

Vidya Vikas Mandal's  
Shree Damodar College of Commerce & Economics, Margao, Goa.  
FY BCA, Semester-I, Semester End Examination, OCT 2019  
Problem Solving and Programming Concepts (CAC-101)

**Duration: 2 hours**

**Total Marks: 60**

- Instructions:
- 1) All Questions are Compulsory.
  - 2) Figures to right indicate maximum marks
  - 3) Start each Question on fresh page
  - 4) Total No. Of Pages: 03

**Q1 A) Give One term for the following**

**(5Marks)**

- a) Function which calls another function.
- b) Error in the program due to violation of rules of programming language.
- c) Software used for writing programs in particular programming language.
- d) Language of 1's and 0's.
- e) Functions which are written by programmers to do a particular task.

**B) State true or false.**

**(5Marks)**

- i) printf() statement in c language places the cursor on the new line after displaying the data on the screen.
- ii) The Break statement is required in the default case of a Switch selection.
- iii) Array elements are stored in continuous memory locations.
- iv) A multi word can be input at run time by using gets () function.
- v) string.h is header file which helps in manipulating strings.

**Q2) Answer the following:**

**(10 Marks)**

a) Explain the importance of documentation in Programming.

**(2 Marks)**

b) Explain the following in 2-3 lines.

- 1) Constant variable    2) Application Software    3) mnemonics

**(3 Marks)**

c) Give 5 points of difference between Compiler and Interpreters.

**(5 Marks)**

**OR**

d) Give 5 points of difference between the Machine Language and the High level Language.

**(5 Marks)**

**Q3) Answer the following:**

**(10 Marks)**

a) Explain how Syntax error is different from Logical error in programming.

**(2 Marks)**

b) What is the difference between a loop with the test condition at the top and a loop with test condition at the bottom.

**(3 Marks)**

c) Write an algorithm to add first n even numbers.

**(5 Marks)**

**OR**

d) Write an algorithm to generate Fibonacci series up to n.

**(5 Marks)**

Q4) Answer the following .

(10 Marks)

a) Find output of the given code code.

(2 Marks)

```
1. #include <stdio.h>
2. int x = 5;
3. void main() {
4.     int x = 3;
5.     m();
6.     printf("%d", x); }
7.
8. void m()
9. { x = 8;
10.  n();
11. }
12. void n()
13. {
14.     printf("%d", x);
15. }
```

b) Explain the working of conditional statement using an example(if -else).

(3 Marks)

c) Draw Flowchart to Read an integer number and reverse the number.

(5Marks)

**OR**

d) Draw Flowchart to generate multiples of n.

(5 Marks)

Q5) Answer the following.

(10 Marks)

a) Evaluate the given expression.

$$3 * 4 / 2 - 4 / 2 - 4$$

(2 Marks)

b) Fix the errors and find the Output of the following code given below.

(3 Marks)

```
1. include { stdio.h }
2. int main() {
3. char arr[ ]= ' Network' ;
4. printf( "% c", arr);
5. return 0; }
```

c) Explain the importance of the storage class in C Language.

(5Marks)

**OR**

d) Explain the different Datatypes supported by C Language.

(5 Marks)

6) Answer the following.

(10 Marks)

a) Find Output of the following code given below.

(2 Marks)

```
1. void main() {  
2.     int n=3;  
3.     do{  
4.         n--;  
5.         --n;  
6.     } while(n>3) ;  
7.     printf ("%d\n", n);     }
```

b) Explain with an example the working of Continue statement.

(3 Marks)

c) What is a Variable name? What are the rules to be followed for constructing a Variable Name ?.

(5 Marks)

**OR**

d) Explain the working of a For loop with an example.

(5 Marks)

-----Best of luck-----