

**BACHELOR OF COMPUTER APPLICATION
FIRST SEMESTER (REPEAT)
PROGRAMMING METHODOLOGY & C PROGRAMMING
BCA-102**

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

1. Determine the value of the following logical expression if a=5, b=10 and c=-6
 - i. a==c || b>a
 - ii. a>b && a<c

a. i. 1, ii. 0	b. i. 1, ii. 1
c. i. 0, ii. 0	d. i. 0, ii. 1

2. A function can have-
 - i. More than one return type
 - ii. More than one argument

a. i-true, ii-true	b. i-true, ii-false
c. i-false, ii-true	d. i-false, ii-false

3. Which of these are true?
 - i. Goto statement can be used in switch.
 - ii. Break statement causes the loop to be terminated.
 - iii. Exit() function causes the loop to be terminated.
 - iv. Continue statement go to the next iteration after skipping any statements in between.

a. i, ii, iv	b. i, iii, iv
c. iii, iv	d. Only iv

4. Which is not a unary operator?

a. ++(increment operator)	b. !(logical negation)
c. & (address)	d. & (bitwise AND)

5. A function which calls itself is said to befunction.

a. Recursive	b. Argument
c. Calling	d. Command line argument

6. Which is the correct output of the following?

```
int a=1;
do
{
    printf("%d %d", a,15%a);
    a++;
} while (15/a!=3);
```

a. 1 0	b. 2 1
c. 3 0	d. All

7. Which symbol is used to represent looping in a flowchart?

a. Rectangle	b. Oval
c. Parallelogram	d. Diamond

8. What is the value of x, m, n after execution of the following statement?

```
int m=10, n=15, x;
x=++m+n++;
```

 a. x=25, m=10, n=15
 b. x=26, m=11, n=15
 c. x=26, m=11, n=16
 d. None of these
9. "In phase 2, we determine the requirements like variables, functions, etc. to solve the problem." - What is phase-2 of Program Development Life Cycle?
 a. Problem Definition
 b. Maintenance
 c. Testing & Debugging
 d. Problem Analysis
10. Which operator is used for dereferencing a pointer variable?
 a. &
 b. *
 c. ->
 d. <-
11. The storage class of a variable declared inside a function is termed as.....
 a. Local
 b. Auto
 c. Both a & b
 d. Global
12. && and & are calledandoperators.
 a. Binary & logical
 b. Logical & bitwise
 c. Logical & address
 d. Both b & c
13. A function returns..... value by default.
 a. Char
 b. int
 c. void
 d. float
14. Call by reference can be performed by using..... in C Programming.
 a. array
 b. string
 c. structure
 d. pointer
15. What is the output of the following program?

```
#include<stdio.h>
int main()
{ int n; for(n = 7; n!=0; n--) printf("n = %d", n--); }
```

 a. 7, 6, 5, 4, 3, 2, 1
 b. 6, 5, 4, 3, 2, 1, 0
 c. 7, 6, 5, 4, 3, 2, 1, 0
 d. Infinite loop
16. An arithmetic expression contains operands of type integer and float. What is the output on execution of the expression?
 a. Gives an integer value
 b. Program terminates abruptly
 c. Integer type operand is converted to float and perform arithmetic operation
 d. Float type operand is converted to integer and perform arithmetic operation
17. In case of matrix multiplication, the..... of the 1st matrix and the..... of the 2nd matrix should have the same size.
 a. Row, column
 b. Row, row
 c. Column, row
 d. Column, column

(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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|---|--------|
| 1. What is array? Differentiate between arrays and structures. | 2+8=10 |
| 2. a) Why user defined function is used in a program? | 1+9=10 |
| b) Explain all the categories of user defined function using an example to find the square root of a number. | - |
| 3. a) Define Algorithm and Flowchart. | 4+6=10 |
| b) Write an algorithm and draw a flowchart to display the sum of all the odd numbers starting from 1 up to a range given by the user. | |
| 4. Explain the various types of operators with suitable examples. | 10 |
| 5. a) What is a recursive function? | 3+7=10 |
| b) Write a program to calculate the factorial of a number by using a recursive function & explain the program execution. | |
| 6. a) Write the difference between call by value & call by reference. | 4+6=10 |
| b) Write a program to swap the values of two numbers using call by reference. | |
| 7. Explain the basics steps for declaring a structure variable. | 10 |
| 8. What do you mean by looping statement in C? Explain the various types of looping statements in C along with an example. | 10 |

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