

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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(1)

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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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