CS/BCA/SEM-1/BCA-103/2010-11

2010-11

INTRODUCTION TO PROGRAMMING

Time Allotted : 3 Hours   *Full Marks* : 70

The figures in the margin indicate full marks.

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

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

$$10 \times 1 = 10$$

   i) The operator & is used for

   a) Bitwise AND   b) Bitwise OR

   c) Logical AND   d) Logical OR.

   ii) Coercion is related to

   a) Cast Operator   b) Binary Operator

   c) Ternary Operator   d) All of these.

   iii) The size of a character variable in 'C' is

   a) 4 bytes   b) 8 bytes

   c) 16 bytes   d) None of these.

   iv) Data type of the controlling statement of a SWITCH statement connot of the type

   a) int   b) char

   c) short   d) float.

v) How long the following loop runs ?

```
for ( x = 0; x = 3; x++ )
```

    a) Three times   b) Four times

    c) Forever   d) Never.

vi) The associativity of operator ++ is from

    a) left to right   b) right to left

    c) both (a) and (b)   d) none of these.

vii) The CONTINUE statement cannot be used with

    a) for   b) switch

    c) do   d) while.

viii) Output of the following program will be

```
main()
{
Int d = 0;
If(d=5)
Printf("Right");
);
}
```

    a) Right   b) Wrong

    c) WrongRight   d) None of these.

ix) Size of the following union (assume size of int=2; size of float=4 and size of char=1) is

```
union Jabb
{
int a;
float b;
};
```

    a) 2   b) 4

    c) 1   d) 6.

x) File is a

    a) data type   b) region of storage

    c) variable   d) register.

GROUP – B
(Short Answer Type Questions)
Answer any *three* of the following. $3 \times 5 = 15$

2. Draw a flowchart that can check whether a supplied number is palindrome or not.

3. Write a program to convert binary number to its equivalent decimal number.

4. What is a symbolic constant ? What do you mean by conditional operator ? What do you mean by binary operator ?

     $2 + 2 + 1$

5. What is the difference between break and continue ? What is a block ? What is a statement terminator ? $2 + 2 + 1$

6. What is a null statement ? What are local variable and global variable ? What is a null string ?

     $1 + 3 + 1$

GROUP – C
(Long Answer Type Questions)
Answer any *three* of the following. $3 \times 15 = 45$

7.   a)   Write a C program to reverse an integer number without using strrev() and strlen(), subtract 9 from the reversed number and print the result. [For example, if the given number is 678, then its reverse is 876. Subtracting 9 will give 867.]   8

    b)   Describe the different classes of data types supported in C along with their keyword equivalent and sizes.   7

8.   a)   Write a program to print the series as given along with the sum :

     $1 - 2 + 3 - 4 + 5 - \ldots\ldots n.$ 8

    b)   Define array. Write the syntax of different types of array along with examples.   7

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405   BcA(3)

9.   a)   What do you mean by NULL pointer ? In which header file is it defined ? How will you include that header file ?   1 + 1 + 1

     b)   Write a program to reverse a given string of characters. You should not use strrev().   6

     c)   Write a program to multiply two matrices.   6

10. a)   "C is a high level language." Comment on the statement critically.   3

     b)   What is a preprocessor in C language ? What are directives ? Illustrate with examples.   3 + 3 + 3

     c)   What is macro ? Give an example program to explain the working principle of macro.   3

11. a)   What is a pointer ? What are the different characteristics of a pointer ?   2 + 3

     b)   "Pass by address refers to the address of a variable passed as an argument to the called function." Justify the statement.   5

     c)   Write a program to swap the values between two variables using pointers.   5

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