10

8. What are the tools of Bioinformatics? Explain each briefly with example.

10

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Duration: 20 minutes   Marks – 20

(PART A - Objective Type)

I. Choose the correct answer: 1x15=15

1. HTML stands for

    a) Hyper Text Markup Language   b) High Text Markup Language

    c) Hyper Tabular Markup Language   d) None of these.

2. The brain of any computer system is

    a) ALU   b) Memory   c) CPU

    d) Control Unit   e) None of the above

3. Which chart can be created in MS-Excel?

    a) Area   b) Line   c) Chart   d) All of the above

4. JPEG extension refers usually to what kind of file

    a) System file   b) Animation/ movie file

    c) Image file   d) None of the above.

5. Type of storage that is used for holding information between steps in its processing is

    a) Primary Storage   b) Intermediate storage

    c) Internal storage   d) CPU   e) None of the above

6. With regards to Email addresses

    a) They must always contain an @ symbol

    b) They can never contain spaces

    c) They are case insensitive

    d) All of the above

7. Which computer is designed to be as compact as possible

    a) Mini computer   b) Super computer   c) Micro computer

    d) Mainframe   e) None of the above

8. Which device of computer operation dispenses with the use of key board

    a) Mouse   b) Touch   c) Light pen

    d) Joystick   e) None of the above

9. What does the .com domain represents?

    a) Education domain   b) Commercial domain

    c) Network   d) None of the above

10. Among the following which is not a search engine

    a) Google   b) Bing   c) Yahoo

    d) Askme.com   e) Omiga-plus.com

11. The term bioinformatics was first introduced by Hwalim in

    a) 1986   b) 1987   c) 1988   d) 1989

12. DDBJ is situated in

    a) US   b) UK   c) Swiss   d) Japan

13. NCBI was established in

    a) 4th November 1988   b) 8th November 1988

    c) 4th November 1989   d) 8th November 1989

14. Which among them is the sequence analysis tool

    a) SPDV   b) BLAST   c) PRINT   d) MEGA 5

15. Which among them is the structure analysis tool

    a) SPDV   b) BLAST   c) PRINT   d) NCBI

II. Write the full form   1X5=5

16. EMBL: _____

17. BLAST: _____

18. PRINT: _____

19. KEGG: _____

20. NCBI: _____

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