## Assignment - 6 Bolution.

- D Answer-(d)
  Explanation- As there are 3 numbers (132),
  so total of 6 combinations can be formed wing
  theree numbers but since (2,1,3) and (2,3,1)
  are same. So, in total there are 5 randomized
  binary search tree that can be formed.
- 2) Answert (a)
- (3) Answer- (b)

  Explanation- In a random mathematical model,
  the expected value of runnber of leaves in a
  randomized binary search tree is found to be
  exactly (n+1)/3 using probability.
- (4) Answer- (a)
  Explanation- In an AVL tree, the difference between heights of the two child subtrees of any mode is at most one. If height differs by more than one, AVL tree performs votations to balance the tree.
  - (5) Answer- (b)
  - (6) Answer-(c)
    Explanation = All the tree data structures given in options are balanced, but B-tree can have more than two children.
  - (7) Answer-(a)
    Explanation- Though both trees are balanced,
    when there are more insertions and deletions
    to make the tree balanced, AVL trees Should
    have more rotations, it would be better to
    use red-black, but if more search is
    required AVL trees should be used.

- (8) Answer-(b)

  Explanation- In a balance binary tree the heights of two subtrees of every node never differ by more than 1.
  - (9) Answer- (c)
    Explanation- RB tree is used for Linux
    Kernel in the form of completely fairs
    schedular process in scheduling algorithm. It is
    used for faster insertions, retrievals.
- (10) Answer- (d)

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