True-False

(1) Minimax algorithm propagates node values from all terminal states upward to the root.

Ans: True

(2) In CSP, a goal state is one where the assignment is complete, and all constraints are satisfied.

Ans: True

(3) Alpha-Beta pruning is used because MiniMax can not provide the best move.

Ans: False.

(4) Pruning or without pruning the outcome of a game tree is always same.

Ans: True

⑤ Pruning is used to reduce search cost compromising the correctness.

Ans: False

⑥ Alpha-Beta pruning algorithm always prunes one or more branches from the search space tree.

Ans: False.

⑦ Forward checking can detect assignment failure earlier than Constraint propagation.

Ans: False.

MCQ

① Adversarial search works in an environment where ——
(a) agents work against the goal of another.

② A function that returns an estimate of the expected utility of the game from a given position is called (b) Evaluation function.

③ Which one of the below is not true about Alpha-Beta pruning.

Ans: (d) Ordering of the terminal nodes does not impact pruning.

④ Which technique can explore more nodes in the same amount of time?

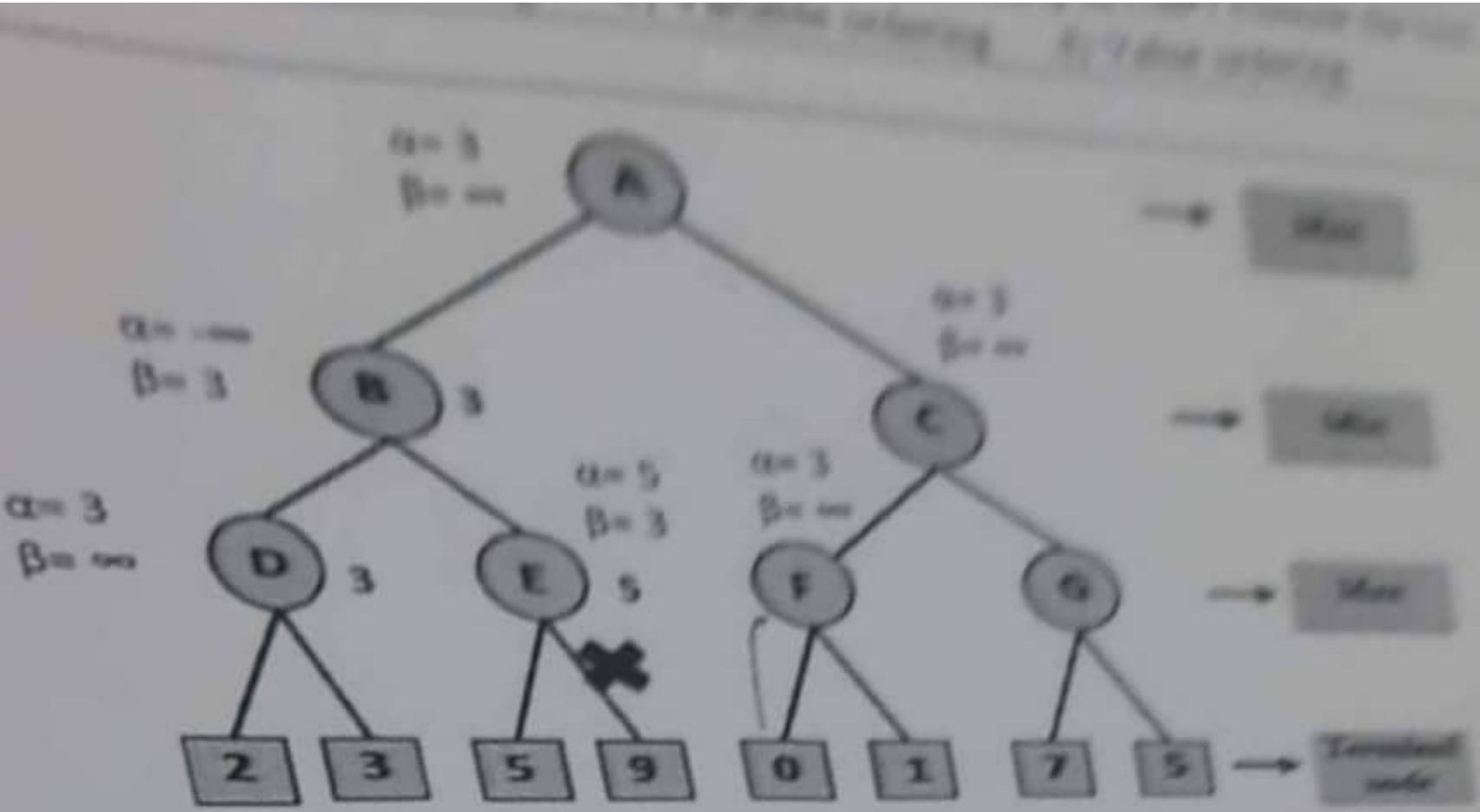
Ans: (b) Alpha Beta pruning

(5) Which one of the below is not correct?

Ans: (a) [Minimax algorithm determins optimum strategy for Max]

(6) If a game has average branching factor 10, and average moves 8, then there will be size of game space

Ans (c) 10^8



Answer the below questions: when back tracking from the terminal node [9] to F in Alpha-Beta pruning for the above search tree.

⑨ Which value F will be considered for updating?

Ans: ⓐ α or ⓒ none

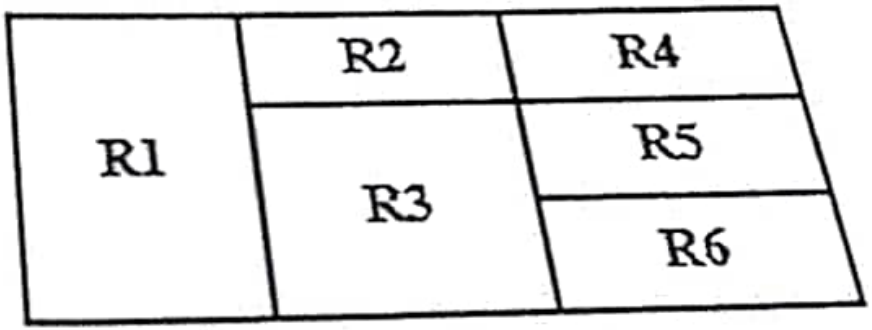
⑩ What will be the node value of F while going back to C?

Ans: ⓑ 1

⑪ Will the terminal node [1] be pruned?

ⓑ no

Imagine you are coloring the below map. Adjacent regions must be colored with distinct colo
B=Blue, G=Green).



Answer the below questions for the above problem

(12) How many different assignment are possible?

Ans (a) 3^6

(13) How many constraint are there ?

Ans: (b) 8