

4008-04

Printed Pages : 4

Degree (Part-II) Vocational Examination, 2021

(Honours)

BCA

[Paper : Fourth]

[PPU-D-II-(V)-(H)-BCA-4]

Time : Three Hours]

[Maximum Marks : 75

Note : Candidates are required to give their answers in their own words as far as practicable. Attempt **any five** questions in all. All the questions are of equal value.

1. (a) What is ADT ? Discuss some ADT with suitable example.
- (b) What is algorithm ? Discuss the role of algorithm in data structure.
2. (a) What is Linear data structure ? Discuss with some suitable example.

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- (b) What is STACK ? Write a function using C-language PUSH, POP operation of stack.
3. (a) What is circular queue ? Advantages over simple queue discuss.
- (b) Write a function to insert a number in circular queue.
4. (a) What is single linked list ?
- (b) Discuss advantages of linked list.
5. (a) What is Tree ? Discuss the types of Tree.
- (b) Construct a Binary Tree for in-order 4, 7, 8, 5, 1, 6, 9, 3
6. (a) Define polish notations Infix, Postfix and prefix.
- (b) Input expression $(A-B/C)*(A/K-L)$ convert into prefix and postfix notation.
7. (a) Write a function to count the nodes of Binary Tree.
- (b) What is GRAPH ? Discuss the types of Graph.

8. (a) Write the difference between Linear and non-linear data structure.
- (b) Write the difference between queue and doubly queue.
9. (a) What is AUTOCAD ? Write the features of AUTOCAD.
- (b) Write the steps to design a building layout and interior design.
10. Write short notes on any five of the followings :
- (a) Hash Table
- (b) DFS
- (c) Binary Search
- (d) Heap Sort
- (e) Radix Sort
- (f) Quick Sort

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