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**M3-R4: JANUARY, 2015, DOEACC O LEVEL, C LANGUAGE
PROGRAMMING ANSWER,**

1. Each question below gives a multiple choice of answers. (1x10)

1.1 The two type of file structures existing in VSAM file are

- A) Key sequenced structures, entry sequenced structures
- B) Key sequenced structure, exit sequenced structures**
- C) Entry sequenced structures, exit sequenced structures
- D) None of the above

1.2 In a multilist organisation

- A) records that have an equivalent value for a given secondary index item are linked together to form a list
- B) records are loaded in ordered sequence defined by collating sequence by content of key
- C) records are directly accessed by records key field**
- D) none of the above

1.3 *ptr ++ is equivalent to

- A) ptr++
- B) *ptr
- C) ++ptr
- D) ++*ptr**

1.4 Declaration `int (*)(p) int(*a)` is

- A) A pointer to function that accept an integer argument and return an integer
- B) A pointer to a, which returns an integer
- C) A pointer to subroutine which returns an integer
- D) None of the above**

1.5 The output of following program would be

```
main()
{ printf("d%d%d%" sizeof(3.14f), sizeof(3.14l));
  is
```

- A) 4,8,10
- B) 8,4,10
- C) 18,8,4
- D) None of the above**



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1.6 An example of hierarchical data structure is

- A) array
- B) link list
- C) tree**
- D) all of the above

1.7 The do..while looping statement

- A) is executed only once if the conditions is true
- B) is also known as entry-controlled loop
- C) is executed at least once if the conditions is false**
- D) the unconditional loop

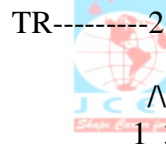
1.8 Which of the following is not a proper storage class in 'C'?

- A) auto
- B) dec**
- C) static
- D) extern

1.9 The average number of comparison is sequential search is

- A) n^2
- B) $n(n-1)/2$
- C) $n(n+1)/2$**
- D) $(n+1)/2$

1.10 Tell whether the following tree is:



- A) Heap
- B) Full and Complete**
- C) Heap Complete
- D) None of the above

2. Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the "OMR" answer sheet supplied with the question paper, following instructions therein. (1x10)



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- 2.1 A command that lets you change one or more fields in a record is look up. **TRUE**
- 2.2 In relational schema each tuple is divided into fields called relations. **FALSE**
- 2.3 The best average SORTING behavior is shown by merge sort. **FALSE**
- 2.4 The data structure that is needed to convert infix notation to prefix notation is graph. **FALSE**
- 2.5 The best case and worst case time for searching an element using linear search is 1, n. **TRUE**
- 2.6 Forest is a set of $N \geq 0$ disjoint trees, which are obtained when root is removed. **TRUE**
- 2.7 PERT graph is a graph used to perform PERT calculation. **TRUE**
- 2.8 Priority queue is a queue that is used to store priority data. **TRUE**
- 2.9 A symmetric digraph is a directed graph such that for every edge VW there is reverse edge WV. **TRUE**
- 2.10 Maximum degree in any vector in a graph with n vertices is n-1. **TRUE**
- 3. Match words and phrases in column X with the closest related meaning/word(s)/phrase(s) in column Y. Enter your selection in the "OMR" answer sheet supplied with the question paper, following instructions therein. (1x10)**

- | |
|---|
| <p>A. Files that are stored on a direct access medium</p> <p>B. 2 bytes</p> <p>C. manipulator</p> <p>D. Number of tracks and number of sectors per track</p> <p>E. The region over which the variable declaration has effect</p> <p>F. A pointer which does not point anywhere</p> <p>G. Three</p> <p>H. Contains pointer to itself</p> <p>I. Files that are stored on a random access medium</p> <p>J. A macro that represent null pointer</p> <p>K. Depends upon context</p> <p>L. Time taken by read write head mechanism to position itself over appropriate cylinder</p> <p>M. Two</p> |
|---|

- 3.1 Null pointer is **F**



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3.2 Number of operators required in ?: operators **G**

3.3 Null macros is **I**

3.4 A direct access file is **I**

3.5 Seek time is **L**

3.6 A function that change state object is called **C**

3.7 FORMAT command in DOS is used to establish **K**

3.8 Scope of a variable is **E**

3.9 A self referential structure is **F**

3.10 Size of a pointer in small memory model is **M**

4. Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Enter your choice in the “OMR” answer sheet supplied with the question paper, following instructions therein. (1x10)

- A. OR
- B. 0 (Logn)
- C. 32 KB
- D. open source software
- E. RAM
- F. And
- G. stdio.h
- H. single
- I. insertions sort
- J. 0 (nlogn)
- K. 64 KB
- L. Dijkstra's algorithm
- M. goto

4.1 An example of volatile memory is **E**.

4.2 The **F** operator is true only when both the operands are true.

4.3 LINUX is an example of **D**.

4.4 By default a real number is treated as **H**.

4.5 Header file in which NULL macro is defined is **G**.

4.6 Memory that can be allocated in a single call to macro is **K**.

4.7 Total number of comparison in bubble sort is **B**.

4.8 Arranging pack of cards by picking one by one is an example of **I**.

4.9 All pair shortest path problem can be solved by **L**.

4.10 Avoid the use of **M** statement in the program.