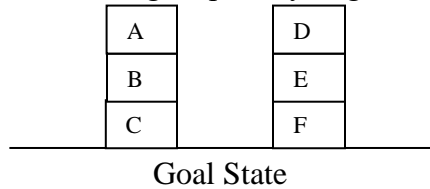
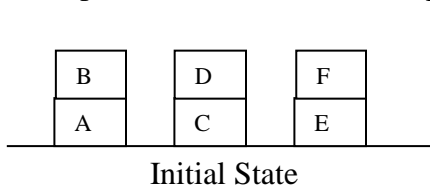
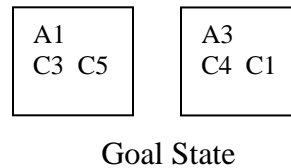
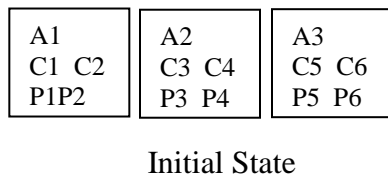


1. How a planner exerts intelligence through domain feature consideration? (2)
2. Generate an optimal plan through Forward State Space search using PDDL for the planning problem in the Blocks world presented below. Omit the predicate 'Block', and give priority to gain in time over gain in actions. (3)



3. Why game playing problems are considered adversarial search problems? (2)
4. Construct a pruned game tree using Alpha-Beta pruning. Take the sequence, [6, 3, 2, 6, 4, 5, 7, 2, 8, 7, 5, 1, 3, 4] of MINIMAX values for the nodes at the cutoff depth of 4 plies. Assume that branching factor is 2, MAX makes the first move, and nodes are generated from *left to right*. (3)

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1. How 'precondition' of actions are represented with PDDL? (2)
 2. Generate an optimal plan using PDDL and Forward State Space search for the Air Cargo Transportation problem given below. Omit predicates 'Airport', 'Cargo' and 'Plane', and consider generally accepted rules and notations for such a problem. (3)



3. Elaborate the concept of quiescence search. (2)
4. Construct a pruned game tree using Alpha-Beta pruning. Take the sequence, [1, 3, 4, 5, 7, 4, 6, 2, 1, 3, 5, 4, 8, 4, 6] of MINIMAX values for the nodes at the cutoff depth of 4 plies. Assume that branching factor is 2, MIN makes the first move, and nodes are generated from *right to left*. (3)