1.
The number of edges from the node to the deepest leaf is called _____of the tree.

A. Length
B. Depth
C. Height
D. None of the mentioned

Answer: C

2.
Which of the following is correct with respect to binary trees?

A. Let T be a binary tree. For every k ≥ 0, there are no more than 2k nodes in level k
B. Let T be a binary tree with λ levels. Then T has no more than 2λ – 1 nodes
C. Let T be a binary tree with N nodes. Then the number of levels is at least ceil(log (N + 1))
D. All of the mentioned

Answer: D

3.
Which statement is correct about binary tree ?

A. Every full binary tree is also a complete binary tree
B. Every complete binary tree is also a full binary tree
C. Every binary tree is either complete or full
D. A binary tree cannot be both complete and full

Answer: A

4.
In full binary search tree every internal node has exactly two children. If there are 100 leaf nodes in the tree, how many internal nodes are there in the tree?

A. 25
B. 49
C. 99
D. 101

Answer: C

5. What is the maximum height of an AVL tree with p nodes?

A. p
B. log(p)
C. log(p)/2
D. p/2
Answer: B

6.
Which type of traversal of binary search tree outputs the value in sorted order?

A. Pre-order
B. None
C. Post-order
D. In-order
Answer: D

7.
The post order traversal of a binary tree is DEBFCA. Find out the pre order traversal

A. ABFCDE
B. ABDECF
C. ADBFEC
D. ABDCEF

Answer: B

8.
One can convert a binary tree into its mirror image by traversing it in

A. inorder
B. preorder
C. postorder
D. None of the above

Answer: C

9.
Out of following which data structure is non linear type?

A. Stacks
B. Graph
C. Lists
D. None of the above

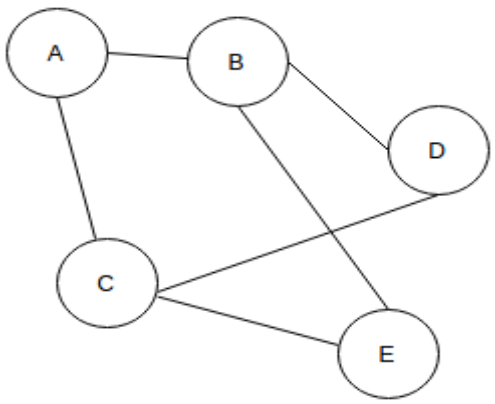
Answer: B

10.
An adjacency matrix representation of a graph cannot contain information of:

A. parallel edges
B. edges
C. nodes
D. direction of edges

Answer: A

11.



For the given graph(G), which of the following statements is true?

A. G is a complete graph
B. G is not a connected graph
C. The edge connectivity of the graph is 1
D. The vertex connectivity of the graph is 2

Answer: D

12.
Which of the following properties does a simple graph not hold?

A. Must be connected
B. Must be unweighted
C. Must have no loops or multiple edges
D. All of the mentioned

Answer: A

13.
Which of the following is true?

A. A graph may contain no edges and many vertices
B. A graph may contain many edges and no vertices
C. A graph may contain no edges and no vertices
D. None of the mentioned

Answer: B

14.
The degree of any vertex of graph is ____?

A. The number of edges incident with vertex
B. Number of vertex in a graph
C. Number of vertices adjacent to that vertex
D. Number of edges in a graph

Answer: A

15.
A graph G is called a ..... if it is a connected acyclic graph ?

A. Cyclic graph
B. Regular graph
C. Tree
D. Not a graph

Answer: C

16.
Rather than build a subgraph one edge at a time ……builds a tree one vertex at a time.

A. kruskal's algorithm
B. prim's algorithm
C. dijkstra algorithm
D. bellman ford algorithm

Answer: B