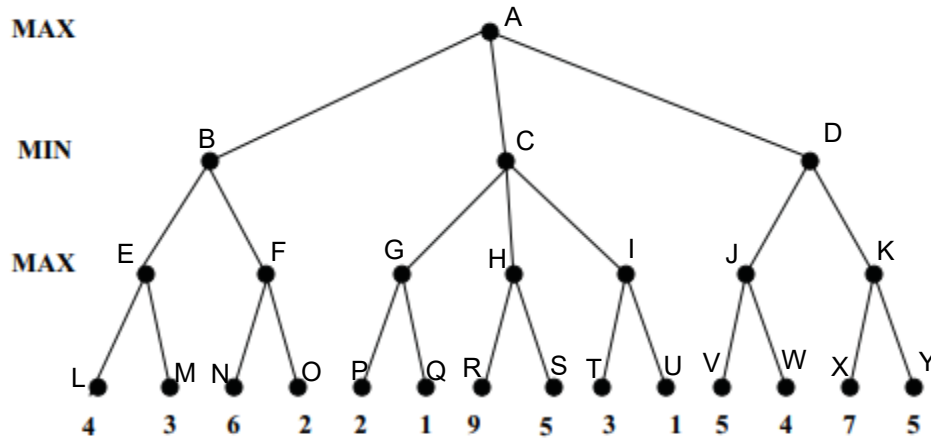


**MCS - 102 Artificial Intelligence**  
**Mid-Sem Exam**

**Time: 1 Hour**

**Total Marks: 15**

1. What is a rational agent approach to AI? How is it different than Turing test approach? [3]
2. List the major differences between best-first, Greedy best -first and A\* algorithms. [2]
3. Given below a game tree:



What nodes would not be needed to be examined using  $\alpha$ - $\beta$  pruning procedure?  
Write your answer giving justification for each pruned node. [8]

4. Define some good heuristic functions for each of the following problems:
  - (i) Travelling Salesman
  - (ii) Tic-Tac-Toe

[2]