

**M. Sc. Bioinformatics Sem.-I (C.B.C.S.) (2013 Course) / Advanced  
Diploma in Bioinformatics Sem.-I (C.B.C.S.) (2013 Course) :  
WINTER - 2018**

**SUBJECT: C PROGRAMMING AND DATA STRUCTURE**

Day: Thursday  
Date: 25/10/2018

**W-2018-1252**

Time: 10.00 AM TO 01.00 PM  
Max. Marks: 60

**N.B:**

- 1) **Q. No.1 and Q. No.5 are COMPULSORY.** Attempt **ANY TWO** from the remaining from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to the both the sections should be written in **SEPARATE** answer books.
- 4) Draw neat labeled diagram **WHEREVER** required.

**SECTION-I**

- Q.1** Write a short notes on (ANY FIVE): (10)
- a) Static variable
  - b) Tokens and identifier
  - c) Logical operator
  - d) Type promotion
  - e) Algorithm
  - f) continue keyword with example
- Q.2** Answer the following questions: (10)
- a) Explain the hierarchy of operators with example.
  - b) Explain structure of C-program.
- Q.3** Answer the following: (10)
- a) Explain different storage classes available in C.
  - b) Draw flow chart to print prime number from 1-300.
- Q.4** Answer the following: (10)
- a) Write a program to reverse elements in an array of 15 user input numbers.
  - b) Write a program to print factorial of number using while, do while and for loop.

**SECTION-II**

- Q.5** Answer the following questions (ANY FIVE): (10)
- a) What is Union?
  - b) What is binary search?
  - c) What is the importance of structure?
  - d) How to declare structure? Give any example.
  - e) Difference between string and arrays.
  - f) Differentiate between strdup ( ) and strcpy ( )?
- Q.6** Answer the following questions: (10)
- a) What is recursion? Write a program to print factorial of number using recursions.
  - b) Explain call by reference. Write a program to demonstrate the use of call by reference.
- Q.7** Answer the following: (10)
- a) Differentiate between structure and arrays.
  - b) Discuss on pointer arithmetic? And state advantages of using array of pointers to string instead of an array of string.
- Q.8** Write a short note: (10)
- a) Selection Sort.
  - b) File opening modes