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BCACAC 109

Credit Based First Semester B.C.A. Degree Examination, Nov./Dec. 2018

(Common to all Batches)

PROGRAMMING IN C

Time : 3 Hours

Max. Marks : 80

Note : Answer any ten questions from Part – A and any one full question from each Unit in Part – B.

PART – A

1. a) What is initialization ? Give example. **(10×2=20)**
- b) What is C token ? List the different types of C tokens.
- c) What # define does ? Give an example.
- d) List any four commonly used header files.
- e) What is entry controlled loop ? Give an example.
- f) What is a compound statement ? Give an example.
- g) Differentiate scanf() and gets() function while reading string.
- h) Assume a = 8, b = 4. Determine the value of x for the expression :
 $x = (a > b) ? a : b * 3 * a;$
- i) What are actual and formal parameters ?
- j) Define a structure called complex consisting of two floating point numbers x and y. Also declare a variable p of type complex.
- k) What is a pointer ? How it can be initialized ?
- l) List any two modes of opening a file. Give example.

P.T.O.



PART – B

Unit – I

2. a) Explain in brief Keywords and Identifiers. Give example for each.
b) Explain the basic structure of a 'C' program.
c) Explain basic data types in C with example. **(4+5+6)**
3. a) Explain printf() and scanf() functions with syntax and examples.
b) List and explain arithmetic and relational operators in C with example.
c) What is a constant ? How are they classified ? Give examples for each. **(4+5+6)**

Unit – II

4. a) Differentiate do .. while and while with syntax and example.
b) Explain if .. else .. if ladder statement in C with syntax and example.
c) Write a C program to transpose a matrix. **(4+5+6)**
5. a) What is an array ? How to declare and initialize two dimensional array ?
Give example.
b) Write a C program to print maximum and minimum among 'n' numbers
using arrays.
c) Explain switch statement with syntax and example. **(4+5+6)**

Unit – III

6. a) Explain automatic and static variables with examples.
b) Mention different categories of user defined functions in C. Explain any one
with suitable example.
c) Explain in brief any five string handling functions with syntax and example. **(5+5+5)**
7. a) What is a string ? How do you declare, initialize and read string ?
b) Explain how to create a user defined function with general form and example.
c) What is recursion ? Write a recursive function to find factorial of a number.
Use it in main function. **(4+6+5)**



Unit – IV

8. a) Explain any two preprocessor directives with suitable examples.
b) Explain call by value and call by reference with suitable examples.
c) What is a structure ? How do you declare a structure variable and access members ? Explain with an example. **(4+5+6)**
9. a) What is union ? Explain how does it differ from a structure.
b) Explain the following :
i) Structure within a structure
ii) Pointer arithmetic
c) Explain the following :
i) `fopen()` and `feof()`
ii) `getw()` and `getc()`
iii) `fprintf()` and `fscanf()` **(4+5+6)**
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