1)

a. False. Proof:

- M1 : w1 > w2
- M2 : w1 > w2
- W1: m2 > m1
- W2 : m1>m2
- There is no pair (m, w) that both rank each other first so no stable matching can contain such a pair

b. True. Proof: If a man m and a woman w rank each other first then every stable matching result must contain that pair, else they'll each be matched with someone they like less than their first choice, which contradicts stability

c.