

Vidya Vikas Mandal's  
Shree Damodar College of Commerce & Economics, Margao  
F.Y.B.C.A, Semester I, 'May/June Supplementary Examination 2017  
Problem Solving & Programming Concepts - (BCA-101)

**Duration: 2 Hours**

**Total Marks: 50**

- Instructions:**
- 1) All Questions are **Compulsory**.
  - 2) Figures to the right indicate Full Marks.
  - 3) Start each new question on a fresh page

**Q.1 A) Name the following:** **5 marks**

1. The operator used in pointers to refer to a pointer variable.
2. The operator which requires three operands to operate on.
3. Collection of related data items of different types.
4. Header file used in C for carrying out string functions.
5. Group of 4 bits..

**Q.1 B) Give reason for the following.** **5 marks**

1. do-while loop is considered as exit-controlled loop.
2. Testing plays a vital role in programming.
3. The statement "**if (i=5) && (j=10)**" results in an error.
4. Arithmetic addition cannot be performed on two pointers.
5. Given a function prototype "**int add(int, int);**" & the function definition "**int add (int)**" in a program results in an error.

**Q.2 Answer the following**

1. Differentiate between Logical errors and Runtime errors. **(2 marks)**
2. Explain Fourth Generation Language (4GL). **(3 marks)**
3. What is a flowchart? Draw a flowchart to print individual digits from the given number.

e.g. 351 should print   3  
                                  5  
                                  1

**(5 marks)**

**Q.3 Answer the following**

1. Differentiate between Call by value and Call by reference (2 marks)
2. Explain the following with suitable examples (3 marks)
  - a) Scope of a variable
  - b) Data type of a variable
3. Write an algorithm to print the Fibonacci series. Test the algorithm with a set of values. (5 marks)

**Q.4 Answer the following**

1. Explain any two types of operators available in C with examples. (2 marks)
2. Write a short note on Pointer? (3 marks)
3. What is an iterative control structure? Explain any two iterative control structures with same example. (5 marks)

**Q.5 Answer the following**

1. Differentiate between source code and object code. (2 marks)
2. Define structure for student storing rollno, name and percentage. Create two variables for the student structure. (3 marks)
3. Define the terms.
  - a) External storage class
  - b) System Software
  - c) Functions
  - d) Static storage class
  - e) Variable(5 marks)

\*\*\*\*\* BEST OFLUCK \*\*\*\*\*