Q1 (20%). Given below is a game tree in which the evaluation values of the leaf nodes are shown below the nodes. The player at the root is the MAX player.

(a) Show the backed-up value for each of the internal nodes of the tree. Indicate the best move at the root node by an arrow.
(b) Mark the leaf nodes that would NOT be evaluated if alpha-beta pruning is used, assuming the leaf nodes are evaluated in left-to-right order.
(c) Re-arrange the leaf nodes to get a game tree which is optimal for alpha-beta pruning. Show the re-arranged tree and mark the leaf nodes that would NOT be evaluated with alpha-beta pruning.

Q2 (20%). Question 5.8 (a) - (c) of the text book.
Q3 (5%). Question 5.16 (a) of the text book.
Q4 (10%). Question 7.6 of the text book.
Q5 (10%). Question 7.7 of the text book.
Q6 (10%) Question 7.10 of the text book.
Q7 (15%). Question 7.14 of the text book.
Q8 (10%). Question 7.18 of the text book.