Part 1 (Points: 25)

Do the following problems from Chapter 1, Section 1.12: 1, 5, 6, 9, 21

Part 2 (Points: 25)

Do the following problems from Chapter 2, Section 2.8: 1, 3, 4, 5, 6

Part 3 (Points: 25, 5, 10, 10)

(a) (i) Do the following problems from Chapter 3, Section 3.9: 1, 4, 5

(ii) Prove Lemma 3.2.

(b) (i) Reconstruct the following graph using the graph reconstruction technique used in the proof of theorem 3-11. Show transformed graphs for each of the three steps and label edges appropriately.

(ii) Consider graphs G1 and G2, which are modifications to the graph of Figure 3-4 in the book. For each graph, compute the

1. Access set,
2. Delete set,
3. Conspiracy graph,
4. Conspirators set and
5. Witness
to the theft of right $r$ by $x$ and $a_1$. If the stealing is not possible, give reasons.

G1:

G2: