



KARPAGAM ACADEMY OF HIGHER EDUCATION

COURSE NAME: DISCRETE STRUCTURES - PRACTICAL

CLASS: I B.SC CS 'B' COURSE CODE: 18CSU212 BATCH: 2018-2021

SYLLABUS

Instruction Hours / week: L: 0 T: 0 P: 3 Marks: Internal : 40 External : 60 Total: 100
End Semester Exam : 3 Hours

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 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 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) $P \wedge Q \wedge \neg R$ (ii) $P \wedge \neg Q \wedge R$ (iii) $P \wedge Q \wedge \neg R$
10. Write a C Program to prove De – Morgan's law.