1. [Circle one] Each node in a tree has:
   a. exactly one parent
   \textcolor{red}{\it b. at most one parent}
   c. at most two parents
   d. any number of parents

2. [Circle one] A full binary tree of height 3 (Rosen & class definition) has:
   a. 4 nodes
   b. 7 nodes
   c. 8 nodes
   \textcolor{red}{d. 15 nodes}

3. [Circle all that are true]
   a. A tree has only one simple path between any two of its nodes.
   b. A tree is m-ary if every internal vertex has no more than m children.
   c. Degree of a tree is the maximum degree of its nodes.
   d. An m-ary tree is called full if every internal vertex has exactly m children.

4. [Circle all that are true] For the tree below:
   a. D is a leaf.
   b. X is a root.
   c. H is an ancestor of A.
   \textcolor{red}{d. It has degree of 2.}
   e. The tree is balanced.
   f. The tree is complete.
   g. B has height=1.
   h. B is a parent of Q.

\begin{center}
\begin{tikzpicture}
  \node (A) {A} [grow'=up, sibling distance=20mm, level distance=20mm]
  child {node (B) {B} [grow'=left, sibling distance=10mm, level distance=10mm]
    child {node (X) {X} [grow'=down, sibling distance=5mm, level distance=5mm]}
    child {node (D) {D} [grow'=up, sibling distance=10mm, level distance=10mm]}
  }
  child {node (M) {M} [grow'=right, sibling distance=10mm, level distance=10mm]}
  child {node (Q) {Q} [grow'=down, sibling distance=5mm, level distance=5mm]
    child {node (H) {H} [grow'=down, sibling distance=5mm, level distance=5mm]}
  }
\end{tikzpicture}
\end{center}