

**M. SC. BIOINFORMATICS SEM.-I (C.B.C.S.) (2013 COURSE) /
ADVANCED DIPLOMA IN BIOINFORMATICS SEM.-I
(C.B.C.S.) (2013 COURSE) : WINTER - 2017
SUBJECT: C Programming & Data Structure**

Date: Wednesday
Day: 01/11/2017

W-2017-1008

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

N.B.

- 1) **Q.1 & Q. 5 are compulsory**
- 2) Attempt any two questions from **Q.2 to Q.4** from **Section- I** & any **two questions** from **Q.6 to Q.8** from **sections – II**
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Figures to the right indicate **FULL** marks.
- 5) Draw neat and labeled diagrams **WHEREVER** necessary

SECTION-I

Q.1 Write Short Note on the following: **(10)**

- a) Pre-processor directive
- b) Constant
- c) Keyword
- d) # include
- e) Operators and their types

Q.2 Answer the following: **(ANY TWO)** **(10)**

- a) Write short note on type conversion.
- b) Hierarchy of operators
- c) Evaluate following expression
 - a) $\text{int } C = a/b - 2 * a + b, \text{ int } a = 4, b = 3;$
 - b) $\text{float } d = e + f * 10.2 - f / 3.5 * e, \text{ int } e = 2 \text{ int } f = 5$

Q.3 Answer the following: **(ANY TWO)** **(10)**

- a) Draw flow chart of program to print even numbers from 2 to 100.
- b) Write definition of data type explain in details
- c) Enlist and explain components of flow chart.

Q.4 Answer the following **(ANY TWO)** **(10)**

- a) Differentiate between for while & do while loop
- b) Write a program to print square of elements of user inputted number
- c) Write a program to print following output

```
*   *   *   *   *  
    *   *   *  
      *
```

Where numbers of rows is user input

SECTION-II

Q.5 Writes short notes on : **(10)**

- a) Functions
- b) strcmp ()
- c) Nested if
- d) switch case
- e) malloc and calloc

P.T.O.

Q.6 Answer the following: **(ANY TWO)** **(10)**
a) Write a note on storage classes
b) Write a program to input an array of structures and display its content
c) Explain concept of pointers with example

Q.7 Answer the following: **(10)**
a) Explain use of following functions.
a) gets() b) puts() c) putchar()
b) Write a program to swap two numbers without using 3rd variable

Q.8 Answer the following: **(ANY TWO)** **(10)**
a) Write a program to demonstrate linked list in C
b) Write a note on ADT
c) Write a note on Binary tree

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