

Name : .....

Roll No. : .....

Invigilator's Signature : .....

**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 × 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 cannot be 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 :  $1 - 2 + 3 - 4 + 5 - \dots n.$   $8$   
b) Define array. Write the syntax of different types of array along with examples.  $7$

405 BCA(3)

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

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
-