# Data Structures
# Data Structures and Algorithms
## Spring-2020     Final-Semester
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- Attempt All Tasks.

Q#1. (a)    Sort the given list using Insertion Sort.                                (10)

56, 59, 45, 40, 43, 55

Q#2.         Construct Binary Trees from given list of numbers and then verify the tree.    (10)

25, 15, 35, 17, 33, 36, 25, 13, 15, 40, 38, 42, 20

Q#3.         Construct Binary Trees from given Mathematical Expressions

i.      $H + G * 2 - (F \wedge M)$                                        (05)
ii.     $A * D + T \wedge B - R$                                          (05)

Q#4.         Apply all the three Binary Tree Traversal Techniques on each of the Tree
             constructed in Q#3.                                          (06 + 06)

Q#3. Fill in the blanks.                                                 (08)

i.      Elements of a Tree are called _____.
ii.     The graphical line drawn between Nodes of a Tree is called _____.
iii.    Level Number of a Root is _____.
iv.     All the nodes with same Level Number belong to _____.
v.      The Left-Most Child Node is _____ Node.
vi.     The Right-Most Child Node is _____ Node.
vii.    A Tree is a _____ Data Structure.
viii.   An Ordered Set of Ordered Trees is called a _____.