1. Solved Already

2. a. States: S1, Standby, S1 b. Actions: None

3. a. States: S2, S1, S2, Ready, A1, S1 b. Actions: actA, actB, actP, actA

4. a. States: S3, S4, Ready, A1, S1, Standby, S1 b. Actions: activity1, actP, actA, actQ