A1. (i) A+ = A, (ii) C+ = CEDBA. The order in which the closure is stated is the same as will be produced by the closure algorithm.

A2. (i) A+ = AC, (ii) B+ = B (iii) ABC (iv) NO! (AB) != A+ U B+.

Remember the union rule is not the same as closure. Union rule: If A → AC and B → B, then (AB)  → ACB

A3.

(i) CD → AC: (CD)+ → CDEAB. Therefor CD → AC

(ii) BD → CD: (BD)+ → BD. Therefore, BD does not → CD.

(iii) BC → CD: BC will always determine C so BC → C. The real question is if BC → D. Determine closure of (BC)+ which is BCD. So BC → CD.

(iv) AC → BC: Again AC → C will be true always. Can we also infer AC → B? (AC)+ → ACBDE. So AC → B.