Adversarial Search Quizzes

Chapter 5
Define the following adversarial search terms:

- Zero-sum game:
- Terminal test:
- Game tree:
- Evaluation function:
- Ply:
- Minimax search:
- Cutoff:
- Utility:
- Alpha-beta pruning:
- Forward-pruning:
- Transposition:
Consider the following game tree:

Which move will be selected by Minimax? Assume left to right processing.
using the search tree in the previous problem, which nodes would be pruned by \( \alpha - \beta \) ?
Using the previous search tree, how would you re-order the tree to obtain maximal α-β pruning?
Sample Adversarial Search Exam Question

Examine the minimax game search tree shown in the diagram. Each leaf node is given a utility value. The three legal moves in the initial state are labeled with a letter.

a) (10) Which move will minimax select for node A?

b) (5) List all nodes that will be pruned (not expanded) by alpha-beta.

c) (5) A different ordering of children in the tree would produce the best possible pruning (largest number of nodes not expanded). List the values of the leaf nodes from left to right for this maximum pruning order.

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12    7    6    11    8    5    4    10    13    3    2    14    15    1    9    16    -2
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