PSG COLLEGE OF TECHNOLOGY

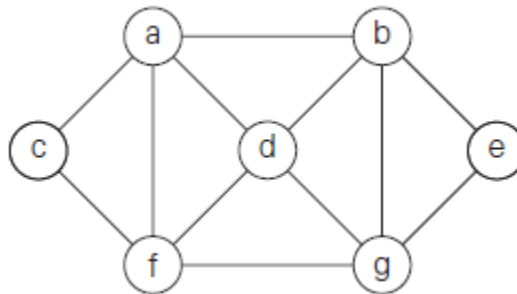**DEPARTMENT OF APPLIED MATHEMATICS AND COMPUTATIONAL SCIENCES**

M.Sc (SS) – Design and Analysis of Algorithms

Home work 6 (Backtracking , Branch and Bound)

1. Solve the following knapsack problem using Branch and bound approach.

item	weight	value	
1	3	$25	
2	2	$20	
3	1	$15	capacity $W = 6$.
4	4	$40	
5	5	$50	

2. Apply backtracking to the problem of finding a Hamiltonian circuit in the following graph considering a as the start vertex.

3. Apply the branch-and-bound algorithm to solve the traveling salesman problem for the following graph: