CS3191

Test your understanding!

Test 4: Medium and Large Games

Question 1 Which of the following statements best describes alpha-beta pruning?

- ☐ Alpha-beta pruning is just the minimax algorithm done depth-first.
- ☐ Alpha-beta pruning does the same thing as the minimax algorithm, but to save time it doesn't go down branches which don't look promising. If you're unlucky it may miss a really good move that way.
- ☐ Alpha-beta pruning does the same thing as the minimax algorithm but avoids having to go down all branches by passing along values already found for some nodes.
- ☐ Alpha-beta pruning does the same thing as the minimax algorithm but it's better because it doesn't look at stupid moves.

Question 2 Which of the following statements are true?

- ☐ It's best to represent the board using an appropriate two-dimensional array because that's closest to the real thing.
- ☐ It's best to represent the board using a one-dimensional array because that's a lot faster.
- ☐ It's best to use bitboards to represent the board because bits are less likely to go wrong.
- ☐ It's best not to pick a complicated board representation because that's much easier to program for.

Question 3 Which of the following statements are true?

- ☐ The evaluation function is used as a short cut to avoid having to go all the way to the leaves of the game tree.
- ☐ In order to come up with a good evaluation function one has to know a lot about the game in question.
- ☐ The evaluation function has to depend on the board representation.
- ☐ The evaluation function is an attempt at guessing the value of a position.

Question 4 Which of the following statements are correct regarding game-playing programs?

- ☐ The horizon effect occurs when the evaluation function is badly chosen.
- ☐ Alpha-beta search doesn't always return a correct value because there's guessing involved.
- ☐ Aspiration search involves even more guessing than ordinary alpha-beta search.
- ☐ Iterative deepening can be used to order the moves one searches.