



BRAINWARE UNIVERSITY

Course – BCA

Principle of Programming Language (BCAC201)

(Semester – 2)

Time allotted: 3 Hours

Full Marks : 70

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group –A

(Multiple Choice Type Question)

10 x 1 = 10

1. Choose the correct alternative for the following: (*Any Ten*)

(i) What is sizeof() in C?

- a) Function b) Operator c) Data type d) None of these

(ii) What is the value of the expression $x != y$ where $x=0$ and $y=0$

- a) 0 b) 1 c) 10 d) 01

(iii) & is used in scanf() to specify

- a) Address b) Value c) Pointer d) Not required

(iv) A function is calling itself, The function is called as

- a) Recursive b) Iterative c) Non recursive d) None of these

(v) The ! is a/an ___ operator in C

- a) And b) Or c) Not d) Not valid operator

(vi) If the value of $i=0$ and $x=0$ and $x=i++$; Then the value of x will be

- a) 1 b) 2 c) -1 d) 0

(vii) What is the value of x in the following expression, if y=1 and x=0?

`x=y?1:0;`

- a)0 b)11 c)Syntax Error d)1

(viii) What is the EOF in C?

- a) End of File b)End of Function c)Element of function d)None of these

(ix) ** is used for

- a)Double pointer b)Multiplication c)Division d)Power

(x)The value of pow(x,y) will compute

- a)x*y b)Pointer c)x to the power y d)y to the power x

(xi) C compiler will not check

- a)Syntax error b)Logical error c)Function declaration d)None of these

Group – B

(Short Answer Type Question)

3 x 5 = 15

Answer *any three* of the following

2. Write a C function to check a given string is palindrome or not. Your function will take two parameters, string1 and string2. The function will return 1 upon success and 0 on failure.

3. Write a C program to find the sum of diagonal of a user given matrix.

4.(a) Write down the difference between malloc() and calloc() with example.

(b) What is realloc()? [3+2=5]

5. What are the different types of loop exist in C? Explain with example.

6. What is a #define macro in C? Explain the concept of typecasting. [2+3=5]

Group – C

(Long Answer Type Question)

3 x 15 = 45

Answer *any three* of the following

- 7.(a) Write a C program to find the maximum number present in an integer array.
- (b) Write a C program to find the total no of vowel(s) present in a user given string. [7+8=15]
8. Write a C program to declare structure named student. Then dynamically array of structure of n students. Sort it on the basis of marks in descending order and display. You may use any sorting algorithm. (n is given by user)
- 9.(a) Write down the difference between structure and union with example.
- (b) What is a recursion? Compare recursion with iteration. Write a recursive function to compute factorial of a number. [5+(2+1)+7=15]
- 10.(a) What is pointer? What do you mean by a void pointer?
- (b) Write the difference between array of pointers and pointer to an array.
- (c) Write the advantages of using a union over structure with example. [(2+1)+5+7=15]
11. Write short notes on the following (*Any three*) [3X5=15]
- (a) File handling in C.
- (b) While loop and Do while loop
- (c) Switch case in C
- (d) C data Types.