END3032 Systems Simulation Lab Practice

Problem Statement

At Gear Shop, a small automotive facility, there are two lathes, a degreaser, and inspection equipment. Pallets received at the receiving area. Capacity of pallet is six blanks. The blanks are machined on either Lathe 1 or Lathe 2 (machines are assigned by turn for successive blanks). After machining, the cogs go to the degreaser for washing. Then the cogs are inspected. Inspection procedure is based on a probability distribution. This distribution is, probability of accepting is 70 percent and probability of rejection is 30 percent. An operator moves the parts from one area to another. The operator is also required to run the machines and perform the inspection procedure.

Two pallets arrive at the receiving area. Bearings arrive at the rate of 0.13 per minute. The machining process takes normal(3,0.2) minutes. The washing takes 5 minutes for accumulated two cogs. The inspection takes uniform(3.2,0.3) minutes. The joining process takes uniform(1.5,0.2) minutes. Track is the Total made, Rejects, Cost/Per part, Cycle Time and WIP. Run simulation for 5 hours (warmup period) and 10 hours.