7. (a) Write a program to find the sum of two matrices of dimension 3*3 ? **7**

(b) Define Arrays. Explain 2-D and 3-D arrays in detail. **8**

8. (a) Write a program to count the number of vowels present in text file 'abc.txt'. **7**

(b) Discuss the concept of storage classes in detail. **8**

9. (a) Write a program to sort the elements of an array using selection/bubble sort techniques. **8**

(b) Write a program to search an element in an array using linear/binary search. **7**

B-212

B.C.A. EXAMINATION, May 2017

(Second Semester)

(B. Scheme) (Main & Re-appear)

(BCA)

BCA-104-B

PROGRAMMING IN C

Time : 3 *Hours*]   [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Question No. **1** is compulsory. Attempt any *Four* questions from Unit by selecting at least *one* question.

1. (a) Discuss the following terms : **15**

   (i) Keywords

   (ii) Prototypes

   (iii) Static variables

   (b) Differentiate between the following :

   (i) gets() and getchar()

   (ii) arrays and structures

   (iii) break and continue statements

   (iv) #include<filename> and #include "filename"

   (v) call by value and call by reference

   (c) Discuss why header files needs to be included in any program.

   (d) What is the length of long double data types in C ?

2. (a) Write short notes on the following : **10**

   (i) Algorithms

   (ii) Modular Programming

   (iii) Unformatted and Formatted I/O functions in C

   (b) Temperature of a city in Fahrenhiet degrees is input through keyboard. Write a program to convert this temperature into centigrade degrees. **5**

3. (a) What do you mean by Preprocessor Directives ? Explain. **7**

   (b) Explain various data types supported by C. **8**

4. (a) Write a program to find the greatest of the three numbers. **8**

   (b) What do you mean by Recursion ? Explain with example. **7**

5. (a) Write a short note on bitwise operators. **8**

   (b) Briefly explain the concept of 'for', 'while' and 'do-while' loops. **7**

6. What do you mean by Structures ? Explain self referential structures and nested structures with suitable examples. **15**