6. A company is considering the brand switching behaviour of consumers of its chocolate bar "Heavenly Delight (HD)". Market surveys have shown that the market share for this product was 25% for HD and 75% for the competition 3 months ago. Since that time the market share for HD has changed very little.

Market research from two different consultants has been commissioned and the company has been presented with two different estimates of the transition matrix governing brand switching per month, as below:

Estimate 1

		To	
		HD	Competition
From	HD	0.80	0.20
	Competition	0.30	0.70

Estimate 2

		To	
		HD	Competition
From	HD	0.11	0.89
	Competition	0.31	0.69

Which estimate do you prefer and why?

What would be the long-run market share for HD using estimate 1?

7. (a) For a single server queueing system illustrate the basics of discrete-event simulation by performing a simulation using the (randomly generated) values given below corresponding to:
   1. exponential inter-arrival times with a mean of 25 seconds
   2. exponential service times with a mean of 15 seconds

Inter-arrival times	Service times
23	10
13	15
10	30
15	20
45	19
14	20
20	10

(b) Take any queueing system with which you are familiar and discuss what you might be interested in finding out from a discrete-event simulation of the system.