Multiple Choice Questions

Q.1 The in order traversal of the tree will yield a sorted listing of elements of tree in-
(A) Binary Trees
(B) Binary Search Trees
(C) Heaps
(D) None of the above

RIGHT ANSWER: (B)

Q.2 What is the expected time required to search for a value in a binary search tree containing n nodes? (You should make reasonable assumptions about the structure of the tree.)
(A) O(1)
(B) O(log n)
(C) O(n)
(D) O(n log n)

RIGHT ANSWER: (B)

Q.3 The following lines talks about deleting a node in a binary tree.(the tree property must not be violated after deletion)
i. from root search for the node to be deleted
ii. _____
iii. delete the node at _____
what must be statement ii. and fill up statement iii.

A. ii)-find random node,replace with node to be deleted. iii)- delete the node
B. ii)-find node to be deleted. iii)- delete the node at found location
C. ii)-find deepest node,replace with node to be deleted. iii)- delete a node
D. ii)-find deepest node,replace with node to be deleted. iii)- delete the deepest node

RIGHT ANSWER: (D)

Q.4 Which of the following traversals is sufficient to construct BST from given traversals 1) Inorder 2) Preorder 3) Postorder

(A) Any one of the given three traversals is sufficient
(B) Either 2 or 3 is sufficient
(C) 2 and 3
(D) 1 and 3

RIGHT ANSWER: (B)

Q.5 How many distinct BSTs can be constructed with 3 distinct keys?

(A) 4
(B) 5
(C) 6
(D) 9

RIGHT ANSWER: (B)

Explanation: ${}^{2n}C_n/(n+1) = {}^{6}C_3/4 = 5$