Exam. Code : 206601
Subject Code : 3639

M.Sc. Bio-Informatics 1st Semester

COMPUTER FUNDAMENTALS, NETWORKING, WEB TECHNOLOGY AND BASICS OF C PROGRAMMING LANGUAGE

Paper—BI-514

Time Allowed—Three Hours]   [Maximum Marks—75

Note :— This question paper consists of **FOUR** sections consisting of **EIGHT** questions. Candidates are required to attempt **FIVE** questions, selecting at least **ONE** question from each section. The **fifth** question may be attempted from any section. Each question carries **15** marks.

SECTION—A

1. (a) What do you understand by storage devices in a computer system ? Also explain the memory hierarchy of these devices. What do you mean by ROM, RAM and DRAM ?   6

   (b) Draw the truth table, logical expression and symbol of NAND, NOR and XOR gates.   6

   (c) What do you mean by computer virus ? How can we prevent our computer from attack of computer viruses ?   3

2. (a) Explain in detail OSI reference model for networking of computer system.   8

   (b) Write down various services available on the Internet.   4

   (c) Write a note on hardware components required for networking of computer system.   3

SECTION—B

3. (a) Briefly explain various features of HTML language. Also give various formatting tags available in HTML.   5

   (b) How can we create hyperlinks in HTML document ? What do you mean by external and internal document referencing ?   5

   (c) Briefly explain various list tags available in HTML.   5

4. (a) What do you understand by Dynamic HTML ? Explain in detail various features of DHTML.   5

   (b) How can we insert frames in HTML document ? Explain various tags associated with frames in HTML along with their attributes.   7

   (c) Briefly explain structure of HTML document.   3

SECTION—C

5. (a) What do you understand by Programming Languages ? Explain various types of programming languages. 5

   (b) Explain various steps of compiling, linking, testing and debugging a program in C language. 5

   (c) Describe various symbols used for creating a flowchart. 5

6. (a) Give a brief introduction to C language. Also explain advantages of programming in C language over other languages. 5

   (b) Explain the difference between constants and variables. What do you understand by keyword ? Give five examples of keywords and their meaning in C language. 5

   (c) Briefly explain various integer and float data types available in C language. Also give their memory requirement and range. 5

SECTION—D

7. (a) Briefly explain various Arithmetical, Relational and Logical operators in C language. 6

   (b) Explain various conditional statements available in C language by giving suitable examples. 6

   (c) Define array. Explain various types of arrays in C language. 3

8. (a) Explain the concept of Modular Programming. What are the advantages of modular programming ? 5

   (b) What do you understand by library functions ? How can we define our own functions in C language ? Explain by giving suitable example. 5

   (c) What do you understand by pointer variable ? What are the advantages of pointer variable ? How can we access data through pointer variable ? Explain by giving suitable example. 5