

## POLL TEST

Q.1 Which of the following is TRUE?

- (A) The cost of searching an AVL tree is  $\theta(\log n)$  but that of a binary search tree is  $O(n)$
- (B) The cost of searching an AVL tree is  $\theta(\log n)$  but that of a complete binary tree is  $\theta(n \log n)$
- (C) The cost of searching a binary search tree is  $O(\log n)$  but that of an AVL tree is  $\theta(n)$
- (D) The cost of searching an AVL tree is  $\theta(n \log n)$  but that of a binary search tree is  $O(n)$

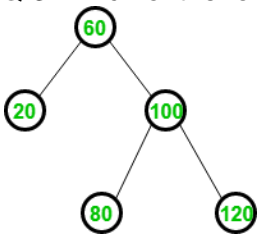
RIGHT ANSWER: (A)

Q.2 What is the maximum height of any AVL-tree with 7 nodes? Assume that the height of a tree with a single node is 0.

- (A) 2
- (B) 3
- (C) 4
- (D) 5

RIGHT ANSWER: (B)

Q.3 Which of the following is updated AVL tree after insertion of 70 for following AVL tree?



Option-(A)	Option-(B)	Option-(C)	Option-(D)
<pre> graph TD     70((70)) --- 60((60))     70 --- 100((100))     60 --- 20((20))     100 --- 80((80))     100 --- 120((120))           </pre>	<pre> graph TD     80((80)) --- 60((60))     80 --- 100((100))     60 --- 20((20))     100 --- 70((70))     100 --- 120((120))           </pre>	<pre> graph TD     80((80)) --- 60((60))     80 --- 100((100))     60 --- 20((20))     60 --- 70((70))     100 --- 120((120))           </pre>	None

RIGHT ANSWER: (C)

Q.4 which of the following statement is/are true?

- (i) Adjacency matrix representation is better for sparse graph than adjacency list representation
- (ii) Finding whether there is an edge between any two nodes in a graph is easier in adjacency matrix
- (iii) Adding a vertex in adjacency list representation is easier than adjacency matrix representation

- (A) (i) & (iii) only
- (B) (i) only
- (C) (ii) & (iii) only
- (D) All are true

RIGHT ANSWER: (D)

Q.5: For a given graph G having v vertices and e edges which is connected and has no cycles, which of the following statements is true?

- (A)  $v = e$
- (B)  $v = e + 1$
- (C)  $v + 1 = e$
- (D)  $v = e - 1$

RIGHT ASNWER: (B)