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Total Pages : 2

Roll No.

S-2449

B.C.A. (IInd Semester) Examination, 2021-22

DATA STRUCTURE & FILE ORGANIZATION

Paper-I (BCA-201)

Time : 2:30 Hours]

Max. Marks : 70

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) Explain the Data Structure. What are the operations to be performed on data structure? [7]
(b) What is stack? Explain the operation performed by stack with a small program of each operation. [7]
2. (a) Difference between stack and Queue. [7]
(b) What is Queue? Write algorithm to insert and delete a node in circular queue. [7]
3. (a) What is link list? What are the different kinds of link list used in data structure? [7]
(b) Write a program to perform binary search. [7]

4. (a) Convert the following infix expression to post fix expression :
 $a + b * c - d ^ e \% f * g + h - i$ [7]
(b) Discuss with binary tree. Explain the different operation of binary tree. [7]
5. (a) What is B-Tree? Create B-Tree of order 5 with the alphabets arrive in the sequence as follows :
a g b k d h m j e s l r x c l n t u p [7]
(b) Perform Quick sort for following set :
66 33 40 20 50 88 60 11 77 30 45 65 [7]
6. (a) Define the hashing. How do Collision happen during Hashing? Explain the different technique resolving of collision. <https://www.sdsuvonline.com> [7]
(b) What do mean by message authentication ? [7]
7. Explain short Notes (any four) : [3½×4=14]
 - (a) Sparse arrays.
 - (b) Application of stack.
 - (c) Priority Queue.
 - (d) Hashing.
 - (e) Huffman Algorithm.

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[P.T.O.

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