Enroll	ment No.	
	HICHLING.	

# Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous) Affiliated to Saurashtra University, Rajkot

#### **SEMESTER END EXAMINATION APRIL – 2017**

### Bachelor of Computer Application / B.Sc. Information Technology 16UCACC05 /16UITCC05 - ADVANCED C AND DATA STRUCTURE

Duration of Exam – 3 hrs

i) Insert before ii) Count

Semester – II

Max. Marks - 70

Dur	ration of Exam – 3 nrs Semester – 11	Max. Marks – 70
	$\underbrace{Part A}_{A} (10x1=10 \text{ marks})$	
	Answer <u>ALL</u> questions	
1.	A function that calls itself is known as a function.	
2.	A variable declared inside the function is called	
3.	Write Syntax of fopen().	
4.	To set a file position at a beginning which function is used?	
5.	is also known as Sequential Search.	
6.	Which sorting techniques are uses divide and conquer strategy.	
7.	The operation of removing an element from a stack is known as	·
8.	Stack is also called FIFO. [True or False]	
9.	node is the last node of the tree.	
10.	A singly linked list traverse in direction.	
	$\underline{Part\ B}\ (5X5=25\ marks)$	
	Answer <u>ALL</u> questions	
11a.	. What is Recursion? Explain it with example.	
OR		
l 1b.	Explain call by reference with example.	
12a.	. Explain fgetc() and fputc() function with example.	
OR		
12b.	. Write down different mods in file handling with their meaning.	
13a.	. Explain bubble sort with example.	
OR		
13b.	. Write a program for insertion sort.	
14a	Write an algorithm to perform Insert & Delete operation on Queue	·.
OR		
14b		ructure.
15a	Write a program that implements doubly linked list with following	g operations.
OP	i) Create ii) Delete by position	
<b>OR</b> 15b		llowing operations.

## $\underline{Part\ C}\ (5X7=35\ marks)$

#### Answer **ALL** questions

16a.	Explain pointer to array with example.
<b>OR</b> 16b.	What is dynamic memory allocation? Explain malloc() and calloc() in brief.
17a. <b>OR</b> 17b.	Write a Program to read the content of a file and display the same on screen.  Explain fscanf() and fprintf() function with example.
18a. <b>OR</b> 18b.	Write a program for selection sort.  Write a program for binary search.
19a. <b>OR</b> 19b.	Write algorithm to perform Insert & Delete operation on Circular Queue.  Write a program to perform PUSH & POP operation on stack.
20a.  OR 20b.	Write a program of singly linked list with following operation. i) create ii) display iii) append (Insert at last)  Create a binary search tree for following 10,5,1,7,6,40,30,35,20,25,8,15 and find out inorder, pre-order, and post-order.