

BCA-12

December – Examination 2020

BCA (Part II) Examination

Data Structure and Algorithm

Paper : BCA-12

*Time : 2 Hours]**[Maximum Marks : 70*

Note :- The question paper is divided into two sections A and B. Write answers as per given instructions.

Section-A**7×2=14****(Very Short Answer Type Questions)**

Note :- Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries 2 marks.

1. (i) What is Algorithm ?
- (ii) Write the names of linear data structure.
- (iii) Write *two* names of stack applications.

- (iv) Write the names of Graph searching algorithm.
- (v) What is Isolated Vertex in Graph ?
- (vi) What is meaning of In-degree and Out-degree of node in Tree ?
- (vii) What is Binary Search Tree ?

Section-B

4×14=56

(Short Answer Type Questions)

Note :- Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 14 marks.

- 2. What is Stack. Explain Stack operations.
- 3. Differentiate Linear and Circular Queue.
- 4. Differentiate the Linked List and Array.
- 5. Explain the different types of asymptotic notations.
- 6. What do you mean by height, degree and depth of a tree ?
- 7. Explain Prim's algorithm of Graph.

- 8. Differentiate the binary tree, complete binary tree and binary search tree.
- 9. What are the different types of data structure ?