

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-----