

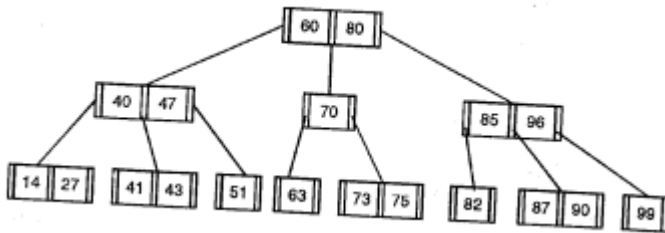
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Sums

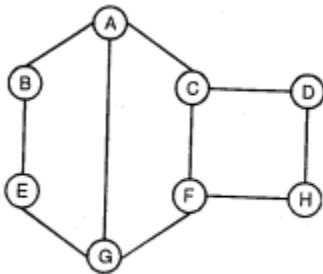
- Show how heap sort processes the input 31, 41, 59, 26, 53, 58, 97
- Find 88 in the data given below. At each step show the position of first, last and mid
8, 13, 17, 26, 44, 56, 88, 97
- Use modulo – division method and linear probing, store the keys shown below in an array with 19 elements. How many collisions occurred? What is the density of the list after all keys have been inserted?

224562	137456	214562
140145	214576	162145
144467	199645	234534

- Use B-tree of order 3 & delete 90, 60. In each step show the resulting B-tree



- Give DFS & BFS traversal of the graph shown below, starting from vertex A



- Find the minimum spanning tree (Prims algorithm) for the following graph [ONLY for IT]

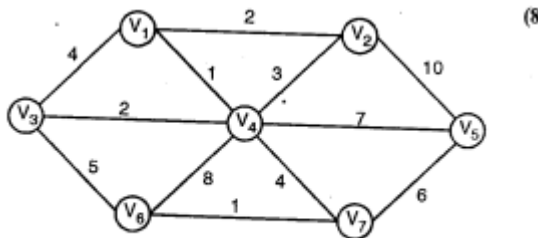
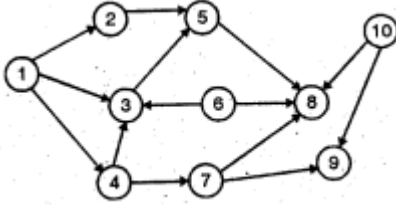


Fig. Q. 8(a)

- The preorder and postorder sequence is as follows. Draw the tree
Preorder: GFDABEC
Postorder: ABDCEFG
- The Inorder and Postorder sequence is as follows. Make the tree
INORDER: RQONPSZ
POSTORDER: RONQSZP

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9. Draw all possible trees for the INORDER sequence ABC
10. Show insertion of 2,1,4,5,9,3,6,7 into an already empty AVL tree.
11. An algorithm runs a given input of size N. If N is 4096, the run time is 512 ms. If N is 16384, the run time is 1024 ms. What is the big – O notation for the same?
12. Explain the QuickSort on the following list of numbers
65 70 75 80 85 50 55 45
13. Show insertion sort passes on the following number
567 456 455 324 213 665 777 907 990 654
14. Give DFS & BFS of the following graph. Assume 1 to be the start node



15. Give the HAUFFMAN Tree for MANTRALAYA

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