Question 1:

1. Candidate key of R is: {A,B}.

2. No, because I is not in {A,C}+ = {A,C,D}.

3. Yes, because F is in B+ = {B,E,F}.

4. R1a (A, C)

R1b (C, D)

R2 (B, E, F)

R3a (A, B, G)

R3b (G, H, I)

Question 2:

1. Candidate keys of R are: {A}.

2. No, because J is not in {B}+ = {B,C,D,G}.

3. No, because J is not in C+ = {C,D,G,B}.

4. R1 (A, B, E)

R2 (B, C, D, G)

R3 (E, F, H)

R4 (H, I, J)