**<https://www.geeksforgeeks.org/minimax-algorithm-in-game-theory-set-1-introduction/>**

**Artificial Intelligence Questions & Answers – Alpha Beta Pruning**

**This set of Artificial Intelligence Multiple Choice Questions & Answers (MCQs) focuses on “Alpha Beta Pruning**”.

1. Which search is equal to minimax search but eliminates the branches that can’t influence the final decision?  
a) Depth-first search  
b) Breadth-first search  
**c) Alpha-beta pruning**  
d) None of the mentioned  
View Answer

Answer: c  
Explanation: The alpha-beta search computes the same optimal moves as minimax, but eliminates the branches that can’t influence the final decision.

2. Which values are independant in minimax search algorithm?  
**a) Pruned leaves x and y**  
b) Every states are dependant  
c) Root is independant  
d) None of the mentioned  
View Answer

Answer: a  
Explanation: The minimax decision are independant of the values of the pruned values x and y because of the root values.

3. To which depth does the alpha-beta pruning can be applied?  
a) 10 states  
b) 8 States  
c) 6 States  
**d) Any depth**  
View Answer

Answer: d  
Explanation: Alpha–beta pruning can be applied to trees of any depth and it is possible to prune entire subtree rather than leaves.

4. Which search is similar to minimax search?  
a) Hill-climbing search  
**b) Depth-first search**  
c) Breadth-first search  
d) All of the mentioned  
View Answer

Answer: b  
Explanation: The minimax search is depth-first search, So at one time we just have to consider the nodes along a single path in the tree.

5. Which value is assigned to alpha and beta in the alpha-beta pruning?  
a) Alpha = max  
b) Beta = min  
c) Beta = max  
**d) Both Alpha = max & Beta = min**  
View Answer

Answer: d  
Explanation: Alpha and beta are the values of the best choice we have found so far at any choice point along the path for MAX and MIN.

6. Where does the values of alpha-beta search get updated?  
**a) Along the path of search**b) Initial state itself  
c) At the end  
d) None of the mentioned  
View Answer

Answer: a  
Explanation: Alpha-beta search updates the value of alpha and beta as it gets along and prunes the remaining branches at node.

7. How the effectiveness of the alpha-beta pruning gets increased?  
**a) Depends on the nodes**  
b) Depends on the order in which they are executed  
c) All of the mentioned  
d) None of the mentioned  
View Answer

Answer: a  
Explanation: None.

8. What is called as transposition table?  
a) Hash table of next seen positions  
**b) Hash table of previously seen positions**c) Next value in the search  
d) None of the mentioned  
View Answer

9. Which is identical to the closed list in Graph search?  
a) Hill climbing search algorithm  
b) Depth-first search  
**c) Transposition table**  
d) None of the mentioned  
View Answer

Answer: c  
Explanation: None.

10. Which function is used to calculate the feasibility of whole game tree?  
**a) Evaluation function**  
b) Transposition  
c) Alpha-beta pruning  
d) All of the mentioned  
View Answer

Answer: a  
Explanation: Because we need to cut the search off at some point and apply an evaluation function that gives an estimate of the utility of the state.