S.Y.BCA Examination
October- 2018
Data and File Structure – 201
Subject Code– 8431

Time: 3 Hours   **Total Marks: 100**

Q.1 Answer the following Questions
(A) What do you mean by data structure? Explain types of data structure. **(10)**
(B) Explain control structure of data in detail. **(10)**

OR

Q.1 Answer the following Questions
(A) What is data structure? Explain Application and goal of data structure in detail. **(10)**
(B) Explain Array and Sparse Matrix storage representation. **(10)**

Q.2 Answer the following Questions
(A) Explain sequential search in detail with suitable example. **(10)**
(B) Write down bubble sort algorithm with its merits & demerits. **(10)**

OR

Q.2 Answer the following Questions
(A) Explain binary search in detail with example and algorithm. **(10)**
(B) Write down sequential search algorithm with its merits & demerits. **(10)**

Q.3 Answer the following Questions:
(A) What is linked list? Explain various operations performed on linked list with example. **(10)**
(B) Explain evaluation of postfix notation using stack method. **(10)**

OR

Q.3 Answer the following Questions:
(A) Write a detailed note on types of linked list. **(10)**
(B) What is queue? Explain types of queue in detail. **(10)**

Q.4 Answer the following Questions
(A) Explain Memory Representations of Binary Tree(Array & Linked) with example. **(10)**
(B) Explain binary tree traversal algorithms with example. **(10)**

OR

Q.4 Answer the following Questions
(A) Explain basic operations performed on binary tree in brief. **(10)**
(A) Explain DFS & BFS Graph Traversal Techniques with example. **(10)**

Q.5 Answer the following Questions
(A) Write a detailed note on magnetic disk. **(10)**
(B) Define the terms: field, record, fixed and variable length record, primary & secondary key. **(10)**

OR

Q.5 Answer the following Questions
(A) Explain Storage device and their Characteristics. **(10)**
(B) Explain sequential & index sequential file in detail. **(10)**