

**Master's Degree Examination - November 2018
Semester – I**

Class: I PG
Major: Bioinformatics

Time: 3 hrs
Max. Marks: 60

17MBIC03 Basics in Computer and Algorithms in Bioinformatics

**Part - A
Choose the correct answer**

(10 X 1/2 = 5)

1. What is the central module of the computer system?
a) Kernel b) CPU c) OS d) hard disk
2. Which of the following is a network protocol?
a) HTTP b) Ethernet c) X modem d) intranet
3. IBM 1401 is thecomputer.
a) 1st generation b) 2nd generation c) 3rd generation d) 4th generation
4. XML is similar to
a) JAVA b) HTML c) Perl d) Python
5. The spanning tree of connected graph with 10 vertices contains.....
a) 9 edges b) 11edges c) 10 edges d) 9 vertices
6. Which of the following problems should be solved using dynamic programming?
a) Merge sort b) Binary search
c) Quick sort d) Longest common subsequence
7. Which one is not a built in data type?
a) Integer b) Character c) String d) list
8. Expand SBML
9. Expand BFS
10. Expand CGI

Part B

(5 X 4 = 20)

Answer all questions

Each answer should not exceed 200 words or one page

11. a) Discuss on the generations of computer.
(OR)
b) Explain operating system and its types?
12. a) Define E-R model with example.
(OR)
b) What is web programming? How is it done? Add a note on its uses.
13. a) What is greedy algorithm? Explain.
(OR)
b) Explain Binary search algorithm.
14. a) Write the outcomes of Benzer's work.
(OR)
b) Discuss about the shortest superstring problem.
15. a) Discuss about looping statements in a Computer program.
(OR)
b) Briefly explain the sequential and conditional programming concepts.

Part C

(5 X 7 = 35)

Answer all questions

Each answer should not exceed 600 words or one page

16. a) Write about computer networking.
(OR)
b) Write in brief about the types of modern computing.
17. a) Elucidate on HTML programming.
(OR)
b) Discuss the applications of RDBMS in biological data analysis.
18. a) Explain dynamic programming algorithm with example.
(OR)
b) Write a note on characteristics of algorithm, algorithm design and analysis and algorithm complexity.
19. a) Discuss in detail about the applications of SBH in sequencing.
(OR)
b) Discuss about the Hamiltonian and Eulerian approach in sequence assembly.
20. a) Explain data types with examples.
(OR)
b) Explain about the array and string data structures.
