

**Model Paper – 2**  
**Hi-Tech Institute of Engineering & Technology**  
**B.C.A. Examination**  
**(Semester-1<sup>st</sup>) Odd Semester**  
**Programming Principles and Algorithm**  
**(BCA-102)**

**Time: 3 Hours**

**Maximum Marks: 75**

**Faculty Name:** Ms. Richa Verma

**Note:** Attempt questions from all sections as per instructions.

**Section – A**

**Note:** Attempt all questions.

5 x 3 = 15

1. What is syntax and usage of Puchar()?
2. What do you understand by header files?
3. What do you mean by complexity of an algorithm.
4. Define storage classes?
5. Why C language is known as procedural language ?

**Section – B**

**Note:** Attempt any two questions.

2 x 7.5 = 15

6. What is the function? Also explain the types of functions.
7. Explain the Brain storming and Divide and conquer problem solving techniques in detail?
8. (i) Write a C program to find the factorial of a given number.  
(ii) Write a C program to print the reverse of n digit number.

**Section – C**

**Note:** Attempt any three questions.

3 x 15 = 45

- 9 Explain the following :
  - (a) Keyword and Identifiers
  - (b) Big-Oh notation?
  - (c) Swapping.
10. Explain the Time and Space complexity
11. (a) Define Algorithm. Explain characteristics of algorithm.  
(b) Write a C program to check number is palindrome or not.
12. What is Operator? Explain the different types of operator.
13. Differentiate among the three- goto, continue, break and exit statements by giving suitable example.