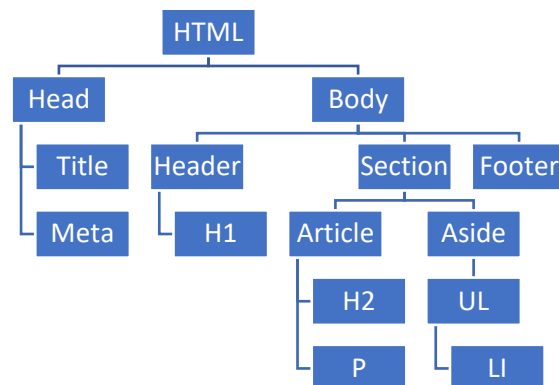**IU**

Problem 1: [CLO3]

Provide the following binary tree:
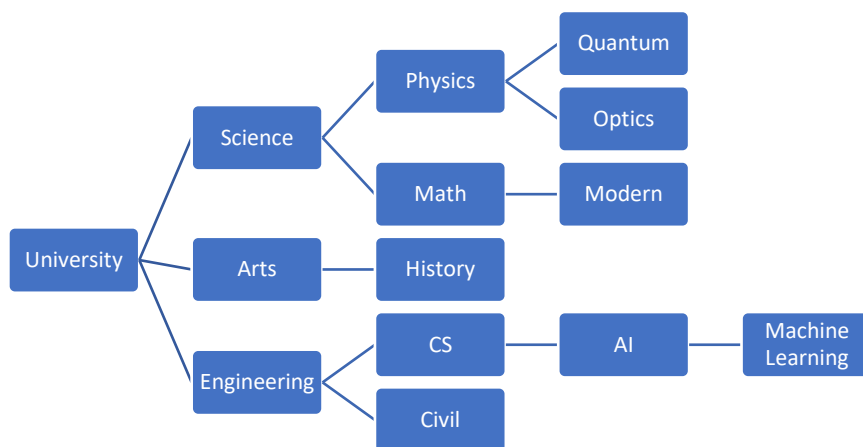
  i.   Write the DFS Pre-order Traversal of the tree step by step.
  ii.   Write the DFS In-order Traversal of the tree step by step.
 iii.   Write the DFS Post-order Traversal of the tree step by step.
 iv.   Identify the root node and leaf nodes in the tree.
  v.   Mention the ancestors of Math and descendants of Engineering.
 vi.   Compute the height of the tree.

Problem 2: [CLO3]

i.   Identify the root node and leaf nodes in the tree.
ii.   Write the DFS Pre-order Traversal of the tree step by step.
iii.   Write the DFS In-order Traversal of the tree step by step.
iv.   Write the DFS Post-order Traversal of the tree step by step.
v.   Perform BFS Level-order Traversal of the tree step by step.

Problem 3: [CLO3]

Provide the following binary tree representing a mathematical expression:
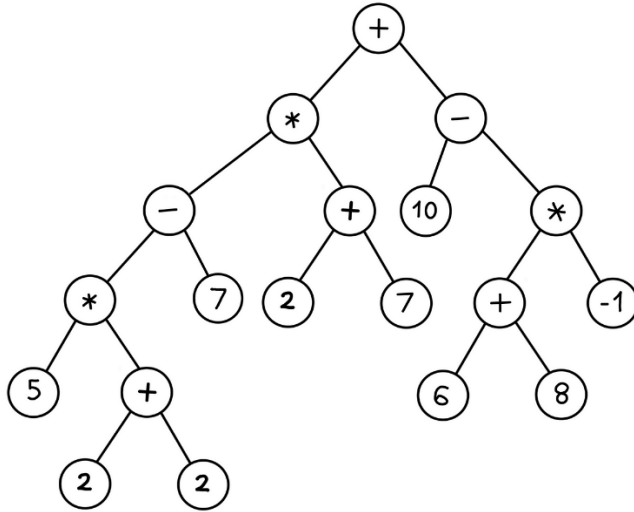
i.   Write the in-order traversal of the tree and explain the resulting expression.
ii.   Write the pre-order traversal of the tree and explain the resulting expression.
iii.   Write the post-order traversal of the tree and explain the resulting expression.