

7. Write a program to change all uppercase character in a file to lowercase and vice versa (Make the actual modifications to the stored file).

8. Design a structure to store a length in yards, feet and inches (for example 7 yards, 2 feet, 3 inches). Write a function to find the difference between two measurements as represented by these structures.

9. (a) What symbol always precedes preprocessor directives? Where can a preprocessor directive be written? Where can a preprocessor directive be split?

(b) What is a macro and what is it used for? What symbol is used to separate the argument of a macro? What can a macro argument consist of? What is meant by a nested macro?

Roll No. 0902349

BCA-201(N)

B. C. A. (Second Semester) EXAMINATION, May 2018

(New Course)
Paper First

C PROGRAMMING

Time: Three Hours | Maximum Marks: 75

Note: Attempt questions from all Sections as directed.

First, the candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section - A

(Short Answer Type Questions)

All questions are compulsory. Each question carries 3 marks.

1. (A) What are subscripts? How are they written? What restrictions apply to the values that can be assigned to the subscripts?

(B) Suppose a function declaration includes argument type specification and one of the arguments is an array. How must the array type specification be written? Use small example for reference.

(C) Describe two different methods for creating a stream-oriented data file. Can both methods be used with unformatted data files?

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(D) What is meant by opening a data file ? How is this accomplished ?

(E) Can a structure variable be defined as a member of another structure ? Can an array be included as a member of a structure ? Can an array have structures as elements ? If yes, then place suitable block codes for respectively.

(F) What is the purpose of the 'typedef' feature ? How is the feature used in conjunction with structures ?

(G) How is a pointer variable declared ? What is the purpose of the data type included in the declaration ? In what way can assignment of an initial value be included in the declaration of a pointer variable ?

(H) How can a function return pointer to its calling routine ?

(I) What is preprocessor directive ? Differentiate conditional and define directives.

Section-B

(Long Answer Type Questions)

Note : Attempt any two questions. Each question carries 12 marks.

2. Write a C program that will generate a table of values for the equation :

$$y = 2e^{(-0.1t)} \sin(0.5t)$$

where t varies between 0 and 60. Allow the size of the t -increment to be entered as an input parameter.

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3. Write a C program using a pointer notation in place of array, that will enter a line of text. Store it in a pointer and then display it backward. Allow the length of the line to be unspecified (terminated by pressing the Enter key), but assume that it will not exceed 80 characters.

4. (a) How are multidimensional arrays defined ? Compare with the manner in which one-dimensional arrays are defined.

(b) State the rules that determine the order in which initial values are assigned to multi-dimensional arrays.

(c) When is a multidimensional array passed to a function ? How are formal argument declarations written ? Compare with one-dimensional arrays.

5. What is meant by dynamic memory allocation ? What library function is used to allocate memory dynamically ? How is the size of the memory block specified ? What kind of information is returned by library function ?

Section-C

(Long Answer Type Questions)

Note : Attempt any two questions. Each question carries 12 marks.

6. If several strings are stored within a one-dimensional array of pointers. How can an individual string be accessed ? What happens if the string are reordered ? Are the strings actually moved to different locations within the arrays ?

(B-52)