TIME: 3 Hours   **SKCET**   **Max.Marks: 100**

PART-A

(20 x 2 = 40 MARKS)

ANSWER ALL QUESTIONS

1. In which situations inline expansion may not work?
2. Mention the ways to open the files.
3. What are various ways of implementation of list ADT?
4. What is complete binary tree?
5. Define divide.
6. How destructor is handled in C++.
7. List out the c++ operators which cannot perform operator overloading.
8. List the conditions should satisfy the casting operator?
9. Give the features of pointer operators?
10. What is generic programming?
11. How expectation is handled by C++?
12. Write an algorithm for simple hash function.
13. Write the prefix and postfix form of the expression (A+B)/ (C-D)
14. What is the name of the basic heap operations and its properties?
15. Define root and node.
16. Write the definition of topological sort.
17. Define an NP-complete problem.
18. Write a routine for insertion sort.

19.   What are the ways to pick the pivot element?

·20.   Mention the name of the approximate bin packing online algorithms.

PART-B

(5 x 12 = 60 MARKS)

ANSWER ANY FIVE QUESTIONS

21. a. Write a C++ program to perform swapping using private values of two (8) classes.

     b. List out the special characteristics of friendly functions.   (4)

22.   Discuss with programming example for sequential input and output operations.

23.   Give a procedure to convert an infix expression a+b*c+(d*e+f)*g to postfix
        notation.

24. a   Write the pseudopodia for outweighed shortest path algorithm using queue.   (6)

     b. Write the psuedocode for Dijkstra's algorithm.   (6)

25.   Write down the merge sort algorithm and show how merge sort processes
        the following input. 24,13,26,1,2,27,38,15

26.   Write the routines to insert and delete a node from binary search tree.

27.   Write an ADT routine for insert and delete for linked list.

28.   Explain in detail about various types of inheritance.

*****THE END*****

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