Degree (Part-II) Examination, 2024

(Vocational)

COMPUTER APPLICATION

[Paper : Fourth]

Paper Code : 400804

Time : Three Hours]   [Maximum Marks : 75

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

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1. (a) Define linear queue. How circular queue is better than linear queue?

   (b) Write a function to delete a number in circular queue.

2. (a) Write a function to insert a number into a Binary search tree.

(b) Define the Expression tree. Create the expression tree of the following expressions :

(i) $(a-b)+(c \times d)$

(i) $a+b/c \times d-e$

3. (a) Define the depth first search algorithm

(b) Discuss the representation of Graph.

4. Write short notes on **any three** of the following :

(a) Minimum spanning tree

(b) Bubble sort

(c) Binary search

(d) Selection sort

5. (a) Define the AVL tree and also discuss the advantages of it.

(b) Define the Threaded Binary tree.

6. (a) Write an algorithm to convert an infix expression into postfix expression.

(b) Write a program to implement a stack using an array.

7. (a) Define Time and Space Complexities analysis of an Algorithm.

(b) Define Data Structure and Operations perform on it.

8. (a) What is algorithm ? Discuss the role of algorithm in data structure.

(b) What is ADT ? Discuss some ADT with suitable example.

9. (a) Write a function to insert a number in circular queue.

   (b) What is circular queue? Discuss its Advantages over simple queue.

10. (a) Write the steps to design a building layout and interior design.

   (b) What is AUTOCAD ? Write the features of AUTOCAD.

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THE END