

## **Computer Lab 06**

### **Problem Description**

This lab is based on problem 5-9 of the text. The parameters for the problem are all as given, but for your final runs use 10 replications.

Use the Expressions module in the Advanced Process template to store the random variables for interarrival times, setup times, processing times, and removal times. Assign an attribute (Assigned Machine, say) for the machine id it goes to for an arriving part, and use this as the index for the times on its machine. Setup requires both a machine and an operator. You can put both of these Resources on the same Seize module. However, once setup is complete, you should Release the operator (only). Then after the Delay for processing, Seize the operator again prior to removal. After removal, release both the machine and the operator. You can release them both on the same Release module, but be sure to release the machine first, then the operator. Keep separate queues for the requests for the operator.

Shortly after arrival, the flow of your model will branch into two nearly identical pieces, one for each machine. To estimate the cycle time (time in the system) for parts processed on each machine, use an Assign module shortly after arrival to mark the Arrival Time attribute, and use two separate Record modules after a part is removed, one for each machine. To estimate the overall cycle time, use a third Record module that the first two Record modules feed into. You will only need one Dispose module.

For the output, set the default report back to "Category Overview." Don't forget to enter 10 replications

### **Deliverables**

1. Electronic copy of .doe file (<name>\_lab06.doe)
2. Hard copy of Category Overview (only – *not* the Replications!).