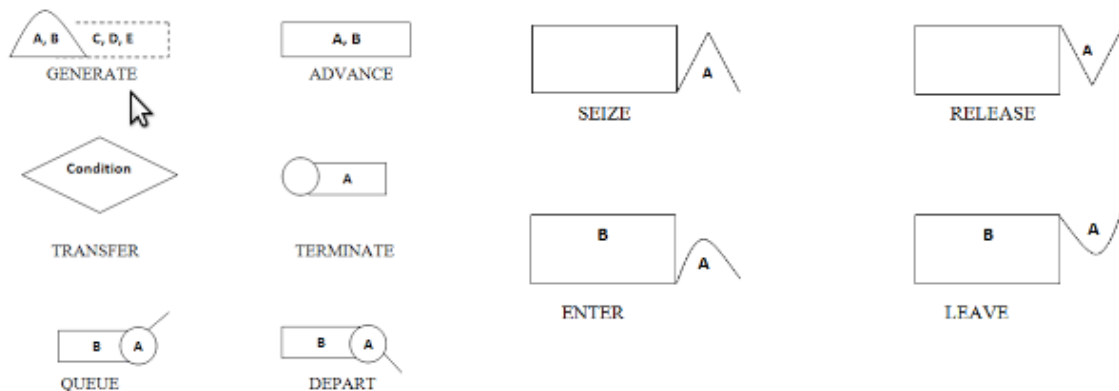


## Simulation in GPSS

- GPSS (General Purpose Simulation System) is a highly structured and special purpose simulation language based on process interaction approach and oriented toward queuing systems.
- The system being simulated is described by the block diagram using various GPSS blocks.
- Each block represents events, delays or other actions that affect the transaction flow.
- GPSS model is developed by converting the block diagram into block statements and adding the control statements.

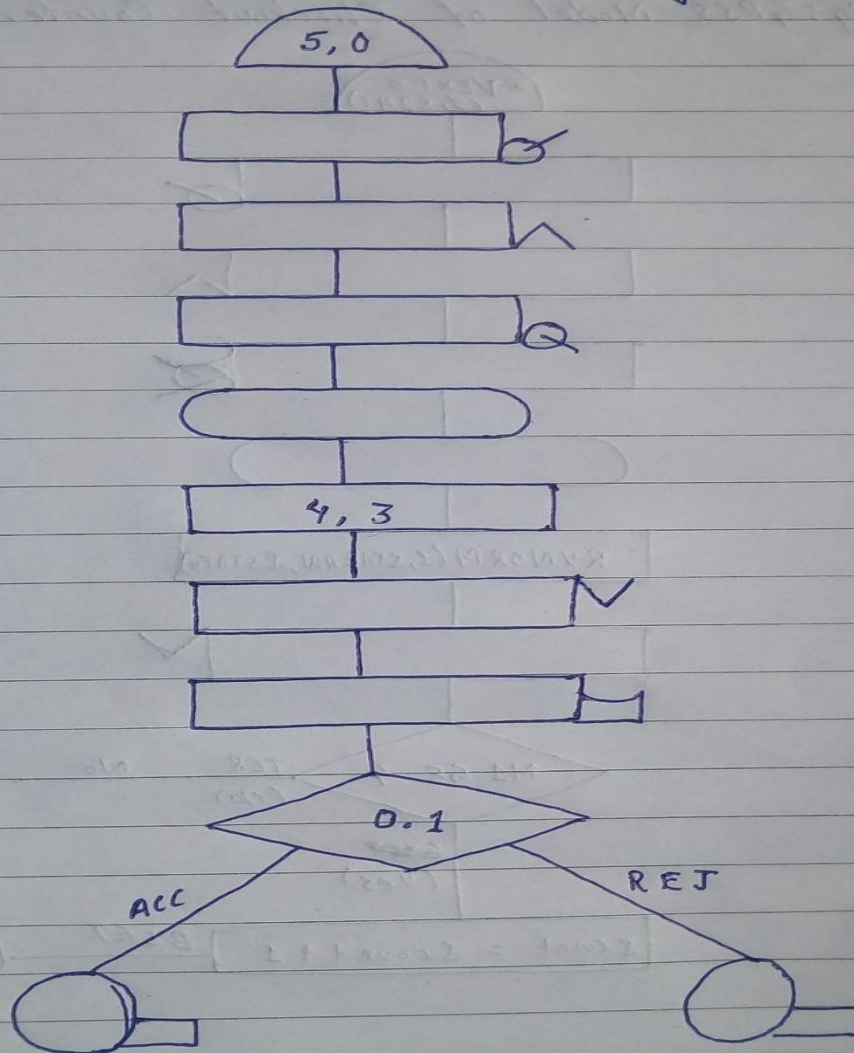
The general blocks used in GPSS block diagram is shown in figure below:



### Example 1 - Manufacturing Shop Model Simulation

A machine tool is turning out parse at a rate of 1 per every 5 minutes. As they are finished, the parse goes to an inspector, who takes 4 (+ or -) 3 minutes to examine each one and rejects about 10 % of the parse. Simulate the system using GPSS model.

Fig: GPSS Model of Shop Manufacturing

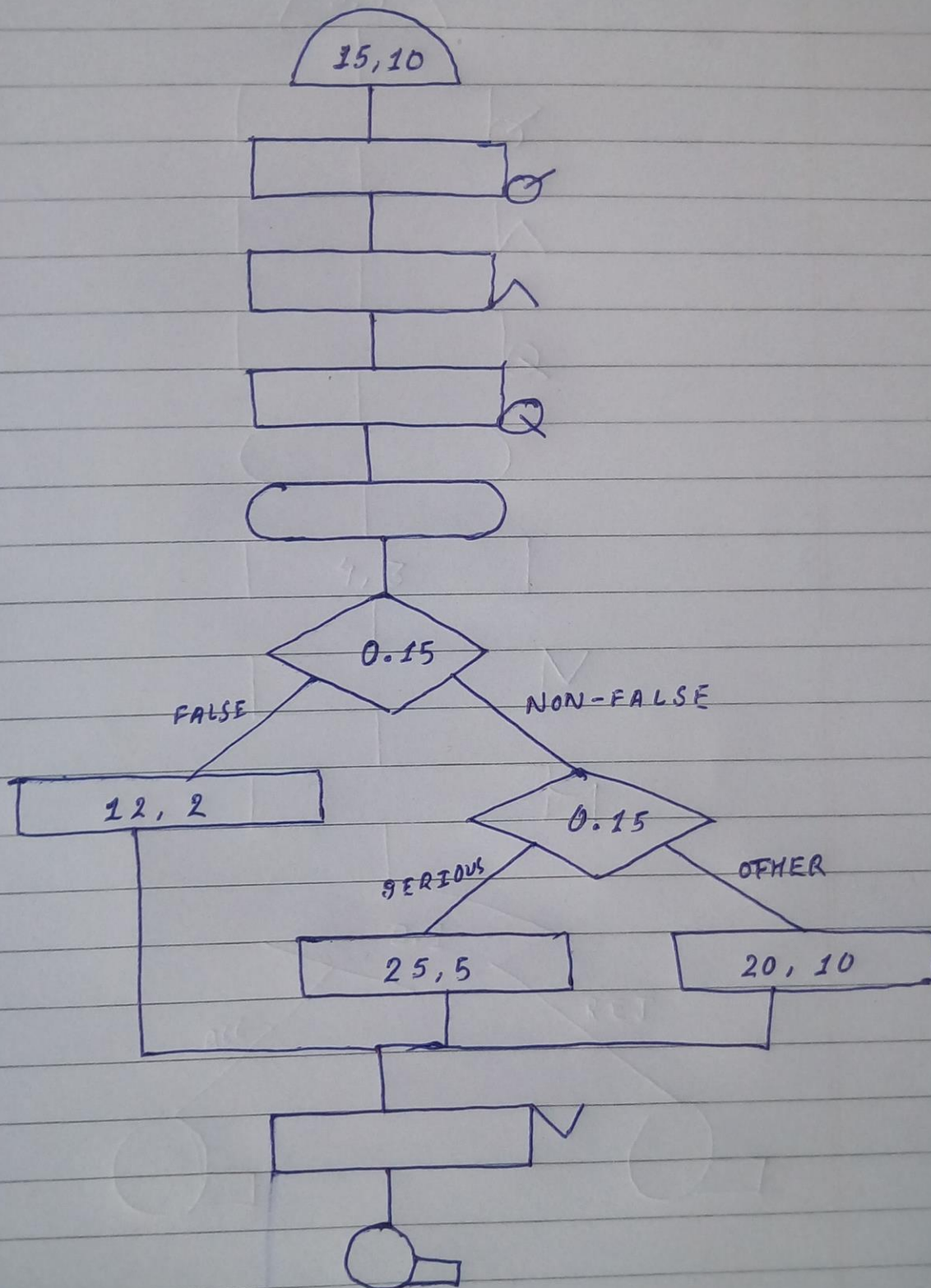


GENERATE 5 0  
 QUEUE  
 SEIZE  
 DEPART  
 MARK  
 ADVANCE 4 3  
 RELEASE  
 TABULATE  
 TRANSFER 0.1 ACC REJ  
 TERMINATE

Example 2 - Ambulances are dispatched at a rate of one every 15 (+ or -) 10 mins. Fifteen percent of the calls are false alarms, which require 12 (+ or -) 2 mins to complete. All other calls can be one of two kinds. The first kind are classified as serious. They constitute 15% of non false

alarms and take 25 (+ or -) 5 mins to complete. The other calls take 20 (+ or -) 10 mins. Simulate the model using GPSS.

Fig: GPSS Model of Ambulance Dispatcher



GENERATE 15, 10  
QUEUE  
SEIZE  
DEPART  
MARK  
TRANSFER 0.15 FALSE NON-FALSE  
FALSE ADVANCE 12, 2  
NON-FALSE TRANSFER 0.15 SERIOUS OTHER  
SERIOUS ADVANCE 25, 5  
OTHER ADVANCE 20, 10  
RELEASE  
TERMINATE