Unit – 02 : Searching & Sorting MCQ

1. Which of the following algorithm is not stable :

A. Bubble sort

B. Quick sort

C. Merge sort

D. Insertion sort

2. Time required to merge two sorted lists of size m and n, is

A. O(m/n)

B. O(m + n)

C. O(m logn)

D. O(n logm)

3. **The worst-case occur in linear search algorithm when .....**

A. Item is somewhere in the middle of the array

B. Item is not in the array at all

C. Item is the last element in the array

D. Item is the last element in the array or item is not there at all

4. **If the number of records to be sorted is small, then ..... sorting can be efficient.**

A. Merge

B. Heap

C. Selection

D. Bubble

5. **The complexity of the sorting algorithm measures the ..... as a function of the number n of items to be sorter.**

A. average time

B. running time

C. average-case complexity

D. case-complexity

6. **Which of the following is not a limitation of binary search algorithm?**
   A. must use a sorted array
   B. requirement of sorted array is expensive when a lot of insertion and deletions are needed
   C. there must be a mechanism to access middle element directly
   D. binary search algorithm is not efficient when the data elements more than 1500.

7. **The Average case occurs in the linear search algorithm .....**
   A. when the item is somewhere in the middle of the array
   B. when the item is not the array at all
   C. when the item is the last element in the array
   D. Item is the last element in the array or item is not there at all

8. **Binary search algorithm cannot be applied to ...**
   A. sorted linked list
   B. sorted binary trees
   C. sorted linear array
   D. pointer array

9. **Complexity of linear search algorithm is .....**
   A. O(n)
   B. O(logn)
   C. O(n2)
   D. O(n logn)

10. **The complexity of bubble sort algorithm is .....**
    A. O(n)
    B. O(logn)
    C. $O(n^2)$
    D. O(n logn)

11. **The complexity of merge sort algorithm is .....**
    A. O(n)
    B. O(logn)
    C. O(n2)
    D. O(n logn)

12. **..... is the method used by card sorter.**
    A. Radix sort
    B. Insertion
    C. Heap
    D. Quick

13. **Which of the following sorting algorithm is of divide and conquer type?**
    A. Bubble sort
    B. Insertion sort
    C. Merge sort
    D. Selection sort

14. **..... sorting algorithm is frequently used when n is small where n is total number of elements.**
    A. Heap
    B. Insertion
    C. Bubble
    D. Quick

15. **Which of the following sorting algorithm is of priority queue sorting type?**
    A. Bubble sort
    B. Insertion sort
    C. Merge sort
    D. Selection sort

16. **Partition and exchange sort is .....**
    A. quick sort
    B. tree sort
    C. heap sort
    D. bubble sort

17. **What is an external sorting algorithm?**

A. Algorithm that uses tape or disk during the sort

B. Algorithm that uses main memory during the sort

C. Algorithm that involves swapping

D. Algorithm that are considered 'in place'

18. **What is an internal sorting algorithm?**

A. Algorithm that uses tape or disk during the sort

B. Algorithm that uses main memory during the sort

C. Algorithm that involves swapping

D. Algorithm that are considered 'in place'

19. **Shell sort is also known as**

A. diminishing decrement sort

B. diminishing increment sort

C. partition exchange sort

D. diminishing insertion sort

20. **Shell sort is an improvement on**

A. insertion sort

B. selection sort

C. binary tree sort

D. quick sort