

1058

B.Sc. (Hons.) Bio-Informatics

Second Semester

BIN-2007: C Language and Programming

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) List any four built-in data types in C.
- b) What is the difference between while and do-while loop?
- c) What do you understand by a null-terminated string? Discuss in brief.
- d) What do you understand by modular programming?
- e) What is the utility of unions? Discuss in brief.
- f) Write statements to open and close a file in C. Appropriately assume any required information yourself. (6x2)

UNIT – I

- II.
 - a) Discuss relational operators available in C language with the help of suitable examples.
 - b) Write a program to find the roots of a quadratic equation. (2x6)
- III.
 - a) Explain the syntax of while loop and write a program to find the sum of first n numbers.
 - b) Write a program to multiply two matrices. (2x6)
- IV.
 - a) Write a program to copy one string to another without using built-in string functions. Appropriately assume any required information yourself.
 - b) Write a program to demonstrate the utility of switch statement. (2x6)

P.T.O.

(2)

UNIT – II

- V. a) Write a function to display the Fibonacci series (0, 1, 1, 2, 3, 5, 8, 13, 21, ...) up to n terms. Appropriately assume any required information yourself.
- b) What is recursion? What are its advantages? Write a recursive function to find the factorial of a number. (2x6)
- VI. a) Define a structure that contains three members; name of the country, name of the capital, and per capita income. Using this structure, write a program to list the countries along with their capitals. Appropriately assume any required information yourself.
- b) How is a structure-type pointer variable declared and used? Discuss with the help of an example. (7,5)
- VII. a) What are the advantages of pointers? Write a program to find the sum of all the elements of an array using pointers.
- b) Write a program to copy the content of a text file to another text file. Appropriately assume any required information yourself. (2x6)

x-x-x