MK-158

003-003201

B. C. A. (Sem. II) (CBCS) Examination
April/May – 2012
Adv. 'C' & Data Structure
(New Course)

Faculty Code : 003
Subject Code : 003201

Time : Hours]   [Total Marks : **70**

1   Multiple Choice Questions   20

  1   The memory address of first element of an array is called.......

  (a)   First address

  (b)   Foundation address

  (c)   Floor address

  (d)   Base address

  2   What is the name of the "&" operator ?

  (a)   Address of Operator

  (b)   Dereference Operator

  (c)   Operator

  (d)   Goto Operator

  3   A function that call itself for its processing is known as :

  (a)   Overloaded function

  (b)   Recursive function

  (c)   Inline function

  (d)   Nested function

4   We declare a function with......if it doesn't have a return type.

(a)   Long

(b)   Int

(c)   Void

(d)   String

5   Quick sort uses..... for implementation

(a)   Recursion

(b)   Heap

(c)   Traversal

(d)   Queues

6   Which of the following is not a type of sorting ?

(a)   Selection

(b)   Bubble

(c)   Binary

(d)   Insertion

7   Which one out of following is not divide and conquer algo ?

(a)   Merge sorting

(b)   Heap sorting

(c)   Quick sorting

(d)   None of the above

8   To set a file position at desired place which function is used ?

(a)   ftell ()

(b)   rewind ()

(c)   ferror ()

(d)   fseek ()

9　An Argc and Argv is which kind of variabloe ?

(a)　Local variable

(b)　Command line argument

(c)　Global variable

(d)　Simple function argument

10　Which of the following data structure store the homogenous data element ?

(a)　Array

(b)　Pointer

(c)　Records

(d)　None

11　Which strucure is used to add and remove nodes from stack ?

(a)　Lifo

(b)　fifo

(c)　Both (a) and (b)

(d)　None

12　Stack is which kind of data structure ?

(a)　Primitive data structure

(b)　Data type

(c)　Non-linear data structure

(d)　Linear Data Structure

13　At which position new nodes are added to Queue ?

(a)　Front

(b)　Middle

(c)　back (rear)

(d)　None

14 The situation where in a linked list START = NULL is....

(a) Overflow

(b) Underflow

(c) Houseful

(d) Saturated

15 Doubly Linked List has following parts ?

(a) 3

(b) 4

(c) 1

(d) 2

16 If the character 'D', 'C', 'B', "A' are placed in queue and then removed one at a time in what order will they be removed?

(a) ABCD

(b) ABDC

(c) DCAB

(d) DCBA

17 Each entry is linked list is called

(a) Note

(b) Link

(c) Data structure

(d) None

18 In tree construction which is the suitable efficient data structure ?

(a) Array

(b) Linked list

(c) Stack

(d) Queue

19 Which of the following is not a technique in binary tree to visit each and every element of tree ?

(a) Pre order

(b) Post order

(c) In order

(d) Line order

20 Which of the following is not type of linked list ?

(a) Singly

(b) Double

(c) Rect.

(d) Circular

2 (a) Answer any three :   6

(i) Explain fwrite () and fread () with example.

(ii) Explain Array to pointer.

(iii) Explain Call by value and call by reference.

(iv) Explain recursion.

(v) Explain Primitive Data Structure.

(vi) What is Scale Factor ?

(b) Answer any three :   9

(i) Explain Categories of Functions.

(ii) Explain Command Line Argument.

(iii) Differentiate Stack Vs. Queue

(iv) Differentiate Text File Vs Binary File.

(v) Explain Primitive data structure.

(vi) Explain malloc (), alloc () and Realloc () functions.

(c) Answer any two :   10

   (i) Write a Program to Implement Circular Queue using Array.

   (ii) Write a Program to create, delete and display operation of Singly Linked List.

   (iii) Write a program to Implement Insertion sort.

   (iv) Write a program to implement Binary Search.

   (v) Write a program to copy one file into another using command line argument.

3 (a) Answer any three :   6

   (i) What is function prototype ?

   (ii) Explain advantage and disadvantage of bubble sort.

   (iii) Explain fseek() and ftell() function.

   (iv) Define Sorting. List all types of sorting.

   (v) What is file ? Which are two types to access the file ?

   (vi) Define polish notation.

(b) Answer any three :   9

   (i) Explain pointer to structure.

   (ii) What is queue ? Explain advantage of queue over stack.

   (iii) What is Linked list ? Explain types of Linked List.

   (iv) Differentiate Sequential allocation list Vs. Linked allocation list.

   (v) Differentiate Singly vs Doubly Linked List.

   (vi) Write an Algo for header linked list.

(c) Answer any two : **10**

    (i)   Explain Tree Traversal Techniques.

    (ii) Write a program for implement merge sort.

    (iii) Write a program to push and pop in stack using Linked List.

    (iv) Write a program to create, display and search a node in doubly linked list.

    (v) Write a program to create In order Binary Tree.

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