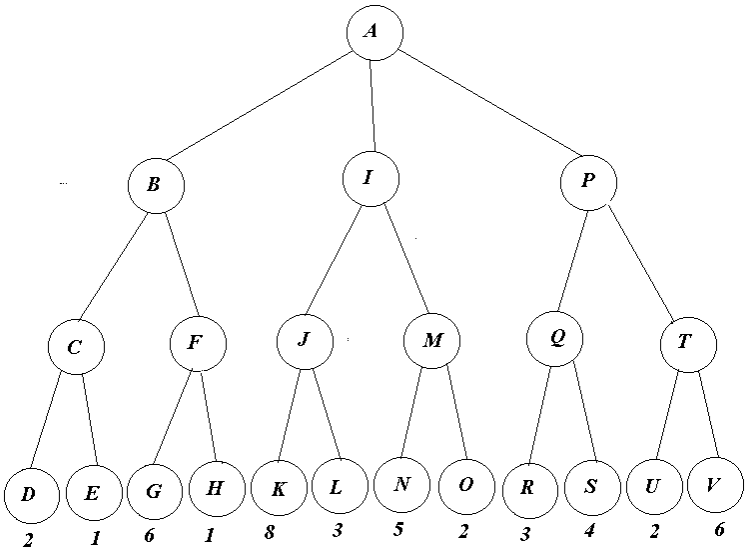
ARTIFICIAL INTELLIGENCE (CS304)

Tutorial-7

Questions:

1) Solve 8-Queen problem by Hill Climbing and any one of its variants. Comment on the results of both.
2) Find the best path of tree given in Fig 7.1 by MIN-MAX algorithm. Also explain how alpha beta pruning helps in adversarial search? (Assumption: Consider Node A as MAX, subsequent node as MIN, then MAX-MIN ….. subsequently)



3) Explain the following constraints in linear programming:
   i. Unary
   ii. Binary
   iii. Global
4) Explain Minimum Arc Consistency (MAC) Algorithm. Solve 4-Queens problem using same.
5) Solve the following using Constraint Satisfaction Problem: Class scheduling: There is a fixed number of professors and classrooms, a list of classes to be offered, and a list of possible time slots for classes. Each professor has a set of classes that he or she can teach. Also Explain Cut-Set conditioning and Sub-Tree CSP.