



NBF-003-004201 Seat No. _____

B. Sc. (I.T.) (Sem. II) (CBCS) Examination

April/May - 2017

CS-07 : Advance C & Data Structure

(Old Course)

Faculty Code : 003

Subject Code : 004201

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer the following Questions : **20**

- (1) The process of arranging data in logical order is called _____.
- (2) _____ function is used to get the position of file pointer.
- (3) If we have a pointer declared as double *p then p will occupy _____ bytes.
- (4) To access the member variables of structure using pointer, we can use _____ operator.
- (5) _____ is also known as Sequential Search.
- (6) Which operator known as indirection operator?
- (7) If we want to open a file then which things we have to specify?
- (8) _____ is the proper function to deallocate memory?
- (9) To set a position at a desired place which function is used?
- (10) Which sort is also known as comparison sort?
- (11) Data structures that are created by user as per their requirement are known as _____
- (12) When the push operation is performed on stack the value of TOS will be _____
- (13) A double linked list contains reference to _____

- (14) Queue uses _____ type of operation for inserting and deleting elements.
- (15) A linked list in which the last node points to the first is called a _____
- (16) The degree of a node in a binary tree can be _____
- (17) In which memory area our dynamically allocated variable will be stored.
- (18) To set a file position at a beginning which function is used?
- (19) _____ is also known as Recursive Sort.
- (20) Give the output of following instructions :

```
int a[3]={2,3,5},
*p; p=a;
p=p+2;
printf("%d",*p);
```

- 2 (a) Attempt any **three** : **6**
- (1) Explain array as function argument with example.
 - (2) Explain pointer with example.
 - (3) Explain : fwrite()
 - (4) Write a program for bubble sort.
 - (5) Explain : fopen()
 - (6) What is binary tree?
- (b) Attempt any **three** : **9**
- (1) Explain pointer to structure with example.
 - (2) Write a program of selection sort.
 - (3) Differentiate: Static Array Vs. Dynamic Array.
 - (4) Write a program that implements insert operation of simple queue.
 - (5) What is recursion? Explain with example.
 - (6) Explain call by reference with appropriate example.

- (c) Attempt any **two** : **10**
- (1) Write a program for Merge Sort.
 - (2) Implement Push, Pop and Update operation on stack.
 - (3) What is data structure? Explain primitive and non primitive data structure.
 - (4) Write a program for doubly link list which perform create(), append() and display() operations.
 - (5) Write a program for Binary Search.
- 3** (a) Explain any **three** function : **6**
- (1) fputc()
 - (2) fgetc()
 - (3) malloc()
 - (4) fprintf()
 - (5) fread()
 - (6) fseek()
- (b) Attempt any **three** : **9**
- (1) Write an algorithm to insert element in circular Queue.
 - (2) Explain pointer to array with appropriate example.
 - (3) Write an algorithm that delete an element from simple queue.
 - (4) Write a program for linear search.
 - (5) Differentiate : Text file Vs. Binary file
 - (6) Explain structure as function arguments with example.

(c) Attempt any **two** :

10

- (1) Write a program for singly link list which perform insert_after(), delete_by_value() and count() operations.
 - (2) Write a program of tree with insert(), inorder(), preorder() and postorder().
 - (3) Write a program for Quick sort.
 - (4) Write a program to copy one file to another file using command line arguments.
 - (5) Write a program for singly circular link list which perform insert_before(), create() and modify() operations.
-