Course ID: 13312   Course Code: BCA-CC-02
Course Title: Introducing to C programming
Time : 2 Hours   Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answer in their own words as far as practicable.

Group-A

1. **Answer all the questions:**   1 X 10 = 10
    i. What is required in each C program?
    a) The program must have at least one function.
    b) The program does not require any function.
    c) Input data
    d) Output data
    e) None of the these

    ii. What will this program print?
    main()
    {
    int i = 2;
    {
    int i = 4, j = 5;
    printf("%d %d", i, j);
    }
    printf("%d %d", i, j);
    }
    a) 4525
    b) 2525
    c) 4545
    d) All of the these
    e) None of these

    iii. What is the output of this statement "printf ("%d", (a++))"?
    a) The value of (a + 1)
    b) The current value of a
    c) Error message
    d) Garbage
    e) None of these

    iv. Study the following program:
    main()
    {
    char x [10], *ptr = x;
    scanf ("%s", x);
    change(&x[4]);
    }
    change(char a[])
    {
    puts(a);
    }

if abcdefg is the input, the output will be
a) abcd
b) abc
c) efg
d) Garbage
e) None of these

v. Study the following program:
```
main()
{
int a = 1, b = 2, c = 3:
printf ("%d", a + = (a + = 3, 5, a))
}
```
What will be the output of this program?
a) 6
b) 9
c) 12
d) 8
e) None of these

vi. In the C language, the constant is defined _____.
a) Before main
b) After main
c) Anywhere, but starting on a new line.
d) Before header declaration
e) None of these.

vii. How many times will the following loop execute?
    for(j = 1; j <= 10; j = j-1)
a) Forever
b) Never
c) 0
d) 1
e) None of these

viii. Which one of the following is a loop construct that will always be executed once?
a) for
b) while
c) switch
d) do while
e) None of these

ix. How many bytes does "int = D" use?
a) 0
b) 1
c) 2 or 4
d) 10
e) None of these

x. What is the result after execution of the following code if a is 10, b is 5, and c is 10?

```
If ((a > b) && (a <= c))
        a = a + 1;
    else
        c = c + 1;
```

a) a = 10, c = 10
b) a = 11, c = 10
c) a = 10, c = 11
d) a = 11, c = 11
e) None of these

Group-B

2. Answer any *five* questions: **2 X 5 = 10**

i.   What is datatype?

ii.   What is difference between variable and constant?

iii.   What is file handle?

iv.   What is the purpose of **? :** Operator?

v.   What is the difference between break and continue?

vi.   What is difference between "A" & 'A' in C?

vii.   What is self referential structure?

viii.   Write down the difference between *ptr and ** ptr?

Group-C

3. Answer any *four* questions: **5 X 4 = 20**

i.   What is array? Write a program in C that will accept an array of integer and will find the largest and smallest element of an array.   **1 + 4 = 5**

ii. What is operator? Explain different types of logical operator with an example **1 + 4 = 5**

iii. Explain with example, the various constants available in „C" language.

iv. Write a C program that computes the size of int, float, double and char.

v.   What is loop? Explain different types of loops with example.   **1 + 4 = 5**

vi. List all conditional control statements used in C. Explain any two with Syntax and example.

Group-D

4. Answer any *one* questions: **10 X 1 = 10**

a. **i)** What is pointer?

   ii) Write a function in C to perform the following:
       a. Copy a string from source to destination
       b. Search a three character pattern in a given string.
       c. Convert an array of digit to its equivalent integer value. i. e. will become 23 like

2	3	\0

atoi function.

iii) Write a C program to eliminate multiple spaces from a sentence and make it Single.   1 + (2 + 2 + 3) + 2

b. i) Write a C program to check whether the given string is palindrome or not.
Write down the difference between ++i and i++.

ii) Write a C program to find GCD of two numbers using ternary operator and for loop.   (3 + 2) + 5

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