

UNIT-IV

8. What is Searching ? Write a program to implement Linear search technique. [8]
9. What is Sorting ? Write an algorithm for selection sort with example. [8]

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Question Paper Code : 3021

B.A./B.Sc. (Part-I) Examination, 2018

[For Exempted Candidates Only]

(New Syllabus)

COMPUTER APPLICATION

[Third Paper]

(C Programming & Data Structure)

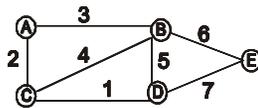
Time : Three Hours]

[Maximum Marks : 50

Note : Answer **five** questions in all. Question **No.1** is **compulsory**. Besides this, attempt **one** question from each unit.

1. Attempt all the questions : [2x10=20]
 - (a) Write the syntax of for loop with example.
 - (b) Differentiate between Library functions and User defined functions.
 - (c) Explain the datatypes used in C language.
 - (d) What is the difference between traversal in tree and traversal in graph ?

- (e) What is array ? Differentiate between Static array and Dynamic array .
- (f) Write the algorithm of Bubble sort.
- (g) Write the algorithm for insert and delete operation in Queue.
- (h) What do you mean by degree of a graph ? Explain indegree and outdegree with example.
- (i) Find adjacency matrix for the given graph :



- (j) What is data structure ? Differentiate between linear and non-linear data structure.

UNIT-I

2. Explain the following statements with syntax and example. [7]
 - (a) if statement
 - (b) if-else statement
 - (c) Switch case statement

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(2)

- (d) do-while statement
- (e) for statement

3. What is operator ? Explain various types of operators used in C language with example. [7]

UNIT-II

4. (a) Write a program to find the transpose of a matrix. [4]
 - (b) What is storage classes ? Explain various types of storage classes. [3]
5. (a) Write a program to find the factorial of a positive integer. [4]
 - (b) Discuss various file opening modes. [3]

UNIT-III

6. What is Stack ? Discuss various operations of stack with algorithm. [8]
7. Find the Minimum Spanning Tree for the following graph using Kruskal's algorithm : [8]

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(3)

[P.T.O.]