



KARPAGAM ACADEMY OF HIGHER EDUCATION
(Deemed to be University)
(Established Under Section 3 of UGC Act, 1956)
Coimbatore-641021

DEPARTMENT OF COMPUTER SCIENCE

SUBJECT : DISCRETE STRUCTURES – PRACTICAL

SEMESTER :II

SUBJECT CODE: 17CSU212

CLASS: I B.SC CS -A

1. Write a C Program to find the number of subsets of a set contains n elements.
2. Write a C Program to find transitive closure of a relation.
3. Write a C Program to prove
 $1/(1*2) + 1/(2*3) + \dots + 1/(n(n+1)) = n/(n+1)$
4. Write a C Program to **to perform the sum = $1 + (1+2) + (1+2+3) + \dots + (1+2+\dots+n)$**
5. Write a C program to print Fibonacci series till Nth term using recursion
6. Write a C program in c to calculate factorial of a number using recursion
7. Write a C Program to find a minimum spanning tree using Prim's algorithm
8. Write a C program to find the shortest path with the lower cost in a graph using **Dijkstra's Algorithm**
9. Write a C Program to construct the truth table for the following formula.
(i) $P \square Q \square R$ (ii) $P \square Q \square R$ (iii) $P \square Q \square R$
10. Write a C Program to prove De – Morgan's law.