

Question Paper Code : 6486

B.C.A. (Semester-II) Examination, 2018

(New Syllabus)

[First Paper]

'C' PROGRAMMING

[BCS-S106T]

Time : Three Hours]

[Maximum Marks : 100

Note : Answer five questions in all. Question no. 1 is compulsory. Besides this, attempt one question from each unit.

1. Answer the following in brief : [4x10=40]
 - (a) Define pointer and elaborate its utility in C-programming.
 - (b) By giving example explain what is a macro and how is it different from a C variable name.
 - (c) What are bitwise operators ? Enumerate all the bitwise operators.
 - (d) By giving example elaborate the role of preprocessor during compilation.

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(1)

[P.T.O.]

- (e) Differentiate between sequential and random accessing of files.
- (f) Explain how one-dimensional array elements are accessed using pointer notation.
- (g) Explain the concept of pointers to functions.
- (h) What is the need for array of structures ? Give an example.
- (i) Define a string. What data structure is used to store a string ?
- (j) Explain the syntax of declaring and initialising 1-D array with an example. Find the errors in following declarations :
 - (i) int a(a);
 - (ii) int b c [4]

UNIT-1

2. (a) Define an array. What do you mean by dimensionality of an array ? Discuss how the elements of two dimensional array are declared and initialised. [10]
- (b) Write a program to find the smallest number in an array by giving proper syntax and comments. [5]

3. (a) Discuss the concept of multidimensional array. Write the syntax of declaring a 3-D array with example. [8]
- (b) Write a program to add two matrices. [7]

UNIT-II

4. (a) Discuss the concept of dynamic memory allocation. Thus explain the functions : [8]
- (i) malloc
- (ii) calloc
- (b) Discuss the purpose, utility and syntax of indirection operator. [7]
5. (a) Give the significance of & and * operator by giving examples. Give an account of pointer arithmetic with all constraints. Also explain pointer expressions. [9]
- (b) Write a program to sort a list of integers using pointer notation. [6]

UNIT-III

6. By giving proper example and syntax elaborate the working of following string functions: [15]
- (a) strchr()

- (b) strcmp()
 - (c) strcat()
 - (d) strcpy()
 - (e) strlen()
7. (a) Explain syntax of defining structure template with an example. Can we initialize structure variable while they are declared ? If yes, explain the syntax with an example. Give an account of operations which can be performed over structure variables. [10]
- (b) Differentiate between structure and union. [5]

UNIT-IV

8. (a) Discuss the need and concept of files. Write the commonly performed operations over files. Elaborate the syntax of opening a file by describing the purpose of various modes used for opening a file. [12]
- (b) Elaborate string oriented function used for file-fgets() with proper syntax. [3]

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(4)

9. With proper syntax and example elaborate the following function used in file handling : [15]
- (a) fseek()
 - (b) ftell()
 - (c) frewind()
 - (d) ffeof)
 - (e) fscanf()

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