Solution:
Fundamental of algorithm

1-A-
  i. (b)-upper
  ii. (c)-algorithm
  iii. (a)- Binary Search Tree
  iv. (b)-O(n)
  v. (a)-cycle

1-B
  i.   children
  ii. tree
  iii. shortest
  iv. $O(n)$
  v.   Rapidly

1-C
  i.   Page 127, "Data structure and algorithms in Python, Goodrich
  ii. Give definition with suitable example.
  iii. Explain with reference to list. Explain search time. (O(n))
  iv. A tree with up to two child nodes
  v.   Give definition and its applications

2.
  A. Give definitions and suitable illustration. Explain why they are useful.
  B. Definition (2 Marks). Example (3 Marks)
  C. Explain what is guessing & confirming (2 Marks) Example (3 Marks)
  D. Explanation of the problem (1 Marks). Algorithm (4 Marks)
  E. Explain how are they useful in algorithmic analysis.(2 Marks) Give examples of each. (3 Marks)

3.
  A. Definition (2 Marks). Characteristics (3 Marks)
  B. definition (1 Marks). (2 Marks each for each traversal –preorder/inorder/postorder)
  C. definition (2 Marks). Example(3 Marks)
  D. definitions (2 Marks). Example (3 Marks)
  E. Definition (1 Marks). Algorithm (4 Marks)
  F. definition (1 Marks). Difference (2 Marks), Example (2 Marks)

4.
  A. definition (2 Marks), algorithm (3 Marks)
  B. give its characteristics with example.
  C. explain concepts(2 Marks), Example(3 Marks)
  D. Dynamic programming (1 Marks), (2 Marks each for each example)
  E. Explain each element.
  F. Definition of classification (1 Marks), description of Classification by Implementation Method (4 Marks)

5.
  A. Definition (2 Marks), its importance and usage (3 Marks)
  B. definition (2 Marks). Example (3 Marks)
  C. definition (2 Marks). Example (3 Marks)
  D. definition (2 Marks), Its use and example(3 Marks)
  E. 2.5 Marks each.